



华虹宏力
— HHGRACE —

HUA HONG SEMICONDUCTOR LIMITED

華虹半導體有限公司

(Incorporated in Hong Kong with limited liability)

(於香港註冊成立之有限公司)

(Stock Code: 01347)

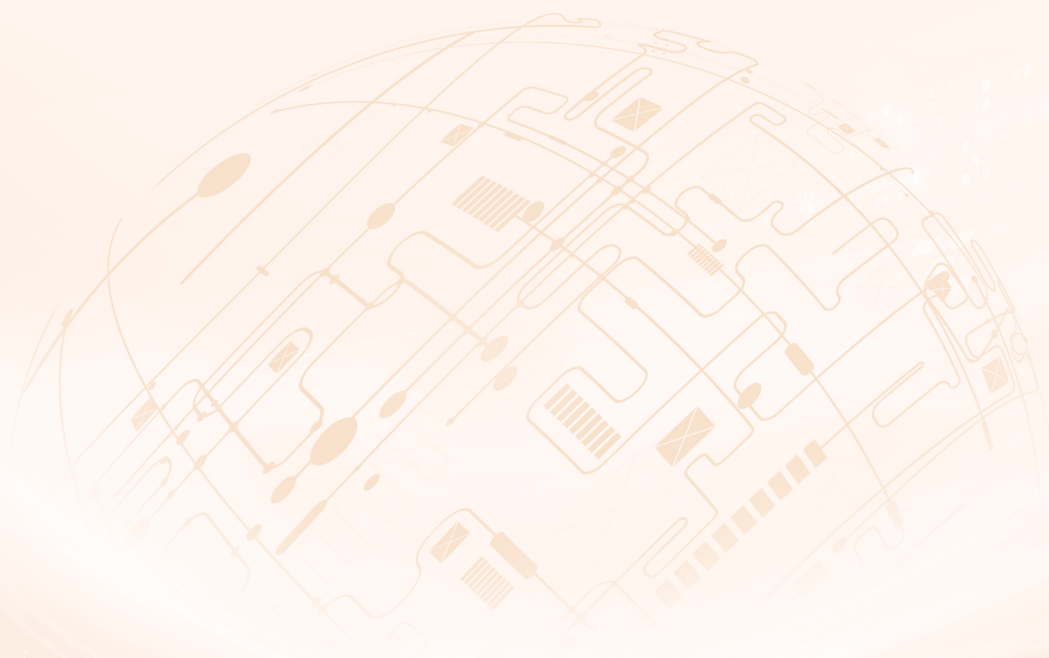
(股份代號：01347)

2024 年度報告 ANNUAL REPORT



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DEFINITIONS

In this annual report, unless otherwise required by the context, the following terms shall have the meanings set out below.

“Annual General Meeting” or “AGM”	an annual general meeting of the Company to be held on 8 May 2025;
“Articles”	the articles of association of the Company (as amended from time to time);
“Board”	the Board of Directors of the Company;
“China IC Fund”	China Integrated Circuit Industry Investment Fund Co., Ltd.* (國家集成電路產業投資基金股份有限公司), a company incorporated in the PRC on 26 September 2014; its shareholders include the Ministry of Finance, the enterprises in the Integrated Circuit Industry Cluster, large-scale state-owned enterprises, certain financial institutions and private enterprises. It mainly focuses on the manufacturing of semiconductor wafers and takes into account the upstream and downstream links covering chip design, package test, equipment and materials etc;
“China IC Fund II”	China Integrated Circuit Industry Investment Fund (Phase II) Co., Ltd.* (國家集成電路產業投資基金二期股份有限公司), a company established in the PRC on 22 October 2019; its shareholders include the Ministry of Finance, the enterprises in the Integrated Circuit Industry Cluster, large-scale state-owned enterprises, certain financial institutions and private enterprises. It mainly invests in the value chain of the integrated circuit industry via equity investment, primarily in integrated circuit chip manufacturing as well as chip designing, packaging test and equipment and materials. To the best of the Directors’ knowledge, information and belief and having made all reasonable enquiry, China IC Fund II is not an associate of China IC Fund under Chapter 14A of the Listing Rules;
“Company” or “Hua Hong Semiconductor”	Hua Hong Semiconductor Limited, a company incorporated in Hong Kong with limited liability on 21 January 2005 and, except where otherwise required by the context, all of its subsidiaries, or its present subsidiaries where the context refers to the time before it became the holding company of its present subsidiaries;
“Director(s)”	the Director(s) of the Company;

DEFINITIONS

“EPS”	earnings per share;
“Extraordinary General Meeting” or “EGM”	an extraordinary general meeting of the Company;
“Grace Cayman”	Grace Semiconductor Manufacturing Corporation, an exempted company with limited liability incorporated in the Cayman Islands on 5 October 1999 and a wholly – owned subsidiary of our Company;
“Group”	our Company and our subsidiaries or, where required by the context, with respect to the period before our Company became the holding company of our present subsidiaries (or became such associated companies of our Company), the business operated by such subsidiaries or their predecessors (as the case may be);
“HHGrace”	Shanghai Huahong Grace Semiconductor Manufacturing Corporation (上海華虹宏力半導體製造有限公司), a company incorporated in the PRC on 24 January 2013 and a wholly-owned subsidiary of our Company;
“Hong Kong Stock Exchange”	The Stock Exchange of Hong Kong Limited;

DEFINITIONS

“Huahong Group”	Shanghai Huahong (Group) Co., Ltd. (上海華虹(集團)有限公司), a company incorporated in the PRC on 9 April 1996 as Shanghai Hua Hong Microelectronics Co., Ltd. and renamed as Shanghai Huahong (Group) Co., Ltd. in 1998, and a substantial shareholder of our Company;
“Huahong Group Framework Agreement”	the framework agreement dated 30 December 2023 entered into between the Company and Huahong Group to regulate the sales and purchase transactions and provision of services between the Group and Huahong Group, its subsidiaries or associates (as defined under Chapter 14A of the Listing Rules) for the year ending 31 December 2024;
“Huahong Real Estate”	Shanghai Huahong Real Estate Co., Ltd. (上海華虹置業有限公司), a company incorporated in the PRC on 28 October 2011 and a wholly-owned subsidiary of Huahong Technology Development;
“Huahong Technology Development”	Shanghai Huahong Technology Development Co., Limited (上海華虹科技發展有限公司), a connected person, a company incorporated in the PRC on 10 May 2010, and a company 50% held by and consolidated with Huahong Group and 50% held by HHGrace;
“Huajin Property Management”	Shanghai Huajin Property Management Co., Ltd. (上海華錦物業管理有限公司), a company incorporated in the PRC on 8 June 2012, a wholly-owned subsidiary of Huahong Technology Development and a connected person of the Company;
“Huali Micro”	Shanghai Huali Microelectronics Corporation (上海華力微電子有限公司), a company incorporated in the PRC on 18 January 2010 and a connected person;
“Shanghai Huali”	Huali Micro and its holding subsidiaries;
“Hua Hong Wuxi”	Hua Hong Semiconductor (Wuxi) Limited, a company incorporated in the PRC on 10 October 2017 and a non-wholly owned subsidiary of the Company held as to approximately 22.22%, 28.78%, 20.00%, 20.58% and 8.42% by the Company, HHGrace, Wuxi Xi Hong Guo Xin, China IC Fund and China IC Fund II, respectively;
“Hua Hong Manufacturing”	Hua Hong Semiconductor Manufacturing (Wuxi) Co., Ltd.* (華虹半導體製造(無錫)有限公司), a company incorporated in the PRC on 17 June 2022 and a non-wholly owned subsidiary of the Company held as to approximately 21.90%, 29.10%, 20.00% and 29.00% by the Company, HHGrace, Wuxi Xi Hong Lian Xin and China IC Fund II, respectively;

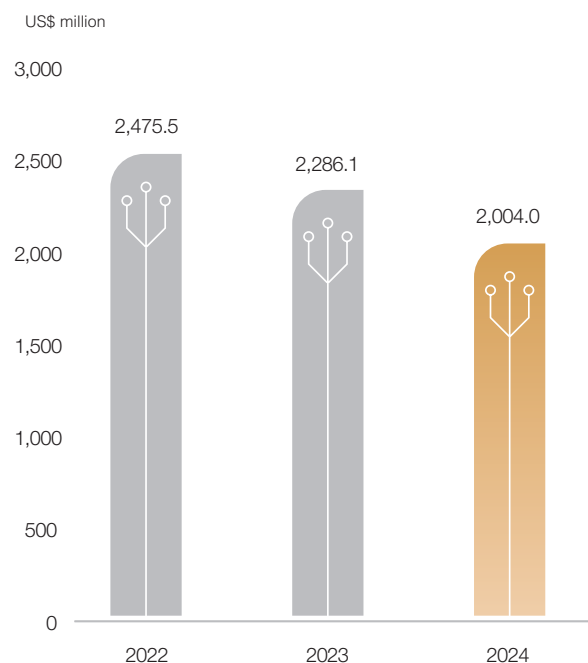
DEFINITIONS

“Listing Rules”	the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, as amended or supplemented from time to time;
“RMB Share(s)” or “A Share(s)”	the ordinary share(s) of the Company which are listed on the STAR Market and traded in RMB;
“RMB Share Issue”	the Company’s issue of 407,750,000 RMB Shares, which are listed and became available for trading on the STAR Market on 7 August 2023;
“SAIL”	Shanghai Alliance Investment Limited (上海聯和投資有限公司), a company incorporated in the PRC on 26 September 1994, a substantial shareholder of our Company;
“SFC”	the Securities and Futures Commission of Hong Kong;
“SFO”	the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong), as amended or supplemented from time to time;
“STAR Market”	the Science and Technology Innovation Board of the Shanghai Stock Exchange;
“Wuxi Xi Hong Guo Xin”	Wuxi Xi Hong Guo Xin Investment Co., Ltd.* (無錫錫虹國芯投資有限公司), a professional investment company incorporated in the PRC on 16 January 2023, jointly controlled by municipal and district-level state-owned enterprises, holding 20.00% of the shares of Hua Hong Wuxi, a non-wholly owned subsidiary of the Company; and
“Wuxi Xi Hong Lian Xin”	Wuxi Xi Hong Lian Xin Investment Co., Ltd.* (無錫錫虹聯芯投資有限公司), a professional investment company incorporated in the PRC on 19 December 2017, jointly established by municipal and district-level state-owned enterprises, holding 20.00% of the shares of Hua Hong Manufacturing, a non-wholly owned subsidiary of the Company.

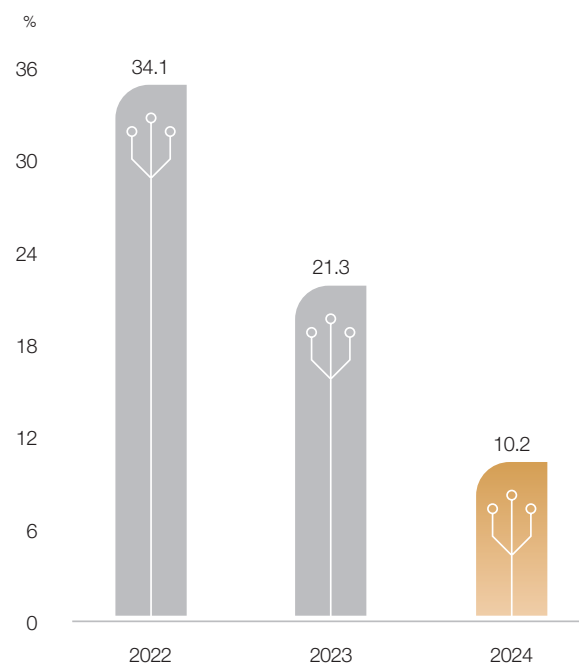
* For identification purpose only

KEY FINANCIALS

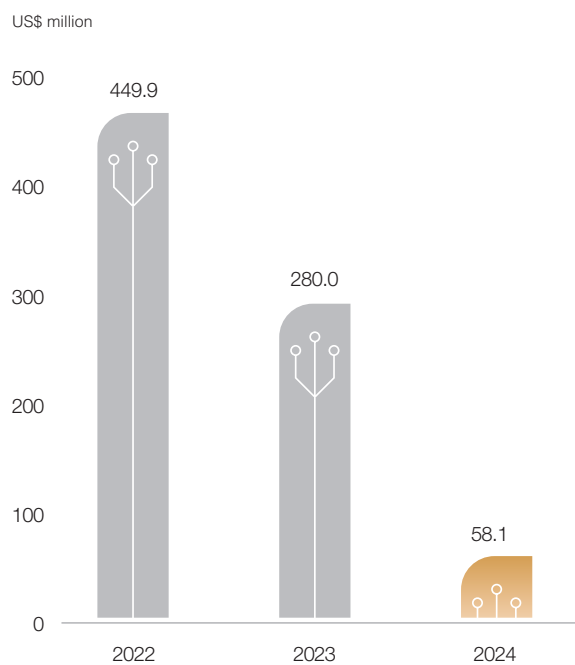
Revenue



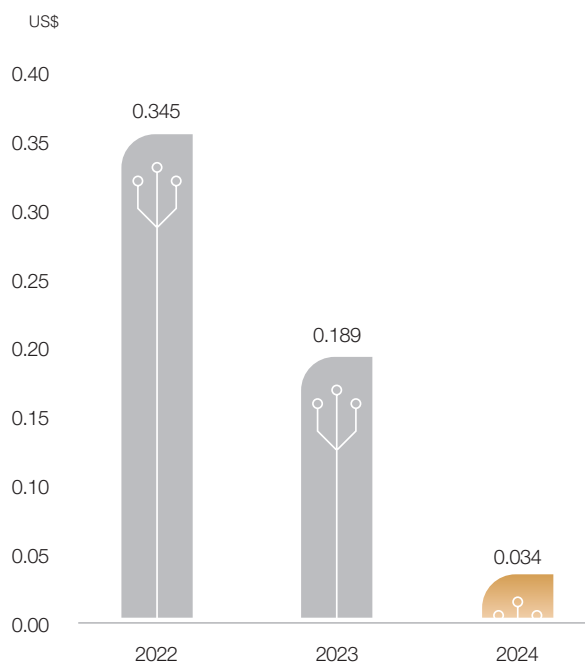
Gross Profit Margin



Profit attributable to owners of the parent



EPS



LETTER TO SHAREHOLDERS

Dear Shareholders,

For Hua Hong Semiconductor, 2024 was a year of significant challenges as well as relentless progress and determination. After enduring a period of weak demand and the pressure of high inventory, the global semiconductor industry is now witnessing a moderate recovery. Despite uncertainties in demand outside of the AI and consumer electronics market sectors, as well as intense competition and pricing pressures stemming from an increase in the supply of mature-node chips, Hua Hong Semiconductor has maintained steady development in a complex and changeable environment by leveraging its deep-rooted expertise in specialty technologies and strong customer support. The Company achieved sales revenue of US\$2,004 million for the year, with near-full average capacity utilization and steady quarter-on-quarter improvement in overall financial performance.

In the fourth quarter of 2024, the second 12-inch production line located in Wuxi (the Hua Hong Manufacturing Project) was successfully put into operation, marking another significant milestone in the Company's "8-inch + 12-inch" strategy. Following an eighteen-month period encompassing facility construction, cleanroom delivery, equipment installation, debugging and verification, the Hua Hong Manufacturing Project was completed and commenced production ahead of schedule. Various specialty process platforms have been successfully integrated and are expected to drive steady revenue growth starting in 2025, laying a solid foundation for future performance improvement.

As a technology enterprise that prioritizes high-quality productivity, innovation remains the sole key to maintaining leadership. The Company continues to increase its R&D investment in process technology – Our core competitive edge. By the end of 2024, the Company had accumulated a total of 4,644 authorized patents, both domestically and internationally. Through continuous iteration and advancement of its process platforms, the Company provides customers and ecosystem partners with an enhanced product portfolio, while laying a solid foundation for the next phase of development. With steadily advancing business expansion and capacity growth, the Company has been focusing on further improvements in operational efficiency during the industry's trough. By implementing cost-reduction and efficiency-enhancement measures across sales and marketing, procurement and supply chain, production and manufacturing, as well as operational support, the Company has strengthened cost control and solidified its competitive advantages.

LETTER TO SHAREHOLDERS

Looking ahead in 2025, the global semiconductor market is expected to continue its moderate recovery. The penetration of AI applications is set to accelerate demand for upgrades in sectors such as smartphones, computer, and automotive intelligence, while demand in industrial and new energy fields is also anticipated to gradually rebound. In the new year, Hua Hong Semiconductor will steadfastly enhance its production capacity expansion, ensuring the Hua Hong Manufacturing Project ramps up production as planned. The Company will continue to optimize its advanced “Specialty IC + Power Discrete” process and product portfolio, increasing the proportion of high-value products. It will also deepen strategic collaboration with customers and end-market ecosystem partners, to meet the rising demand driven by supply chain localization in the Chinese market. Moving forward, the Company will leverage innovation as its engine for growth and quality for its foundation, seizing opportunities in the industry's new growth cycle to create sustainable value for shareholders, and collaborate with partners to write a new chapter in the semiconductor industry!

Junjun Tang

Chairman and Executive Director

Peng Bai

President and Executive Director

Shanghai, PRC
27 March 2025

CORPORATE INFORMATION

Corporate Culture

SPIRIT

FACE CHALLENGES HEAD-ON
STRIVE FOR EXCELLENCE

VISION

WE EMPOWER OUR CUSTOMERS
THROUGH CONTINUOUS INNOVATION

MISSION

CREATING VALUE FOR SHAREHOLDERS, CUSTOMERS AND
EMPLOYEES THROUGH COLLABORATION, INNOVATION AND
BEING A GOOD CORPORATE CITIZEN

CORE

VALUES

INTEGRITY, TEAMWORK, INITIATIVE
AND DISRUPTIVE INNOVATION

CORPORATE INFORMATION

Board of Directors

Executive Directors

Junjun Tang (*Chairman*)
Peng Bai (*President*) (*appointed on 1 January 2025*)
Suxin Zhang (*resigned on 31 December 2024*)

Non-Executive Directors

Jun Ye
Guodong Sun
Bo Chen (*appointed on 7 March 2025*)
Chengyan Xiong (*appointed on 28 March 2024*)
Limin Zhou (*appointed on 19 January 2024, resigned on 7 March 2025*)

Independent Non-Executive Directors

Stephen Tso Tung Chang
Kwai Huen Wong, JP
Songlin Feng (*appointed on 28 March 2024*)
Long Fei Ye (*resigned on 28 March 2024*)

Company Secretary

Sui Har Lee

Authorized Representatives

Junjun Tang
Sui Har Lee

Audit Committee

Stephen Tso Tung Chang (*Chairman*)
Chengyan Xiong (*appointed on 28 March 2024*)
Songlin Feng (*appointed on 28 March 2024*)
Jun Ye (*resigned on 28 March 2024*)
Long Fei Ye (*resigned on 28 March 2024*)

Remuneration Committee

Kwai Huen Wong, JP (*Chairman*)
Jun Ye (*appointed on 28 March 2024*)
Songlin Feng (*appointed on 28 March 2024*)
Long Fei Ye (*resigned on 28 March 2024*)

Nomination Committee

Junjun Tang (*Chairman*) (*appointed on 31 December 2024*)
Kwai Huen Wong, JP
Songlin Feng (*appointed on 28 March 2024*)
Suxin Zhang (*resigned on 31 December 2024*)
Long Fei Ye (*resigned on 28 March 2024*)

Website

www.huahonggrace.com

Auditor

Ernst & Young
Certified Public Accountants
27/F, One Taikoo Place
979 King's Road, Quarry Bay
Hong Kong, PRC

Hong Kong Legal Advisor

Herbert Smith Freehills
23/F, Gloucester Tower
15 Queen's Road Central
Hong Kong, PRC

Principal Banks

China Construction Bank Shanghai Branch
No. 900, Lujiazui Ring Road
Pudong New Area
Shanghai, PRC

China Development Bank Shanghai Branch
No. 68, Puming Road
Pudong New Area
Shanghai, PRC

China Merchants Bank Co., Ltd. Shanghai Branch
No.1088 Lujiazui Ring Road
Pudong New Area
Shanghai, PRC

China Construction Bank Corporation Hong Kong Branch
28/F, CCB Tower, 3 Connaught Road, Central
Hong Kong, PRC

Bank of Communications Co., Ltd. Hong Kong Branch
20 Pedder Street, Central
Hong Kong, PRC

China Development Bank Jiangsu Branch
No. 232, Middle Jiangdong Road
Nanjing, Jiangsu, PRC

Agricultural Bank of China Wuxi Xinwu Subbranch
No. 26, Hefeng Road, Xinwu District
Wuxi, Jiangsu, PRC

China Construction Bank Wuxi High and New Technology Industrial Development Zone Subbranch
No. 26, Hefeng Road, Xinwu District
Wuxi, Jiangsu, PRC

China CITIC Bank Wuxi New District Subbranch
No. 26, Hefeng Road, Xinwu District
Wuxi, Jiangsu, PRC

Bank of China Wuxi High and New Technology Industrial Development Zone Subbranch
No. 140, Wangzhuang Road, Xinwu District
Wuxi, Jiangsu, PRC

Bank of Communications Co., Ltd. Wuxi Branch
No.8, 2nd Financial Street, Binhu District
Wuxi, Jiangsu, PRC

CORPORATE INFORMATION

Share Registrar

Hong Kong shares:
Tricor Investor Services Limited
17/F, Far East Finance Centre
16 Harcourt Road
Hong Kong, PRC

A shares:
China Securities Depository and Clearing Corporation
Limited, Shanghai Branch
No. 188 South Yanggao Road
Pudong New Area
Shanghai, PRC

Registered Office

Room 2212, Bank of America Tower
12 Harcourt Road, Central
Hong Kong, PRC

Principal Places of Business

288 Halei Road
Zhangjiang Hi-Tech Park
Shanghai, PRC
Postcode: 201203

No. 30, Xinzhou Road
Xinwu District
Wuxi, Jiangsu, PRC
Postcode: 214028

No. 30-1, Xinzhou Road
Xinwu District
Wuxi, Jiangsu, PRC
Postcode: 214028

Stock Code

Hong Kong Stock Exchange: 01347
Shanghai Stock Exchange: 688347

DIRECTORS AND SENIOR MANAGEMENT TEAM



Mr. Junjun Tang, aged 60, was appointed on 1 May 2019 as the President and Executive Director of the Company, and subsequently redesignated on 31 December 2024 as the Chairman and Executive Director of the Company. Mr. Tang also serves as Chairman of HHGrace, Hua Hong Wuxi and Hua Hong Manufacturing. Mr. Tang has extensive experience in the integrated circuit industry and management and possesses strong coordination and execution ability. Prior to joining the Company, Mr. Tang was the Secretary of the Party Committee, Vice President and Executive Vice President of Huali Micro from February 2010 to March 2019, and concurrently served as the President of Shanghai Huali from August 2016 to March 2019. During the period from July 2008 to February 2010, Mr. Tang was the Vice Secretary of the Party Committee, President of Trade Union and head of administrative and government relationships of Shanghai Hua Hong NEC Electronics Co., Ltd.. Prior to joining the Company, Mr. Tang successively held various positions, including Associate Chief Officer of Shanghai Bureau of Instrument and Telecommunications Industry (上海儀表電訊工業局), Technologist of Shanghai Radio No.17 Factory (上海無線電十七廠) and Technologist of Shanghai Semiconductor Device No.4 Factory (上海半導體器件四廠). Mr. Tang graduated from Southwest Jiaotong University with an Undergraduate's degree in Business Administration. He also graduated from China Europe International Business School with a Master's degree in Business Administration. He holds the title of Chief Senior Economist, and was awarded titles including National May 1st Labor Medal, National Model Worker, National Outstanding Party Affairs Worker.



Dr. Peng Bai, aged 62, was appointed as the President and Executive Director of the Company on 1 January 2025. Mr. Bai also serves as President and Director of HHGrace, Hua Hong Wuxi and Hua Hong Manufacturing. Mr. Bai has over 30 years of experience in the field of integrated circuits manufacturing. Prior to joining the Company, Mr. Bai was the Chief Executive Officer of Rong Semiconductor Corporation (榮芯半導體有限公司), where he had held the position since 2022. Before that, he served as a process integration engineer, process integration manager, director of yield engineering, director of research and development and vice president, and corporate vice president, successively, at Intel Corporation. Mr. Bai studied at Peking University and subsequently graduated from the University of Bucharest in 1985 with a Bachelor of Science degree in Physics, and received a Doctor of Philosophy degree in Physics from the Rensselaer Polytechnic Institute in 1991.

DIRECTORS AND SENIOR MANAGEMENT TEAM



Mr. Jun Ye, aged 52, has been a Non-Executive Director of our Company since February 2012, and is a Director of HHGrace. Mr. Ye has more than 20 years of experience in finance and investment. Mr. Ye has successively held various positions in SAIL, including Manager of the Investment Banking Division and the Business Development Division, General Manager Assistant, Deputy General Manager and General Manager since 1996 and Chairman since March 2025. Mr. Ye is also a Director at Bank of Shanghai, Chairman of Shanghai Zhaoxin Semiconductor Co., Ltd., Sinotherapeutics Inc. and Sino-US United MetLife Insurance Company Limited. Mr. Ye obtained a Bachelor's degree in Industrial and International Trade and a Master's degree in Business Administration from Shanghai Jiao Tong University.



Mr. Guodong Sun, aged 47, was appointed as a Non-Executive Director of the Company with effect from 10 December 2020. Mr. Sun is also the Director of Hua Hong Wuxi and Hua Hong Manufacturing. Mr. Sun joined China Development Bank in 2000. From 2000 to 2014, Mr. Sun held various positions in China Development Bank, including Deputy Director of the Human Resources Systems Division, Deputy Director and Director of the Hubei Branch Human Resources Department, etc. Mr. Sun had been the General Manager of the Human Resources Department of Sino-IC Capital Co., Ltd. (華芯投資管理有限責任公司) from December 2014 to July 2016, and has been the Managing Director of Sino-IC Capital Co., Ltd. since July 2016, and has been the General Manager of Shanghai Branch of Sino-IC Capital Co., Ltd. since May 2024. Mr. Sun graduated from Beijing Institute of Technology in the PRC with a Bachelor's degree in Computer Application and from Central University of Finance and Economics in the PRC with a Master's degree in Business Administration.

DIRECTORS AND SENIOR MANAGEMENT TEAM



Mr. Bo Chen, aged 48, was appointed as a Non-Executive Director of the Company on 7 March 2025. Mr. Chen is also the Director of HHGrace, Hua Hong Wuxi and Hua Hong Manufacturing. Mr. Chen is currently serving as the vice president of Shanghai Huahong (Group) Co., Ltd. (上海華虹(集團)有限公司) and as the Chairman of Shanghai Hua Hong Hongri Electronics Co., Ltd. (上海華虹虹日電子有限公司). Mr. Chen has extensive experience in strategic development of high-tech industries and fixed asset investment. Prior to joining our Group, Mr. Chen held various positions at the Shanghai Municipal Development and Reform Commission (上海市發展和改革委員會) from 2001 to 2023, including Deputy Principal Staff Member, Principal Staff Member, Assistant to the Division Director, Deputy Division Director, Division Director and Level I Division Rank Official. Mr. Chen graduated from Fudan University and received a Master of Science degree.



Ms. Chengyan Xiong, aged 45, was appointed as a Non-executive Director of the Company with effect from 28 March 2024. Ms. Xiong has nearly 20 years of experience working in the finance and accounting sector. Prior to joining the Company, Ms. Xiong was a deputy chief staff member and chief staff member of the budget office of Shanghai State-owned Assets Supervision and Administration Commission* (上海市國有資產監督管理委員會), after which she held positions as deputy head and head in various departments within the group companies of Huahong Group. Ms. Xiong is currently the director of the capital and finance department of Huahong Group and holds various positions as a director or a supervisor at a number of the subsidiaries of Huahong Group. Ms. Xiong graduated from Shanghai University of Finance and Economics (上海財經大學) with a Master's degree in management. Ms. Xiong is also a senior accountant and a non-practising certified public accountant in the PRC.

DIRECTORS AND SENIOR MANAGEMENT TEAM



Mr. Suxin Zhang, resigned on 31 December 2024 as the Chairman and an Executive Director of our Company as well as the Chairman of the Nomination Committee.



Mr. Limin Zhou, resigned on 7 March 2025 as a Non-Executive Director of the Company.

DIRECTORS AND SENIOR MANAGEMENT TEAM



Mr. Stephen Tso Tung Chang, aged 76, is an Independent Non-Executive Director of our Company and a Director of HHGrace. Mr. Chang was a certified public accountant in Hong Kong and a member of the Hong Kong Society of Accountants from 1978 to the end of 2003. He has been a Fellow member of the Institute of Chartered Accountants in England and Wales since January 1983, and has extensive experience in accounting, auditing and financial management. Mr. Chang held various positions at Ernst & Young starting in 1976. He became a Management Committee Member of Ernst & Young in 1989 and was actively involved in establishing and monitoring the firm's internal control and risk management policy and procedures. Prior to his promotion to Managing Partner of the Professional Services Department, he was Chairman of Ernst and Young's audit and advisory business services for four years. He was a Partner of Ernst and Young and the Chairman of Ernst and Young China and Hong Kong prior to his retirement in 2003. He is a member of the Investment Committee of Shanghai Fudan University Education Development Foundation and Fudan University Education Development Foundation (overseas). He is also an Independent Non-Executive Director of China World Trade Center Co., Ltd. (stock code: 600007.SH), and was formerly an Independent Non-Executive Director of China Cinda Asset Management Co., Ltd. (stock code: 1359.HK), Kerry Properties Limited (stock code: 683.HK) and China Life Insurance Company Ltd. (stock code: 2628.HK). Mr. Chang obtained a Bachelor of Science degree in Food Science and Chemistry from the University of London.



Mr. Kwai Huen Wong, SBS, BBS, JP, aged 73, is an Independent Non-Executive Director of our Company and a Director of HHGrace. Mr. Wong had served as the PRC Managing Partner of two international law firms for 15 years. Prior to that, he worked for the Lands Department, Department of Justice and Legislative Council of the Hong Kong SAR Government for a total of 10 years. He was appointed as a Member of Airport Authority Hong Kong, Hospital Authority, and the Competition Commission from 2011 to 2018. He was the former Chairman of the Hong Kong International Arbitration Centre, the former President of the Law Society of Hong Kong and Inter-Pacific Bar Association, and the former Chairman of Hong Kong Copyright Tribunal. He is presently the Chairman of Hong Kong Inland Revenue Board of Review, and the Independent Non-Executive Director of Vinda International Holdings Limited (stock code: 3331.HK) and NWS Holdings Limited (stock code: 659.HK). Mr. Kwai Huen Wong was formerly a Director of the Hong Kong Mortgage Corporation Limited and an Independent Non-Executive Director of China Oilfield Services Limited. In addition, he is the Honorary Lecturer, External Examiner, Advisory Board Member and Professor at The University of Hong Kong, The Chinese University of Hong Kong, City University of Hong Kong, Hong Kong Baptist University and Hong Kong Shue Yan University. Mr. Wong holds a Bachelor of Arts degree from The Chinese University of Hong Kong and a Bachelor of Law degree from the University of London.

DIRECTORS AND SENIOR MANAGEMENT TEAM



Mr. Songlin Feng, aged 60, is an Independent Non-Executive Director of our Company and the Director of HHGrace with effect from 28 March 2024. He has over 32 years of experience in academic research in science and technology, including integrated circuits and semiconductors. He successively served as a deputy researcher, researcher, deputy director, director, an assistant to head and the head of the Institute of Semiconductors of the Chinese Academy of Sciences* (中國科學院半導體研究所) from February 1992 to December 2000. From January 2001 to August 2010, he was a researcher, deputy head and the head of Shanghai Institute of Microsystems and Information Technology of the Chinese Academy of Sciences* (中國科學院上海微系統與信息技術研究所). He successively served as a researcher, the leader of the planning team and the Dean of Shanghai Advanced Research Institute of the Chinese Academy of Sciences* (中國科學院上海高等研究院) from March 2009 to May 2017, and then as a researcher of the Institute, retiring in May 2024. Mr. Feng has been an independent director of INESA Intelligent Tech Inc. (雲賽智聯股份有限公司), a company listed on the Shanghai Stock Exchange (Stock Code: 600602) and Shanghai Zhaoxin Semiconductor Co., Ltd.* (上海兆芯集成電路股份有限公司). In addition, Mr. Feng has been a director of Shanghai Zhongyan Hongling Information Technology Co., Ltd.* (上海中研宏瓚信息科技有限公司), Jiaxing Zhongke Wireless Sensor Network Technology Co., Ltd. (嘉興中科無線傳感網科技有限公司) and Shanghai Zengwei Anxin Technology Development Co., Ltd. (上海增維安信科技發展有限公司). Mr. Feng graduated from Wuhan University (武漢大學) with a bachelor's degree in semiconductor physics, and holds a master's degree and a doctor's degree in material sciences from from Université Paris Diderot – Paris VII, respectively.



Mr. Long Fei Ye, resigned on 28 March 2024 as an Independent Non-Executive Director of our Company and the member of the Audit Committee, the Nomination Committee and the Remuneration Committee.

DIRECTORS AND SENIOR MANAGEMENT TEAM



Mr. Daniel Yu-Cheng Wang, aged 62, has been appointed as the Secretary of the Board of the Company since February 2012. Mr. Wang is also an Executive Vice President of our Company, HHGrace, Hua Hong Wuxi and Hua Hong Manufacturing, supervising key functional divisions including finance, information technology, administration and compliance, board office, and overseas human resources. In April 2001, Mr. Wang joined Grace Shanghai Semiconductor Manufacturing Corporation and took on a central leadership position at every phase of Grace Shanghai's growth and development. His responsibilities encompassed supervising the planning and execution of the merger, as well as the successful initial public offering of the company on both the Hong Kong Stock Exchange and the STAR board at the Shanghai Stock Exchange. Prior to joining Grace Shanghai Semiconductor Manufacturing Corporation, Mr. Wang served at LSI Logic Corporation in San Jose, Silicon Valley, California from August 1995 to March 2001 as the Division Controller in the Broadband Entertainment Division. Before that, Mr. Wang was employed by Franklin Templeton Investments in the U.S. Mr. Wang holds a Bachelor's degree in Industrial Engineering and Operations Research from the College of Engineering, University of California, Berkeley and a Master's degree of Business Administration degree in Finance and Banking from the University of San Francisco, in the U.S.. In the "All – Asia (Ex-Japan) Executive Team Ranking" published by Institutional Investor, a respected international financial magazine, he was honored as the Best Chief Financial Officer in the technology/semiconductor industry for several times.

DIRECTORS AND SENIOR MANAGEMENT TEAM

Senior Management

As at the date of this report, the Company's senior management includes:

Mr. Junjun Tang, aged 60, is the Chairman and an Executive Director of our Company. For more information about Mr. Tang's profile and academic background, see the section headed "Directors and Senior Management Team – Board of Directors".

Dr. Peng Bai, aged 62, is the President and Executive Director of the Company. For more information about Mr. Bai's profile and academic background, see the section headed "Directors and Senior Management Team – Board of Directors".



Mr. Weiping Zhou, aged 57, is an Executive Vice President of our Company, HHGrace, Hua Hong Wuxi and Hua Hong Manufacturing, responsible for marketing and has over 35 years of experience in the integrated circuit industry in China. Mr. Zhou joined the Company at the beginning of 2018. Prior to joining the Company, Mr. Zhou was the Executive Vice President of Shanghai Belling Corporation Limited, the General Manager of Ningbo Shanshan Ulica Solar Technology Developing Company Limited, the General Manager of Shanghai Belling Microelectronics Manufacturing Company Limited, the Deputy Secretary to the Communist Party Committee, President, Chief Executive Officer, Secretary to the Communist Party Committee and Vice President of Advanced Semiconductor Manufacturing Corporation Limited. Mr. Zhou graduated from East China Normal University with a Bachelor's degree in Solid State Electronic Technology and subsequently obtained a Master's degree in Business Administration from Fudan University, and he is a professor-level Senior Engineer.

DIRECTORS AND SENIOR MANAGEMENT TEAM



Mr. Daniel Yu-Cheng Wang, aged 62, is an Executive Vice President of our Company, HHGrace, Hua Hong Wuxi and Hua Hong Manufacturing, and is in charge of finance, information technology, administration and compliance, board office, and overseas human resources. For more information about Mr. Wang's profile and academic background, see the section headed "Directors and Senior Management Team – Board of Directors".



Mr. Guangping Hua, aged 57, is an Executive Vice President of our Company, HHGrace, Hua Hong Wuxi and Hua Hong Manufacturing, and is in charge of technology development and design services. Mr. Hua has nearly 30 years of working experience in the semiconductor industry. Prior to this, Mr. Hua has worked for Institute of Microelectronics of Tsinghua University, Chartered Semiconductor Manufacturing Limited (Singapore), Advanced Semiconductor Manufacturing Corporation Limited and Shanghai Hua Hong NEC Electronics Co., Ltd.. Mr. Hua graduated from Tsinghua University with a Master's degree in Microelectronics Engineering and holds a professional title of Assistant Researcher.

DIRECTORS AND SENIOR MANAGEMENT TEAM

Company Secretary



Ms. Sui Har Lee, aged 47, has been serving as the Company Secretary of the Company since November 2019. Ms. Lee is currently a Partner of Jun He Law Offices. She has around 16 years of experience in general business practices and corporate financial transactions, such as assisting corporations in listing their shares on the Hong Kong Stock Exchange, merger and acquisitions, capital reorganization, and compliance and regulatory matters in relation to the Listing Rules of the Hong Kong Stock Exchange. Ms. Lee was admitted as a Solicitor of the High Court of Hong Kong in 2005. Ms. Lee graduated from City University of Hong Kong with the degree of Bachelor of Laws and obtained the degree of Master of Laws from University College London.

CORPORATE GOVERNANCE REPORT

The Board is pleased to present this corporate governance report for the year ended 31 December 2024.

Corporate Governance Practices

The Company diligently practices good corporate governance and has established corporate governance procedures that comply with the principles in the Corporate Governance Code (the “Code”) as set out in Appendix C1 to the Listing Rules.

The Company understands the importance of sound corporate governance practices and recognizes the changing regulatory environment. Therefore, the Company has continually monitored and updated its corporate governance practices, from implementing the Code and evaluating the effectiveness of its practices to responding to continuous developments in the regulatory landscape.

Compliance with the Code Provisions

During the year ended 31 December 2024, the Company complied with the Code.

Securities Transactions by Directors

The Company has adopted the Model Code for Securities Transactions by Directors of Listed Issuers (the “Model Code”) as set out in Appendix C3 to the Listing Rules as its own code of conduct regarding securities transactions by Directors. The Company has made specific enquiries with all of the Directors, each of whom has confirmed that they have, throughout the year ended 31 December 2024, complied with the required standards set out therein.

Board of Directors

The Board is entrusted with the overall responsibility of managing the business and affairs of the Company. It has the ultimate responsibility for the day-to-day management of the Company, which is delegated to the Chairman and management.

The nine-member Board currently comprises two Executive Directors, Mr. Junjun Tang (Chairman) (appointed as the Chairman on 31 December 2024) and Dr. Peng Bai (President) (appointed on 1 January 2025); four Non-Executive Directors, Mr. Jun Ye, Mr. Guodong Sun, Mr. Bo Chen (appointed on 7 March 2025) and Ms. Chengyan Xiong (appointed on 28 March 2024); and three Independent Non-Executive Directors, Mr. Stephen Tso Tung Chang, Mr. Kwai Huen Wong, JP, and Mr. Songlin Feng (appointed on 28 March 2024). Mr. Suxin Zhang, Mr. Limin Zhou and Mr. Long Fei Ye resigned as an Executive Director, a Non-Executive Director and an Independent Non-Executive Director on 31 December 2024, 7 March 2025 and 28 March 2024, respectively. More details of the Directors are disclosed on page 12 of this annual report. The Company has published and maintained on its website and on the Hong Kong Stock Exchange’s website an updated list of the Directors, identifying their roles and functions.

Each of the Non-Executive Directors of the Company is appointed for a specific term of three years and is subject to re-nomination and re-election by the Company in general meetings, unless previously terminated in accordance with the terms and conditions of the relevant letter of appointment or Director’s service contract.

CORPORATE GOVERNANCE REPORT

The Board meets regularly throughout the year. All Directors are given the opportunity to put items on the agenda for regular Board meetings. All Directors have access to the Company Secretary to ensure that all Board procedures, rules and regulations are followed. Full minutes of Board meetings are kept by the Company Secretary and are available for inspection on reasonable notice. Any Director may, in furtherance of his duties, take independent professional advice, where necessary, at the expense of the Company.

The Board is responsible for setting the strategic direction and policies of the Group and supervising management. Some functions are reserved by the Board, including, inter alia, the monitoring and approval of material transactions; matters involving a conflict of interest with a substantial shareholder or a Director of the Company; the approval of the quarterly, interim and final results; other disclosures to the public or regulators; and the internal control system. Decisions relating to such matters shall be subject to formal decisions of the Board. Matters not specifically reserved to the Board and necessary for the daily operations of the Company are delegated to management under the supervision of the respective Director(s) and the leadership of the Chairman.

The Company has implemented different mechanisms to ensure independent views and input are available to the Board:

- **Composition of the Board:** During the year ended 31 December 2024, the Board had at all times complied with Rules 3.10 and 3.10A of the Listing Rules. The Company has three Independent Non-Executive Directors, representing more than one-third of the Board. At least one of the Independent Non-Executive Directors possesses appropriate professional qualifications or accounting or related financial management expertise.
- **Independence assessment:** Each of the Independent Non-Executive Directors has made an annual confirmation of independence pursuant to Rule 3.13 of the Listing Rules. The Company is of the view that all Independent Non-Executive Directors are independent in accordance with the guidelines set out in Rule 3.13 of the Listing Rules.
- **Board decision-making:** A Director who has a material interest in any transaction, contract or arrangement shall not vote (nor shall be counted in the quorum) on any Board resolution approving the same. If a substantial shareholder or a Director has a conflict of interest in a matter to be considered by the Board which the Board has determined to be material, such matter shall be dealt with in a Board meeting rather than by a written resolution.
- **Communication between the Chairman and Independent Non-Executive Directors:** The Chairman of the Board values communication with the Independent Non-Executive Directors highly and holds meetings with them at least once each year without the presence of other Directors.
- **Remuneration of Independent Non-Executive Directors:** Independent Non-executive Directors receive fixed fees for their role as members of the Board and Board committees. No equity-based compensation with performance-related elements is granted to the Independent Non-executive Directors to avoid potential bias in their decision-making or compromise to their objectivity and independence.
- **Board evaluation:** The Board assesses and reviews the time contributed by each Independent Non-Executive Director and their attendance at Board and Board committee meetings, so as to ensure that every Independent Non-Executive Director has devoted sufficient time to the Board to discharge his responsibilities as a Director of the Company.

The implementation and effectiveness of the above mechanisms are reviewed on an annual basis. The Board considers that such mechanisms had been implemented properly and effectively in the year ended 31 December 2024.

CORPORATE GOVERNANCE REPORT

The roles of the Chairman and the President are separate. The Chairman is responsible for the overall management and operations of the Company and for proposing and reviewing the corporate directions and strategies of the Company. The Chairman is responsible for formulating business strategies and provides leadership to the Board, ensuring effective running of the Board, including that all appropriate issues are discussed by the Board in a timely manner. The Chairman ensures that all Directors are properly briefed on issues arising at Board meetings and all Directors receive adequate, complete and reliable information. The Chairman of the Board highly values communication with the Independent Non-Executive Directors and will hold meetings with them at least once each year without the presence of other Directors.

The President is responsible for the day-to-day management of the Company's business and operations as well as implementation of the Company's business strategies.

Directors' and Officers' Liabilities Insurance

Appropriate insurance has been arranged by the Company to cover potential liabilities of Directors and Officers of the Company regarding legal actions against said Directors and Officers of the Company and its subsidiaries, arising out of corporate activities of the Company.

Board Operation

During the year ended 31 December 2024, the Board held six Board meetings. The attendance record of each Board member at Board meetings, meetings of the Audit Committee, the Nomination Committee, and the Remuneration Committee, as well as the annual/extraordinary general meeting is set out below:

	Board meetings	Audit Committee meetings	Nomination Committee meetings	Remuneration Committee meetings	Annual General Meeting	Extraordinary General Meeting
Executive Directors						
Suxin Zhang ^(Note)	6	N/A	3	N/A	1	N/A
Junjun Tang ^(Note)	6	N/A	0	N/A	1	N/A
Peng Bai ^(Note)	–	–	–	–	–	–
Non-Executive Directors						
Jun Ye	6	2	N/A	1	1	N/A
Guodong Sun	6	N/A	N/A	N/A	1	N/A
Limin Zhou ^(Note)	6	N/A	N/A	N/A	1	N/A
Chengyan Xiong ^(Note)	4	4	N/A	N/A	1	N/A
Bo Chen ^(Note)	–	–	–	–	–	–
Independent Non-Executive Directors						
Stephen Tso Tung Chang	6	6	N/A	N/A	1	N/A
Kwai Huen Wong, JP	6	N/A	3	3	1	N/A
Songlin Feng ^(Note)	4	4	1	1	1	N/A
Long Fei Ye ^(Note)	2	2	2	2	–	N/A

Note: Peng Bai was appointed as the President and an Executive Director on 1 January 2025. Bo Chen was appointed as a Non-Executive Director on 7 March 2025. Chengyan Xiong was appointed as a Non-Executive Director and a member of the Audit Committee on 28 March 2024. Songlin Feng was appointed as an Independent Non-Executive Director, a member of the Audit Committee, the Nomination Committee and the Remuneration Committee on 28 March 2024. Each of Peng Bai, Bo Chen, Chengyan Xiong and Songlin Feng has obtained legal advice referred to in Rule 3.09D of the Listing Rules, and each of them has confirmed that he/she understood his/her obligations as a director of a listed issuer.

Junjun Tang was appointed as the Chairman and an Executive Director and a member of the Nomination Committee on 31 December 2024; Suxin Zhang resigned as an Executive Director, the Chairman and the Chairman of the Nomination Committee on 31 December 2024; Limin Zhou resigned as a Non-Executive Director on 7 March 2025; Long Fei Ye resigned as an Independent Non-Executive Director, a member of Audit Committee, a member of Nomination Committee and a member of Remuneration Committee on 28 March 2024.

CORPORATE GOVERNANCE REPORT

In place of physical meetings, the Board may circulate written resolutions for approval by the relevant members of the Board except for matters where a substantial shareholder or a Director has a conflict of interest that the Board has determined to be material, in which case the matter shall be dealt with by a physical Board meeting (rather than a written resolution) to comply with provision C.5.7 of the Code.

The Board, having considered the attendance records of the Directors, is satisfied that each Director spends sufficient time performing his responsibilities.

Continuous Professional Development

Directors shall keep abreast of their responsibilities as Directors and of the conduct, business activities, and development of the Company.

Under Code Provision C.1.4, the Directors should participate in appropriate continuous professional development programs to develop and refresh their knowledge and skills to ensure that their contribution to the Board remains informed and relevant. During the year ended 31 December 2024, all Directors were provided with timely updates on the Company's performance, financial position, prospects, and materials on new or salient changes to laws and regulations applicable to the Group, to enable the Board as a whole and each Director individually to discharge their duties. Internally-facilitated briefings for the Directors will be arranged in the next financial year and reading material on relevant topics will be issued to the Directors where appropriate. All Directors are encouraged to attend relevant training courses at the Company's expense.

The participation by each Director in continuous professional development for the year ended 31 December 2024 and as of the date of this report is set out below:

Name of Director	Reading related rules and materials and/or attending training courses
Junjun Tang (<i>Chairman</i>)	✓
Peng Bai (<i>President</i>)	✓
Jun Ye	✓
Guodong Sun	✓
Bo Chen	✓
Chengyan Xiong	✓
Stephen Tso Tung Chang	✓
Kwai Huen Wong, JP	✓
Songlin Feng	✓
Suxin Zhang	✓
Limin Zhou	✓
Long Fei Ye	✓

CORPORATE GOVERNANCE REPORT

Remuneration Committee

The Remuneration Committee currently comprises three Independent Non-Executive Directors, Mr. Kwai Huen Wong, JP, Mr. Songlin Feng (appointed on 28 March 2024) and one Non-Executive Director Mr. Jun Ye (appointed on 28 March 2024). Mr. Long Fei Ye resigned as a member of the Remuneration Committee on 28 March 2024. The Chairman of the Remuneration Committee is Mr. Kwai Huen Wong, JP. Each member is sufficiently experienced and is appropriately skilled in the issues of determining Executive compensation in public companies. The Board expects committee members to exercise independent judgement in conducting the business of the committee. The roles and functions of the Remuneration Committee include the determination of the specific remuneration packages of all Executive Directors and senior management, including benefits in kind, pension rights, and compensation payments, and making recommendations to the Board in connection with the remuneration of the Non-Executive Directors. The Remuneration Committee should consider factors such as the salaries paid by comparable companies, employment conditions elsewhere in the Group, and the desirability of performance-based remuneration. A copy of the terms of reference of the Remuneration Committee is available from the Company's website and the Hong Kong Stock Exchange's website. The Remuneration Committee shall meet at least once a year.

For the year ended 31 December 2024, the Remuneration Committee held three meetings to discuss the vesting of certain options granted under the Company's share option scheme, and resolved to submit a proposal to the Board on the vesting arrangements for such options, as well as the remuneration packages for the newly appointed Board members.

Details of the emoluments of the Directors are set out in note 8 to the Financial Statements.

Nomination Committee

The Nomination Committee currently comprises one Executive Director, Mr. Junjun Tang (appointed on 31 December 2024), and two Independent Non – Executive Directors, Mr. Kwai Huen Wong, JP and Mr. Songlin Feng (appointed on 28 March 2024). Mr. Suxin Zhang and Mr. Long Fei Ye resigned as a member of the Nomination Committee on 31 December 2024 and on 28 March 2024, respectively. The Chairman of the Nomination Committee is Mr. Junjun Tang. Each member is sufficiently experienced and is appropriately skilled in the issues of nomination of directors to the Board. The Company has provided the Nomination Committee with sufficient resources to perform its duties. The Nomination Committee may seek independent professional advice, at the Company's expense, to perform its responsibilities. The roles and functions of the Nomination Committee are to review the structure, size and composition of the Board, make recommendations on any proposed changes to the Board to complement the Company's corporate strategy, with due regard to the board diversity policy, identify individuals suitably qualified to become Board members, select or make recommendations to the Board on the selection of individuals nominated for directorships, assess the independence of Independent Non-Executive Directors, and make recommendations to the Board on the appointment or re-appointment of Directors and succession planning for Directors, in particular the Chairman and the President, and monitor the implementation of the board diversity policy and review such policy, as appropriate, to ensure its effectiveness. The Nomination Committee has established a specific written committee charter which deals clearly with its authority and duties. A copy of the terms of reference of the Nomination Committee is available from the Company's website and the Hong Kong Stock Exchange's website. The Nomination Committee shall meet at least once a year.

For the year ended 31 December 2024, the Nomination Committee held three meetings to recommend to the Board the appointment of each of the new directors, and discussed topics such as the Company's remuneration policy and the competitiveness of the Company's salary levels.

Pursuant to the Articles, any person appointed as a Director to fill a casual vacancy of the Board shall hold office only until the next following annual general meeting of the Company and shall then be eligible for re-election at the relevant general meeting, and any Director appointed as an addition to the existing Board shall hold office only until the next annual general meeting of the Company and shall then be eligible for re-election at the relevant general meeting. Every Director shall be subject to retirement by rotation at least once every three years and shall be eligible for re-election in accordance with the Articles. The Articles also allow for removal of a Director by an ordinary resolution.

CORPORATE GOVERNANCE REPORT

Audit Committee

At least one of the members of the Audit Committee has appropriate professional qualifications or accounting or related financial management expertise as required under the Listing Rules. None of the members of the Audit Committee was a former partner of the Company's existing external auditors within one year immediately prior to the dates of their respective appointments. All members have appropriate skills and experience in reviewing financial statements as well as addressing significant control and financial issues of the Company. The Board expects the members of the Audit Committee to exercise independent judgement and delegates the responsibilities of the corporate governance functions to the Audit Committee in order to comply with the requirement of the Code.

The Audit Committee currently comprises one Non-Executive Director, Ms. Chengyan Xiong (appointed on 28 March 2024), and two Independent Non – Executive Directors, Mr. Stephen Tso Tung Chang and Mr. Songlin Feng (appointed on 28 March 2024). Mr. Long Fei Ye resigned as a member of the Audit Committee on 28 March 2024. Mr. Jun Ye ceased to be a member of the Audit Committee on 28 March 2024 upon his re-designation as a member of the Remuneration Committee. The Chairman of the Audit Committee is Mr. Stephen Tso Tung Chang. The primary duties of the Audit Committee include the reviewing of the Company's financial reporting system, the nature and scope of the audit review as well as the effectiveness of the system of internal control procedures and risk management. The Audit Committee is also responsible for making recommendations in relation to the appointment, reappointment, and removal of the external auditors, and the reviewing and monitoring of the independence and objectivity of the external auditors. In addition, the Audit Committee discusses matters raised by the external auditors and regulatory bodies to ensure that appropriate recommendations are implemented. A copy of the terms of reference of the Audit Committee is available from the Company's website and the Hong Kong Stock Exchange's website. The Audit Committee shall meet at least twice a year.

During the year ended 31 December 2024, the Audit Committee held six meetings and all the committee members were present at the meetings. The major work performed by the Audit Committee with respect to the year ended 31 December 2024 included reviewing and recommending the re-appointment of the external auditor, approving the terms of engagement (including the remuneration) of the external auditor and the audit plan, reviewing the unaudited quarterly results announcement, reviewing the unaudited interim report and interim results announcement for the six months ended 30 June 2024, reviewing the audited financial statements and final results announcement for the year ended 31 December 2024, reviewing the work of the Group's audit department and assessing the effectiveness of the Group's systems of risk management and internal control. The Audit Committee also held discussions with management to ensure that the Company has adequate resources, qualified and experienced staff in the accounting and financial reporting function, training programs and budget.

Auditor's Remuneration

During the year ended 31 December 2024, the remuneration paid and payable to the auditors of the Company, Ernst & Young, for the provision of audit services and non-audit related services to the Company were US\$0.73 million and US\$0.01 million, respectively. Details of significant non-audit related services include tax and risk management advisory services.

CORPORATE GOVERNANCE REPORT

Board Diversity

The Board adopted a board diversity policy (the “Policy”) in compliance with Rule 13.92 of the Listing Rules.

The Company sees increasing diversity at the Board level as an essential element in maintaining the Company’s competitive advantage. In designing the Board’s composition, Board diversity will be considered from several aspects, including without limitation, differences in the talents, skills, regional and industry experience, background, gender, age, and other qualities of the members of the Board, in order to maintain an appropriate range and balance of talents, skills, experience, and background on the Board. In recommending candidates for appointment to the Board, the Nomination Committee will consider candidates on merit against objective criteria and with due regard to the benefits of diversity on the Board. The Nomination Committee discussed and agreed on the measurable objectives for achieving diversity on the Board and recommended them to the Board for adoption. At any given time, the Board may seek to improve one or more aspects of its diversity and measure progress accordingly.

The Board believes that gender diversity is an important aspect of Board diversity. Following the resignation of Ms. Jing Wang on 1 September 2023, the Company did not have a director of a different gender at that moment and, as a result, prior to the appointment of Ms. Chengyan Xiong as a non-executive Director on 28 March 2024, the Company could not meet the requirement set out in Rule 13.92 of the Listing Rules. Following the appointment of Ms. Chengyan Xiong as a non-executive director, the Company is compliant with the requirement under Rule 13.92 of the Listing Rules. Gender diversity aside, the Remuneration Committee took the view that the measurable objectives for Board diversity had been achieved to a large extent for the year ended 31 December 2024. The Nomination Committee paid particular attention to the cultural and educational background, professional and technical experience, and skills of the members of the Board and also reviewed the composition of Executive Directors and Independent Non-Executive Directors, so as to ensure appropriate independence within the Board.

The Company will continue to maintain a balance of diverse perspectives on the Board that is appropriate for and conducive to the Company’s growth.

Workforce Diversity

As at 31 December 2024, the gender ratio of the Group’s workforce (including the Company’s senior management) was approximately 74% male to 26% female. The Company’s hiring is merit-based and non-discriminatory. The Board is satisfied that the Company has achieved gender diversity in its workforce.

Corporate Governance Functions

The Board is responsible for performing the functions set out in provision A.2.1 of the Code.

The Board reviewed the Company’s corporate governance policies and practices, the training and continuous professional development of Directors and senior management, the Company’s policies and practices on compliance with legal and regulatory requirements, the compliance with the Model Code, and the Company’s compliance with the Code and disclosure in this Corporate Governance Report.

CORPORATE GOVERNANCE REPORT

Investor Relations

Shareholders' Communication Policy

The Company has adopted a shareholders' communication policy, which is subject to annual review to ensure its implementation and effectiveness. Such policy aims to ensure that Shareholders will have equal and timely access to information about the Company, so as to enable them to exercise their rights in an informed manner and to allow them to engage actively with the Company.

A summary of the Company's shareholders' communication policy is set out below.

The Company provides information to Shareholders through its financial reports (including quarterly, interim and annual reports), circulars, announcements and other disclosures submitted to the Hong Kong Stock Exchange and the Shanghai Stock Exchange for publication.

To further promote effective communication, the Company maintains a website at www.huahonggrace.com with information and updates on the Company's business developments and operations, list of Directors and their roles and functions, constitutional documents, terms of reference of the Board and its committees, procedures for nomination of Directors for election, corporate governance practices, financial reports, circulars, announcements and other information.

Shareholders' meetings are a primary forum for communication between the Board and Shareholders. The Company encourages Shareholders to attend and participate in general meetings to ensure a high level of accountability and to keep them informed of the Company's goals and strategies. The Chairman of the Board, other Board members, and the Chairmen of all the Board committees, or in their absence, other members of the respective committees, are available to answer any questions from Shareholders. Shareholders are given sufficient notice of the meetings, and detailed voting procedures are included in circulars to Shareholders accompanying the notices of meetings.

In addition to the above, the Company also publishes newsletters through its WeChat public account. Shareholders can subscribe to the account to obtain the latest news of the Company.

To promote investors' understanding of the Company's business, the Company organises roadshows and on-site visits to its clean rooms and exhibition halls for investors. The Company has also participated in a number of investment forums and conducted multiple exchanges with securities analysts, fund management companies, and individual investors through various means.

In order for the Company to solicit and understand the views of Shareholders and stakeholders, Shareholders and other stakeholders may make enquiries to the Company through its investor relations contact by email at IR@hhgrace.com.

The Company has reviewed the implementation and effectiveness of its shareholders' communication policy for the year ended 31 December 2024, including the steps taken at the general meetings, the handling of queries received and the multiple communication channels in place. The Company is of the view that the policy is effective and has been properly implemented.

CORPORATE GOVERNANCE REPORT

Company Secretary

Ms. Sui Har Lee, the Company Secretary, is responsible to the Board for ensuring that the Board procedures are followed and that the Board activities are efficiently and effectively conducted. She is also responsible for ensuring that the Board is fully appraised of the relevant legislative, regulatory, and corporate governance developments relating to the Company and facilitating the induction and professional development of Directors.

The Company Secretary reports to the Chairman and the President, plays an essential role in the relationship between the Company and its Shareholders, and assists the Board in discharging its obligations to Shareholders pursuant to the Listing Rules.

During the year ended 31 December 2024, Ms. Sui Har Lee attended relevant professional seminars to update her skills and knowledge and has complied with Rule 3.29 of the Listing Rules.

Procedures for Shareholders to Convene an Extraordinary General Meeting

Extraordinary general meetings may be convened by the Directors on requisition of Shareholder(s) holding not less than one-twentieth of the paid-up capital of the Company or by such Shareholder(s) who made the requisition (the "Requisitionist(s)") (as the case may be) pursuant to sections 566 to 568 of the Companies Ordinance (Chapter 622 of the laws of Hong Kong) (the "Companies Ordinance"). The objects of the meeting must be stated in the requisition, which must be signed by the Requisitionist(s) and deposited at the registered office of the Company. Shareholders should follow the requirements and procedures as set out in sections 580 to 583 of the Companies Ordinance for convening an extraordinary general meeting.

Procedures for Putting Forward Proposals at Shareholders' Meetings and Directing Enquiries from Shareholders to the Board

Shareholders may at any time send their written requests, proposals, enquiries, and concerns to the Company for the attention of Chairman of the Board or the Company Secretary whose contact details are as follows:

288 Halei Road, Zhangjiang Hi-Tech Park, Shanghai 201203, China

Tel: (86) 21 38829909

Fax: (86) 21 50809999

Email: IR@hhgrace.com

CORPORATE GOVERNANCE REPORT

Voting by Poll

Pursuant to Rule 13.39(4) of the Listing Rules, any vote of Shareholders at a general meeting must be taken by poll.

Risk Management and Internal Monitoring

Risk Management and Internal Monitoring Objectives

Risk Management Objective

From a compliance perspective, the Company has implemented the provisions of the Corporate Governance Code issued by the Hong Kong Stock Exchange to ensure the compliance with relevant requirements in a timely manner.

From the perspective of operations, the management team well understands the risks that may be confronted by the Company as it undertakes future development. Therefore, the risk management objective of the Company is to identify and assess risks and take appropriate countermeasures to evade a risk entirely, if possible, otherwise to manage these risks to reduce their impact and keep them under control. The Company has constructed a robust risk control system working on a continuous basis, established a risk management platform, clarified risk management mechanisms, improved a risk map, and carried out an annual risk evaluation. We have developed a concise, scientific, practical, and efficient risk management and control model which complies with regulatory requirements under the Code and is in line with the Company's specific evolving circumstances.

Internal Control System Objective

The Company's internal control system has fully implemented the requirements for a risk management framework as set out by COSO (Committee of Sponsoring Organizations of the Treadway Commission) as well as the guidelines of Hong Kong Institute of Certified Public Accountants for risk management. We refined the three tiers of risk map in the processes and formed risk-oriented internal control evaluation by considering the Company's ongoing operational circumstances and business characteristics. The objective is to evaluate the effectiveness and applicability of our internal monitoring system and provide reasonable guarantees for the effectiveness of the Company's operating activities, the reliability of financial reports, and compliance with laws and regulations.

CORPORATE GOVERNANCE REPORT

Risk Management and Internal Monitoring System

To ensure our risk management work develops efficiently and forms a long-term mechanism, the Company has established a risk management monitoring system comprising a “three-line model”. It covers the roles and duties of many different aspects as follows:

1st Line	Business Departments - Establish and maintain various departmental risk management mechanisms; - Ongoing collection of risk data while performing day-to-day department tasks; - Continue to carry out risk monitoring and early warning of the department; - Assist in the implementation of the Company’s risk management work, including providing necessary documents and samples, identify major risks related to the department, and determine major risk countermeasures;
2nd Line	Business Supervision and Administration Departments Provide and supplement expertise, play a supportive and supervisory role, help continuously implement and improve the risk management work; analyze and report on the accuracy and effectiveness of risk management;
3rd Line	Internal Audit Level - Independently inspect and supervise risk management activities conducted by the Business Departments and the Risk Management Level, and evaluate whether the Company’s risk management mechanism is implemented effectively and efficiently; - Conduct annual comprehensive risk assessments, based on the risk assessment results, define the major risk factors and relevant response responsibilities, organize and guide relevant departments in making response plans for major risks, and follow up on the implementation of the plans; - Urge departments or agencies to rectify problems discovered during the auditing and risk assessment process and monitor the ongoing status of the rectification work; - Report the auditing and risk assessment results to the Audit Committee of the Company.

CORPORATE GOVERNANCE REPORT

Risk Management and Internal Monitoring Statement

The Board is responsible for the Company's risk management and internal monitoring system, as well as ensuring a review of the system's effectiveness. The Board designated the Internal Auditing Department to perform the internal auditing function and granted it full independent responsibility and authority. The internal auditors audited the effectiveness of the Company's risk management and internal monitoring system each year through various audit projects according to the approved auditing scope and in accordance with the provisions in D.2 of the Corporate Governance Code, and no material deficiency was found.

Based on audits by the Internal Auditing Department, the Board believes that the Company's risk management and internal monitoring system is adequate, trustworthy, and effective. However, one must recognise that the Company's risk management and internal monitoring framework can only manage rather than completely eliminate risks that may affect the Company's ability to accomplish its business objectives. Therefore, it provides a reasonable but not an absolute guarantee for the avoidance of material misstatement or loss.

With a view to identifying, handling, and disseminating inside information in compliance with the SFO, procedures, including pre-clearance on dealing in the securities of the Company by designated members of management, notification of regular blackout period and securities dealing restrictions to relevant Directors and employees, identification of projects by code name, and dissemination of information to stated purpose and on a need-to-know basis, have been implemented by the Group to guard against possible mishandling of inside information within the Group.

General

The Directors acknowledge their responsibility in preparing the Company's financial statements for each financial period to give a true and fair view of the state of affairs of the Company and in accordance with statutory requirements and applicable accounting standards. In preparing the financial statements for the year ended 31 December 2024, the Directors have selected suitable accounting policies and applied them consistently, made judgments and estimates that are prudent, fair, and reasonable, and prepared the financial statements on a going concern basis.

The responsibilities of the auditors with respect to the financial reporting are set out in the Independent Auditors' Report on pages 299 to 301 of this annual report.

On behalf of the Board

Mr. Junjun Tang

Chairman

DIRECTORS' REPORT

The Board presents the annual report of the Company for 2024 and the audited financial statements of the Company for the period from 1 January 2024 to 31 December 2024 (the "Financial Statements").

Principal Activities

The Company was a pure-play 8-inch and 12-inch wafer foundry as at the end of 2024, with its long-term focus on the development and application of advanced "Specialty IC + Power Discrete" differentiated specialty technologies, including Embedded/Standalone Non-Volatile Memory, Power Discrete, Analog & Power Management, Logic & RF, providing diverse specialized process wafer manufacturing services to its customers. The activities of its principal subsidiaries are set out in note 1 to the Financial Statements (Pages 310 to 311).

Business Review

Revenue Analysis

Revenue of Hua Hong Semiconductor for 2024 was US\$2,004 million, representing a decrease of 12.3% compared to the previous year. The annual revenue reflected a scenario of declining prices but increasing volumes. Driven by the rapid development of the AI sector and the gradual recovery of part of the consumer electronics market, the global semiconductor market maintained moderate growth. However, due to the release of domestic supply-side capacity, competition in the wafer foundry market has intensified, exerting downward pressure on prices. Nevertheless, based on the Company's confidence in the long-term market growth and the trend of localization in the domestic semiconductor market, its "8-inch + 12-inch" strategy has achieved significant milestones, with the Hua Hong Manufacturing Project successfully completed and put into operation. Additionally, leveraging its long-standing technological expertise and proactive sales strategies, the Company maintained an average annual capacity utilization rate close to 100%, securing a leading position among major global wafer foundry enterprises.

Revenue by Service						
	2024 US\$'000	2024 %	2023 US\$'000	2023 %	YoY Change US\$'000	YoY Change %
Semiconductor wafers	1,900,929	94.9%	2,181,591	95.4%	(280,662)	(12.9)%
Others	103,064	5.1%	104,522	4.6%	(1,458)	(1.4)%
Total	2,003,993	100.0%	2,286,113	100.0%	(282,120)	(12.3)%

- In 2024, 94.9% of our revenue was generated from the sale of semiconductor wafers.

Revenue by Customer						
	2024 US\$'000	2024 %	2023 US\$'000	2023 %	YoY Change US\$'000	YoY Change %
Systems and fabless companies	1,919,000	95.8%	2,109,482	92.3%	(190,482)	(9.0)%
Integrated device manufacturers (IDMs)	84,993	4.2%	176,631	7.7%	(91,638)	(51.9)%
Total	2,003,993	100.0%	2,286,113	100.0%	(282,120)	(12.3)%

- Our revenue from systems and fabless companies accounted for 95.8%.

DIRECTORS' REPORT

Revenue by Geography

	2024 US\$'000	2024 %	2023 US\$'000	2023 %	YoY Change US\$'000	YoY Change %
China	1,636,528	81.6%	1,774,178	77.6%	(137,650)	(7.8)%
North America	187,899	9.4%	204,882	9.0%	(16,983)	(8.3)%
Other Asia	103,410	5.2%	149,087	6.5%	(45,677)	(30.6)%
Europe	69,528	3.5%	134,760	5.9%	(65,232)	(48.4)%
Japan	6,628	0.3%	23,206	1.0%	(16,578)	(71.4)%
Total	2,003,993	100.0%	2,286,113	100.0%	(282,120)	(12.3)%

- In 2024, 81.6% of the Company's revenue was generated in China.

Revenue by Technology Type

	2024 US\$'000	2024 %	2023 US\$'000	2023 %	YoY Change US\$'000	YoY Change %
Embedded Non-Volatile Memory (eNVM)	526,122	26.3%	703,148	30.8%	(177,026)	(25.2)%
Standalone Non-Volatile Memory (sNVM)	130,137	6.5%	116,715	5.1%	13,422	11.5%
Power Discrete	623,922	31.0%	902,346	39.4%	(278,424)	(30.9)%
Logic & RF	272,201	13.6%	202,483	8.9%	69,718	34.4%
Analog & Power Management (PM)	448,100	22.4%	358,333	15.7%	89,767	25.1%
Others	3,511	0.2%	3,088	0.1%	423	13.7%
Total	2,003,993	100.0%	2,286,113	100.0%	(282,120)	(12.3)%

- In 2024, the Analog & PM and Logic & RF platforms delivered strong revenue growth, primarily driven by rapid demand expansion in AI-related applications and recovery in the consumer electronics market.

DIRECTORS' REPORT

Revenue by Technology Node						
	2024 US\$'000	2024 %	2023 US\$'000	2023 %	YoY Change US\$'000	YoY Change %
55nm & 65nm	438,656	21.9%	291,683	12.8%	146,973	50.4%
90nm & 95nm	389,181	19.4%	386,191	16.9%	2,990	0.8%
0.11μm & 0.13μm	278,597	13.9%	405,911	17.8%	(127,314)	(31.4)%
0.15μm & 0.18μm	129,645	6.5%	147,338	6.4%	(17,693)	(12.0)%
0.25μm	16,932	0.8%	24,217	1.1%	(7,285)	(30.1)%
≥0.35μm	750,982	37.5%	1,030,773	45.0%	(279,791)	(27.1)%
Total	2,003,993	100.0%	2,286,113	100.0%	(282,120)	(12.3)%

- In 2024, the 55nm and 65nm platforms sustained robust revenue growth, driven by strong demand from the Analog & PM and other platforms.

Revenue by End Market						
	2024 US\$'000	2024 %	2023 US\$'000	2023 %	YoY Change US\$'000	YoY Change %
Consumer Electronics	1,261,705	63.0%	1,294,251	56.6%	(32,546)	(2.5)%
Industrial & Automotive Electronics	461,256	23.0%	673,395	29.5%	(212,139)	(31.5)%
Communications	251,261	12.5%	256,856	11.2%	(5,595)	(2.2)%
Computing	29,771	1.5%	61,611	2.7%	(31,840)	(51.7)%
Total	2,003,993	100.0%	2,286,113	100.0%	(282,120)	(12.3)%

- In 2024, demand in the consumer electronics market remained relatively stable, with revenue from this end-market accounting for 63.0% of total revenue.

DIRECTORS' REPORT

Capacity and Capacity Utilization			
Fab (In thousands of wafers per month)	2024	2023	YoY Change
Fab 1	65	65	–
Fab 2	60	60	–
Fab 3	53	53	–
Total monthly 8-inch wafer capacity	178	178	–
Fab 7 (12-inch wafer capacity)	95	95	–
Capacity utilization (8-inch wafer equivalent)	99.5%	94.3%	5.2%

- In 2024, capacity utilization (8-inch wafer equivalent) increased by 5.2 percentage points.

Wafer Shipments			
In thousands of wafers	2024	2023	YoY Change
Wafer shipments (8-inch wafer equivalent)	4,545	4,103	10.8%

- In 2024, there was a year-on-year increase of 10.8% in the Company's wafer shipments.

Research and Development

Hua Hong Semiconductor is committed to research and development (R&D), innovation, and optimization of differentiated technologies, with a focus on eNVM/sNVM, Power Discrete, Analog & PM (Power Management), Logic & RF and other featured process platforms. It continues to provide customers with product mix and services that meet market demand. In 2024, Hua Hong Semiconductor continued accelerating the development of 12-inch capacity and technology platforms; and the product mix of advanced “Specialty IC + Power Discrete” became more diverse due to the extension of the 12-inch process platform.

The NVM platform remains one of the main sources of revenue for the Company. Its embedded flash memory technology maintains a leading position in smart card and automotive-grade MCU applications. Leveraging the product mix advantages of its “8-inch + 12-inch” platform, multiple full series MCU chips produced at process nodes with flash memory process capability have entered mass production, empowering customers to secure first-tier positions in the local supply chain for automotive electronics, high-end home appliances, and industrial control applications, thereby driving supply chain upgrades. For standalone flash memory platforms, the Company enhanced the performance of its proprietary NORD technology and traditional ETOX technology products, earning recognition from customers and end-market applications. Technologically, successful mass production of 48nm NOR Flash has further strengthened competitiveness of our memory portfolio.

DIRECTORS' REPORT

The Analog & PM (Power Management) platform achieved significant revenue growth in 2024, primarily driven by robust demand in AI supporting power applications and stable volumes of wafer inputs. The Company collaborated with leading customers to strengthen its foothold in consumer markets, such as smartphone fast-charging and wireless charging chips, and accelerated penetration into automotive electronics. Technologically, the development of “BCD+” hybrid processes, based on our conventional BCD process, enabled iterative advancements across multiple process nodes, and enabled us to serve our customers and provide single-chip solutions for a wide range of market applications as a diversified specialty process platform.

Logic & RF platform also achieved rapid revenue growth, with the 55/40nm specialty process, RF CMOS and 65nm RF SOI processes entering mass production and the mass production of 55nm BSI image sensor chips for high-end smartphone primary cameras. Breakthroughs in platform technology enabled the Company to rapidly secure leading customers in the industry.

The Power Discrete platform faced material pricing pressure due to competitors' capacity expansions and softening end-market demand in the industrial and new energy market sectors. Nevertheless, the Company proactively pursued technology innovation while maintaining stable capacity utilization. Specifically, through iterative optimizations of deep-trench structures in super-junction MOSFET, it further narrowed the gap with oversea industry leaders. The Company continued to iterate and mass-produce high-voltage IGBT, aligning with international benchmarks and solidifying its position as a cornerstone of the local supply chain's advancement. Amid intensifying pricing competition, the Company accelerated the adoption of high-end products in industrial control and automotive electronics, steadily increasing the proportion of new products to reinforce its market leadership position.

The Company's major milestone in 2024 was the successful operation of the Huahong Manufacturing Project (Hua Hong Fab 9). Following approximately 18 months of facility construction, structural completion, cleanroom delivery, major equipment installation, and testing, the production line commenced wafer input and mass production by the end of 2024. It is expected to gradually introduce 40nm process nodes and multi-platform product mix in 2025, aiming for a stable capacity ramp-up and sustained revenue growth.

DIRECTORS' REPORT

Outlook

Looking ahead to 2025, the global semiconductor market is expected to continue to experience a moderate recovery, driven by sustained strength in AI, while the Chinese semiconductor market remains resilient. Under the leadership of the entire management, the Company will comprehensively enhance its management and operational efficiency. In R&D, leveraging the newly operational 12-inch production line in Wuxi, the Company will vigorously advance the development of key technology platforms by shoring up weaknesses, achieve breakthroughs in prioritized areas, and diversifying its product portfolio, to strengthen its core competitiveness. In capacity, the Hua Hong Manufacturing Project will enter its ramp-up phase in 2025, unlocking further production capacity in a stepwise manner, in synergy with the Hua Hong Wuxi project to form a flexible capacity allocation system, better aligning with customer demand. In operations, the Company will further improve operational efficiency and strengthen cost controls. In market strategy, focusing on the domestic ecosystem development, the Company aims to expand and solidify its domestic client base, while collaborating with overseas strategic partners, to implement the “China for China” strategy. These efforts are designed to deliver enhanced performance for Hua Hong Semiconductor’s ecosystem partners and create value for the Company and its shareholders.

DIRECTORS' REPORT

Management Discussion and Analysis

Financial Performance

	2024 US\$'000	2023 US\$'000	Change
Revenue	2,003,993	2,286,113	(12.3)%
Cost of sales	(1,798,865)	(1,799,017)	0.0%
Gross profit	205,128	487,096	(57.9)%
Other income and gains	149,072	144,370	3.3%
Fair value (loss)/gain on an investment property	(39)	103	(137.9)%
Selling and distribution expenses	(9,628)	(10,189)	(5.5)%
Administrative expenses	(351,276)	(322,868)	8.8%
Other expenses	(33,395)	(33,666)	(0.8)%
Finance costs	(97,113)	(100,497)	(3.4)%
Share of profit of associates	3,459	9,230	(62.5)%
(Loss)/profit before tax	(133,792)	173,579	(177.1)%
Income tax expense	(6,593)	(47,154)	(86.0)%
(Loss)/profit for the year	(140,385)	126,425	(211.0)%
Attributable to:			
Owners of the parent	58,108	280,034	(79.2)%
Non-controlling interests	(198,493)	(153,609)	29.2%

Revenue

Revenue was US\$2,004.0 million, 12.3% lower than 2023, primarily due to decreased average selling price, partially offset by an increase in the number of wafer shipments.

Gross profit

Gross profit was US\$205.1 million, a decrease of 57.9% compared to 2023, mainly due to decreased average selling price and increased depreciation costs.

Administrative expenses

Administrative expenses were US\$351.3 million, an increase of 8.8% compared to 2023, mainly due to increased research and development expenses and increased new fab start-up-costs.

Share of profit of associates

Share of profit of associates was US\$3.5 million, a decrease of 62.5% compared to 2023, due to decreased profit realized by the associates.

Income tax expense

Income tax expense was US\$6.6 million, a decrease of 86.0% compared to 2023, mainly due to decreased taxable profit.

(Loss)/profit for the year

As a result of the cumulative effect of the above factors, loss for the year was US\$140.4 million compared to profit for the year of US\$126.4 million in 2023.

DIRECTORS' REPORT

Financial Status

	31 December 2024 US\$'000	31 December 2023 US\$'000	Change
Non-current assets			
Property, plant and equipment	5,859,117	3,519,292	66.5%
Investment property	164,153	166,643	(1.5)%
Right-of-use assets	77,761	78,545	(1.0)%
Investments in associates	139,799	139,099	0.5%
Equity instruments designated at fair value through other comprehensive income	289,311	270,506	7.0%
Other non-current assets	52,464	199,780	(73.7)%
Total non-current assets	6,582,605	4,373,865	50.5%
Current assets			
Inventories	467,060	449,749	3.8%
Trade and notes receivables	270,461	278,669	(2.9)%
Due from related parties	18,324	11,219	63.3%
Other current assets	585,902	212,649	175.5%
Pledged deposits	31,624	32,088	(1.4)%
Cash and cash equivalents	4,459,132	5,585,181	(20.2)%
Total current assets	5,832,503	6,569,555	(11.2)%
Current liabilities			
Trade payables	298,372	235,410	26.7%
Interest-bearing bank borrowings	280,704	193,035	45.4%
Due to related parties	9,125	13,876	(34.2)%
Government grants	57,563	35,017	64.4%
Other current liabilities	916,474	495,049	85.1%
Total current liabilities	1,562,238	972,387	60.7%
Net current assets	4,270,265	5,597,168	(23.7)%
Non-current liabilities			
Interest-bearing bank borrowings	1,917,235	1,906,526	0.6%
Other non-current liabilities	29,016	49,963	(41.9)%
Total non-current liabilities	1,946,251	1,956,489	(0.5)%
Net assets	8,906,619	8,014,544	11.1%

DIRECTORS' REPORT

Explanation of items with fluctuation over 10% from 31 December 2023 to 31 December 2024

Property, plant and equipment

Property, plant and equipment increased from US\$3,519.3 million to US\$5,859.1 million, primarily due to capacity expansion of the new production line.

Other non-current assets

Other non-current assets decreased from US\$199.8 million to US\$52.5 million, primarily due to decreased prepayments for equipment.

Due from related parties

Due from related parties increased from US\$11.2 million to US\$18.3 million, primarily due to increased receivables from certain of our related parties.

Other current assets

Other current assets increased from US\$212.6 million to US\$585.9 million, primarily due to increased value-added tax credit.

Cash and cash equivalents

Cash and cash equivalents decreased from US\$5,585.2 million to US\$4,459.1 million, primarily due to reasons stated in the cash flow analysis below.

Trade payables

Trade payables increased from US\$235.4 million to US\$298.4 million, primarily due to increased purchase of materials.

Due to related parties

Due to related parties decreased from US\$13.9 million to US\$9.1 million, primarily due to a payment of technology purchased in the year.

Government grants

Government grants increased from US\$35.0 million to US\$57.6 million, primarily due to increased receipts of government funding.

Other current liabilities

Other current liabilities increased from US\$495.0 million to US\$916.5 million, primarily due to increased payables for capital expenditures.

Interest-bearing bank borrowings

Total interest-bearing bank borrowings increased from US\$2,099.6 million to US\$2,197.9 million, primarily due to increased drawdowns of bank borrowings.

Other non-current liabilities

Other non-current liabilities decreased from US\$50.0 million to US\$29.0 million, primarily due to decreased deferred tax liabilities.

DIRECTORS' REPORT

Cash Flow

	2024 US\$'000	2023 US\$'000	Change
Net cash flows generated from operating activities	459,495	641,695	(28.4)%
Net cash flows used in investing activities	(2,671,532)	(833,312)	220.6%
Net cash flows generated from financing activities	1,150,125	3,781,746	(69.6)%
Net (decrease)/increase in cash and cash equivalents	(1,061,912)	3,590,129	(129.6)%
Cash and cash equivalents at beginning of the year	5,585,181	2,008,765	178.0%
Effect of foreign exchange rate changes, net	(64,137)	(13,713)	367.7%
Cash and cash equivalents at end of the year	4,459,132	5,585,181	(20.2)%

Net cash flows generated from operating activities

Net cash flows generated from operating activities were US\$459.5 million, a decrease of 28.4% compared to 2023, mainly due to decreased receipts from customers.

Net cash flows used in investing activities

Net cash flows used in investing activities were US\$2,671.5 million, primarily attributed to US\$2,779.8 million for capital investments and US\$17.6 million for equity instrument investments, offset by receipts of (i) US\$82.0 million of interest income, (ii) US\$41.2 million of government grants, (iii) US\$2.6 million of disposal of an equity instrument, and (iv) US\$0.1 million for disposal of items of property, plant and equipment.

Net cash flows generated from financing activities

Net cash flows generated from financing activities were US\$1,150.1 million, including (i) US\$1,181.8 million of capital contribution from non-controlling interests, (ii) US\$289.3 million of proceeds from bank borrowings, (iii) US\$5.4 million of government grants for interest expenses, and (iv) US\$3.6 million from share option exercises, offset by (i) US\$183.5 million of repayments of bank borrowings, (ii) US\$105.7 million of interest repayments (iii) US\$36.2 million payment of dividends, and (iv) US\$4.6 million payment of a principal portion of lease payments.

Cash and cash equivalents

As a result of the cumulative effect of the above factors, cash and cash equivalents decreased from US\$5,585.2 million as of 31 December 2023 to US\$4,459.1 million as of 31 December 2024.

DIRECTORS' REPORT

Financial Risks

Interest rate risk

Our exposure to the risk of changes in market interest rates relates primarily to the Group's interest-bearing bank borrowings with a floating interest rate. Our policy is to manage interest rate risk using a mix of fixed and floating rate debts.

As at 31 December 2024, if the interest rates had been 100 basis points higher/lower with all other variables held constant, profit before tax for the year would have been US\$20,053,000 lower/higher, mainly as a result of higher/lower interest expense on floating rate bank borrowings.

Foreign currency risk

We have transactional currency exposures arising primarily from sales or purchases by our principal subsidiaries operating in the Mainland China in US\$, rather than the subsidiaries' functional currency, which is RMB. During the year, approximately 18% of our sales were denominated in currencies other than the functional currency of the subsidiaries making the sale, whilst 61% of costs of sales were denominated in the subsidiaries' functional currency.

In addition, we have currency exposures from interest-bearing bank borrowings held by our subsidiaries operating in the Mainland China. As at 31 December 2024, interest-bearing bank borrowings with a carrying amount of US\$1,502.3 million were dominated in US\$, rather than the subsidiaries' functional currency, which is RMB.

As at 31 December 2024, if the US\$ had strengthened or weakened against the RMB by 5 percent, with all other variables held constant, our profit before tax for the year would have been approximately US\$99.6 million lower or higher.

Credit risk

We trade only with recognised and creditworthy third parties and related parties. It is our policy that all customers who wish to trade on credit terms are subject to credit verification procedures. In addition, receivable balances are monitored on an ongoing basis, and our exposure to bad debts is not significant.

Our maximum exposure to credit risk in relation to our financial assets is: the carrying amounts of cash and cash equivalents, trade and notes receivables, financial assets included in prepayments, other receivables and other assets, amounts due from related parties, and pledged deposits included in the consolidated statement of financial position. We have no other financial assets which carry significant exposure to credit risk.

Liquidity risk

To meet liquidity requirements in the short and long term, our policy is to monitor regularly the current and expected liquidity requirements to ensure that we maintain sufficient reserves of cash and adequate committed lines of funding from major financial institutions.

Capital management

Our primary objectives of capital management are to safeguard our ability to continue as a going concern and to maintain healthy capital ratios to support our business and maximize shareholders' value.

We manage our capital structure and make adjustments in light of changes in economic conditions. To do this, we may adjust the dividend payment to shareholders, return capital to shareholders, or issue new shares. We are not subject to any externally imposed capital requirements. No changes were made in the objectives, policies, or processes for managing capital during the year.

DIRECTORS' REPORT

Gearing Ratio

Details of the gearing ratio are set out in Note 38 to the Financial Statements.

Results

The results of the Group for the year ended 31 December 2024 and the state of affairs as at that date are set out in the Financial Statements on pages 302 to 305 of this report.

Final Dividends

Considering the capital-intensive nature of the semiconductor industry, alongside the Group's current development and business model, it is essential for the Group to retain adequate funds to fulfil its operational needs and fuel its ongoing expansion of production capabilities, R&D innovation and enhancement of market share, which are conducive to maintain the stability of the Group's operations and promote its long-term development plans. Therefore, subject to approval at the Annual General Meeting, the Board does not recommend payment of a dividend for the year ended 31 December 2024 (2023: HK\$0.165 per Share).

Dividend Policy

Subject to the approval of the Shareholders and the requirements of law, it has been decided that the Company will pay dividends to the Shareholders for the year of 2015 and onwards if the Group is profitable, the operations environment is stable, and there is no significant investment made by the Group. It is intended that the average of dividends paid in three consecutive years will be no less than 30% of the average distributable net profit of these three years. The remaining net profit will be used for the development and operations of the Group.

This dividend policy will continue to be reviewed from time to time and there can be no assurance that dividends will be paid in any amount for any given period. In the event that the Board recommends a dividend, the form and amount will depend on the assessment by the Directors of the factors affecting the Group from time to time.

Distributable Reserves

As at 31 December 2024, the Company has US\$276,812,000 in distributable reserves available for distribution to Shareholders.

DIRECTORS' REPORT

Bank Loans

The particulars of bank loans of the Group as at 31 December 2024 are set out in note 26 to the Financial Statements.

As at 31 December 2024, certain of the Group's bank loans were secured by pledges of the Group's assets. Please refer to note 26 to the Financial Statements for further details.

Financial Summary

A summary of the published results and the assets and liabilities of the Group for the past five financial years is set out on page 412. This summary does not form part of the audited financial statements.

Property, Plant and Equipment

Details of additions and other changes during the year ended 31 December 2024 in the property, plant and equipment, and investment property of the Group are set out in notes 13 and 14 to the Financial Statements.

In addition, details of the investment property are set out below:

Location	Type of Use	Term of Lease	Group's Interest	Gross Floor Area (sq.m.)
Portions of 9 buildings No. 818 Guo Shou Jing Road Zhangjiang Hi-Tech Park Pudong New Area Shanghai, PRC	Industrial use	Held under a land use right for a term expiring on 8 March 2051	100%	91,563.11

Significant Events After the Reporting Period

As of the date of this report, the Company has no significant events after the Reporting Period.

Share Capital

Details of movement in the share capital of the Company during the year ended 31 December 2024 are set out in note 30 to the Financial Statements. These movements include the automatic inclusion of the amount standing to the share premium account into the share capital as from 3 March 2014, in accordance with section 37 of Schedule 11 to the New Companies Ordinance (Cap. 622), as part of the transition to the no-par value regime.

DIRECTORS' REPORT

Share Option Scheme

A share option scheme (the "Share Option Scheme") was approved by an extraordinary general meeting of the Company held on 1 September 2015. A summary of the Share Option Scheme is as follows:

Purpose of the Share Option Scheme:	The purpose of the Share Option Scheme is to attract, retain and provide incentives to the Participants (defined below), to provide them with the opportunity to obtain Shares of the Company, and to link their interests closely to the operating results and share performance of the Company, with the view to increasing the value of the Company.
Participants:	The participants of the Share Option Scheme ("Participants") include (1) existing Executive and Non-Executive Directors of any member of the Group; or (2) senior management and key managerial and technical personnel having a direct impact on the results of operations and sustainable development of any member of the Group, subject always to any limits and restrictions specified in the Share Option Scheme, but shall not include any Independent Non-Executive Directors.
Maximum entitlement of each Participant:	If the total number of Shares allotted and which may fall to be allotted upon exercise of all the share options ("Share Options") granted and to be granted (including exercised, cancelled, and outstanding Share Options) to a Participant in any 12-month period in aggregate exceeds 1% of the issued share capital of the Company at the time, no further grant of Share Options shall be given to such Participant. Share Options may be granted to a Participant in excess of the individual limit of 1% in any 12-month period only with the approval of the Shareholders at a general meeting. No Share Option shall be granted to any person who holds over 5% of Shares of the Company which carry voting rights on the Grant Date (as defined in the Share Option Scheme), unless such grant is approved by shareholders at the general meeting.
Minimum period, if any, for which an option must be held before it can be exercised:	Two years unless otherwise stated in the grant notice of the Share Option.
The amount payable on application or acceptance of the Share Option and the period within which payments or calls must be made or loans for such purposes must be paid:	HK\$1.00 is to be paid by each grantee as consideration for the grant of Share Option within 28 days from the date of proposed offer.
Number of options available for grant at the beginning and the end of year 2024, and the remaining life of the Share Option Scheme:	The Share Option Scheme shall be valid and effective for a period of seven (7) years commencing on the date of adoption. It has therefore expired on 1 September 2022. No further options could be granted, and none has been granted, under the Share Option Scheme from that date.

As at 31 December 2024 and the date of this report, the total number of shares available for issue under the Share Option Scheme is 19,337,302 shares and 12,382,480 shares, representing approximately 1.13% and 0.72% of the total number of shares in issue (representing all shares in issue of the listed company (including A Shares)), respectively.

DIRECTORS' REPORT

Share Options Granted under the Share Option Scheme

On 4 September 2015, the Company granted 30,250,000 Share options (the "2015 Options") to subscribe for a total of 30,250,000 ordinary shares of the Company to certain individuals under the Share Option Scheme. Details of the 2015 Options are as follows:

Date of grant:	4 September 2015
Exercise price of options granted:	HK\$6.912
Number of options granted:	30,250,000 (representing 1.76% of the issued shares of the Company as at 31 December 2023)
Validity period of the options:	From 4 September 2015 to 3 September 2022 (seven (7) years), both dates inclusive
Vesting period of the options:	One third of the options shall vest on each of 4 September 2017, 4 September 2018, and 4 September 2019

The exercise price of HK\$6.912 per Share represents a premium of 0% over the higher of (i) the closing price of HK\$6.87 per Share as stated in the daily quotation sheets issued by the Hong Kong Stock Exchange on the date of the grant; (ii) the average closing price of HK\$6.912 per Share as stated in the daily quotation sheets issued by the Hong Kong Stock Exchange for the five trading days immediately preceding the date of the grant; and (iii) the closing price of HK\$6.800 per Share as stated in the daily quotation sheets issued by the Hong Kong Stock Exchange on the day immediately before the grant date.

On 24 December 2018, the Company granted 34,500,000 share options (the "2018 Options") to subscribe for a total of 34,500,000 ordinary shares of the Company to certain individuals under the Share Option Scheme. Details of the 2018 Options are as follows:

Date of grant:	24 December 2018
Exercise price of options granted:	HK\$15.056
Number of options granted:	34,500,000 (representing 2.01% of the issued shares of the Company as at 31 December 2023)
Validity period of the options:	From 24 December 2018 to 23 December 2025 (seven (7) years), both dates inclusive
Vesting period of the options:	For employees at or above the level of the vice president of the Company (together with Directors), one fourth of the 2018 Options shall vest on each of 24 December 2020, 24 December 2021, 24 December 2022, and 24 December 2023; for the other employees of the Company, one third of the 2018 Options shall vest on each of 24 December 2020, 24 December 2021, and 24 December 2022

DIRECTORS' REPORT

The exercise price of HK\$15.056 per share represents the higher of (i) the closing price of HK\$14.440 per share as stated in the daily quotation sheets issued by the Hong Kong Stock Exchange on the date of the grant; (ii) the average closing price of HK\$15.056 per share as stated in the daily quotation sheets issued by the Hong Kong Stock Exchange for the five business days immediately preceding the date of the grant; (iii) the closing price of HK\$14.380 per Share as stated in the daily quotation sheets issued by the Hong Kong Stock Exchange on the day immediately before the grant date; and (iv) the nominal value of the share.

On 29 March 2019, the Company granted 500,000 share options (the "March 2019 Options") to subscribe for a total of 500,000 ordinary shares of the Company to one individual under the Share Option Scheme. Details of the March 2019 Options are as follows:

Date of grant:	29 March 2019
Exercise price of options granted:	HK\$18.400
Number of options granted:	500,000 (representing 0.03% of the issued shares of the Company as at 31 December 2023)
Validity period of the options:	From 29 March 2019 to 28 March 2026 (seven (7) years), both dates inclusive
Vesting period of the options:	One fourth of the options will vest on each of 23 December 2021, 12 August 2022, 11 August 2023, and 9 August 2024

The exercise price of HK\$18.400 per share represents the higher of (i) the closing price of HK\$18.400 per share as stated in the daily quotation sheets issued by the Hong Kong Stock Exchange on the date of the grant; (ii) the average closing price of HK\$18.176 per share as stated in the daily quotation sheets issued by the Hong Kong Stock Exchange for the five business days immediately preceding the date of the grant; (iii) the closing price of HK\$18.220 per share as stated in the daily quotation sheets issued by the Hong Kong Stock Exchange on the day immediately before the grant date; and (iv) the nominal value of the share.

On 23 December 2019, the Company granted 2,482,000 share options (the "December 2019 Options") to subscribe for a total of 2,482,000 ordinary shares of the Company to certain individuals under the Share Option Scheme. Details of the December 2019 Options are as follows:

Date of grant:	23 December 2019
Exercise price of options granted:	HK\$17.952
Number of options granted:	2,482,000 (representing 0.14% of the issued shares of the Company as at 31 December 2023)
Validity period of the options:	From 23 December 2019 to 22 December 2026 (seven (7) years), both dates inclusive
Vesting period of the options:	For employees at or above the level of the vice president of Hua Hong Wuxi, one fourth of the options will vest on each of 23 December 2021, 23 December 2022, 23 December 2023, and 23 December 2024; for the other employees of Hua Hong Wuxi, one third of the options will vest on each of 23 December 2021, 23 December 2022, and 23 December 2023

DIRECTORS' REPORT

The exercise price of HK\$17.952 per share represents the higher of (i) the closing price of HK\$17.260 per share as stated in the daily quotation sheets issued by the Hong Kong Stock Exchange on the date of the grant; (ii) the average closing price of HK\$17.952 per share as stated in the daily quotation sheets issued by the Hong Kong Stock Exchange for the five business days immediately preceding the date of the grant; (iii) the closing price of HK\$17.200 per share as stated in the daily quotation sheets issued by the Hong Kong Stock Exchange on the day immediately before the grant date; and (iv) the nominal value of the share.

Among the March 2019 Options, 500,000 share options were granted to the Directors of the Company, subject to their acceptance.

Details of the movements in the share options during the year ended 31 December 2024 are as follows:

	Name or category of participants						
	Director						
Number of share options	Mr. Junjun Tang	Resigned director	Other employees			Total	
Granted at 4 September 2015	–	988,000	–	29,262,000	–	–	30,250,000
Granted at 24 December 2018	–	–	680,000	–	33,820,000	–	34,500,000
Granted at 29 March 2019	500,000	–	–	–	–	–	500,000
Granted at 23 December 2019	–	–	–	–	–	2,482,000	2,482,000
Cancelled/Lapsed during the year 2015	–	–	–	-130,000	–	–	-130,000
Cancelled/Lapsed during the year 2016	–	–	–	-1,458,000	–	–	-1,458,000
Cancelled/Lapsed during the year 2017	–	–	–	-1,353,399	–	–	-1,353,399
Cancelled/Lapsed during the year 2018	–	–	–	-754,595	–	–	-754,595
Cancelled/Lapsed during the year 2019	–	–	-600,000	-58,000	-1,035,000	-36,000	-1,729,000
Cancelled/Lapsed during the year 2020	–	-119,000	-80,000	–	-993,904	-84,000	-1,276,904
Cancelled/Lapsed during the year 2021	-62,500	–	–	–	-5,751,868	-592,993	-6,407,361
Cancelled/Lapsed during the year 2022	–	–	–	–	-543,728	-73,983	-617,711
Cancelled/Lapsed during the year 2023	-8,168	-6,900	-15,068				
Exercised during the period	–	–	–	–	1,740,046	140,075	1,880,121
Cancelled during the period	–	–	–	–	–	-6,900	-6,900
Lapsed during the period	–	–	–	–	-87,758	-116,668	-204,426
Outstanding at 1 January 2024	437,500			–	19,468,101	1,516,248	21,421,849
Outstanding at 31 December 2024	437,500			–	17,640,297	1,259,505	19,337,302
Vesting period of share options	From 29 March 2019 to 28 March 2026	From 4 September 2015 to 3 September 2022	From 24 December 2018 to 23 December 2025	From 4 September 2015 to 3 September 2022	From 24 December 2018 to 23 December 2025	From 23 December 2019 to 22 December 2026	
Exercise period of share options	From 29 March 2021 to 28 March 2026	From 4 September 2017 to 3 September 2022	From 24 December 2020 to 23 December 2025	From 4 September 2017 to 3 September 2022	From 24 December 2020 to 23 December 2025	From 23 December 2021 to 22 December 2026	
Exercise price of share options	HK\$18.400	HK\$6.912	HK\$15.056	HK\$6.912	HK\$15.056	HK\$17.952	
Weighted average closing price of the shares immediately before the dates on which the share options were exercised					HK\$20.67	HK\$22.56	

Save as disclosed above, the Company has not adopted any other share option scheme during the year ended 31 December 2024.

DIRECTORS' REPORT

Reserves

Details of movements in the reserves of the Group during the year ended 31 December 2024 are set out in the consolidated statement of changes in equity on pages 306 to 307 of this report.

Issuance and Listing of Securities

Type of shares and other derivative instruments	Issue price	Issue amount	Listing date	Trading amount approved to be listed as of the end of the reporting period
Ordinary share	RMB52.00	407,750,000	7 August 2023	391,440,000 (Circulating shares not subject to selling restrictions); 16,310,000 (Circulating shares subject to selling restrictions)

In order to enhance the overall competitiveness and strengthen the sustainable development capabilities of the Company, an extraordinary general meeting of the Company was held on 27 June 2022 to consider and approve the resolution on the application for the initial public offering and listing of not more than 433,730,000 RMB Shares on the STAR Market of the Shanghai Stock Exchange. The Board is of the view that the offering and listing of the Company is in line with the relevant national industrial policies and the Company's development strategies, which will facilitate the further expansion of the Company's production capacity, enhance the Company's research and development capabilities and enrich the technological platform. It helps the Company to better meet market demands and enhance its market position and core competitiveness in the wafer foundry industry.

On 7 August 2023, the Company was listed on the STAR Market of the Shanghai Stock Exchange under the stock abbreviation of Hua Hong Company (華虹公司) and stock code of 688347.

Through issuing the RMB Shares on the STAR Market of the Shanghai Stock Exchange, a total of 407,750,000 ordinary shares of the Company have been subscribed by eligible off-line investors, as well as eligible natural persons, legal entities and other institutional investors (other than those prohibited by the laws and regulations and regulatory documents of the PRC) or such other target subscribers meeting the relevant qualification requirements of the China Securities Regulatory Commission and the Shanghai Stock Exchange, who have maintained stock accounts with the Shanghai Stock Exchange.

DIRECTORS' REPORT

The total proceeds raised amounted to RMB21,203,000,000. After deducting the issuance expenses, including underwriting, sponsorship fees, as well as other issuance expenses, the net proceeds amounted to RMB20,920,677,000, at an issue price of RMB52.00 per ordinary share (the closing price of the Company's shares on the Hong Kong Stock Exchange was HK\$26.35 as at the date of the announcement of the Company in relation to the terms of the RMB Share Issue (i.e. 4 August 2023)). Upon receipt of the proceeds, the entire amount has been deposited into a dedicated account for the proceeds, which was approved by the Board. As of 31 December 2023, approximately RMB1,944,328,349 of the net proceeds were utilized, therefore approximately RMB18,976,348,611 were brought forward to the beginning of the Reporting Period. The proceeds raised will be utilised in accordance with the previously disclosed intended use of the proceeds as set out below:

Unit: RMB

Previously disclosed intended use of proceeds	Amount of committed investments	Accumulated unutilised proceeds at the end of the Reporting Period	Expected timeframe for usage of unutilised proceeds
Hua Hong Manufacturing (Wuxi) Project	12,500,000,000.00	160,279,362.29	By the end of 2025
8-Inch Factory Optimisation and Upgrading Project	2,000,000,000.00	1,736,605,414.57	By the end of 2025
Specialty Technological Innovation, Research and Development Project	2,500,000,000.00	1,938,773,902.26	By the end of 2026
Replenishment of Working Capital	1,000,000,000.00	–	N/A

DIRECTORS' REPORT

Continuing Connected Transactions

The Group disclosed in the prospectus dated 3 October 2014 the continuing connected transactions with, amongst others, Huali Micro, Huahong Real Estate and Huajin Property Management. Certain details of such transactions are summarized in the table below. With respect to such transactions, the Company had applied for and the Hong Kong Stock Exchange had granted a waiver from, among others, strict compliance with the announcement and independent shareholders' approval requirement (as the case may be). Details of such continuing connected transactions of the Group together with certain other continuing connected transactions conducted during 2024 are set out as follows:

Transaction	Transaction Date	Parties to the Transaction	Connected Relationship	Transaction	Actual Transaction Amount 2024	Proposed Annual Caps 2024
(1)	1 January 2024	Huahong Group (as purchaser) The Company (as seller)	Huahong Group is a substantial shareholder of the Company. Hongri and Huahong Zealcore are owned 51% and 93.02% by Huahong Group, respectively.	The Company's sale of semiconductor products to Huahong Group, its subsidiaries and associates, including Hongri and Huahong Zealcore, pursuant to the Huahong Group Framework Agreement.	US\$20,441,000	US\$29,320,000
(2)	1 January 2024	Huahong Group (as seller) The Company (as purchaser)	Huahong Group is a substantial shareholder of the Company. Hongri and Huahong Zealcore are owned 51% and 93.02% by Huahong Group, respectively.	The Company's purchase of wafers and chemicals from Huahong Group, its subsidiaries and associates, including Hongri and Huahong Zealcore, pursuant to the Huahong Group Framework Agreement.	US\$39,531,000	US\$40,425,000

DIRECTORS' REPORT

Transaction	Transaction Date	Parties to the Transaction	Connected Relationship	Transaction	Actual Transaction Amount 2024	Proposed Annual Caps 2024
(3)	1 January 2024	HHGrace (as service provider) Hua Hong Wuxi (as recipient of service)	Hua Hong Wuxi is a non-wholly owned subsidiary which is held as to approximately 20.58% by China IC Fund. As China IC Fund is no longer a substantial shareholder of the Company since 27 June 2024, therefore, Hua Hong Wuxi is no longer a connected subsidiary of the Company since the same date.	Service agreement between HHGrace (as service provider) and Hua Hong Wuxi (as recipient of services) in relation to the provision of corporate services by HHGrace to Hua Hong Wuxi.	RMB69,912,007 (approx. US\$9,842,000)	RMB140,000,000 (approx. US\$19,620,000)
(4)	1 January 2024	HHGrace (as recipient of service) Hua Hong Wuxi (as service provider)	Hua Hong Wuxi is a non-wholly owned subsidiary which is held as to approximately 20.58% by China IC Fund. As China IC Fund is no longer a substantial shareholder of the Company since 27 June 2024, therefore, Hua Hong Wuxi is no longer a connected subsidiary of the Company since the same date.	Service agreement between HHGrace (as recipient of service) and Hua Hong Wuxi (as service provider) in relation to the provision of chemical placing services.	US\$63,000 ⁽¹⁾	US\$2,550,000
(5)	1 January 2024	Hua Hong Manufacturing (as recipient of service) Hua Hong Wuxi (as service provider)	Hua Hong Wuxi is a non-wholly owned subsidiary which is held as to approximately 20.58% by China IC Fund. As China IC Fund is no longer a substantial shareholder of the Company since 27 June 2024, therefore, Hua Hong Wuxi is no longer a connected subsidiary of the Company since the same date.	Service agreement between Hua Hong Manufacturing (as recipient of services) and Hua Hong Wuxi (as service provider) in relation to the provision of joint venture internal services by Hua Hong Wuxi to Hua Hong Manufacturing.	RMB59,974,191 (approx. US\$8,443,000) ⁽¹⁾	RMB120,000,000 (approx. US\$16,817,000)
(6)	1 January 2024	Hua Hong Manufacturing (as recipient of service) Hua Hong Wuxi (as service provider)	Hua Hong Wuxi is a non-wholly owned subsidiary which is held as to approximately 20.58% by China IC Fund. As China IC Fund is no longer a substantial shareholder of the Company since 27 June 2024, therefore, Hua Hong Wuxi is no longer a connected subsidiary of the Company since the same date.	Service agreement between Hua Hong Manufacturing (as recipient of services) and Hua Hong Wuxi (as service provider) in relation to the provision of staff commissioning training by Hua Hong Wuxi to the new employees of Hua Hong Manufacturing.	RMB7,100,000 (approx. US\$999,000) ⁽¹⁾	RMB7,150,000 (approx. US\$1,002,000)

DIRECTORS' REPORT

Transaction	Transaction Date	Parties to the Transaction	Connected Relationship	Transaction	Actual Transaction Amount 2024	Proposed Annual Caps 2024
(7)	25 February 2010 (together with the supplemental agreements dated 10 June 2011 and 25 July 2014)	Huali Micro (as lessee) The Company (as lessor)	Huali Micro is 53.85% owned by Huahong Group, a substantial shareholder of the Company.	Lease agreement between Huali Micro (as lessee) and the Company (as lessor) in relation to the factory premise situated at Hill 2, 13th street, Zhangjiang Hi-Tech park, Pudong New Area, Shanghai, PRC leased by the Company to Huali Micro for their 300mm wafer production line. The total gross floor area leased was 96,048.2 square meters.	RMB98,801,000 (approx. US\$13,892,000)	RMB103,000,000 (approx. US\$14,435,000)
(8)	1 January 2024	Huali Micro (as lessee) HHGrace (as lessor)	Huali Micro is 53.85% owned by Huahong Group, a substantial shareholder of the Company.	Lease agreement between Huali Micro (as lessee) and HHGrace (as lessor) in relation to certain clean rooms in HHGrace's factory premises leased to Huali Micro. The total gross floor area leased was 192 square meters.	RMB1,402,000 (approx. US\$197,000)	RMB5,316,000 (approx. US\$745,000)
(9)	10 January 2013 (together with a supplemental agreement dated 10 June 2014)	Huahong Real Estate (as lessor) The Company (as lessee)	Huahong Real Estate is a wholly-owned subsidiary of Huahong Technology Development, a company 50% held by and consolidated with Huahong Group, a substantial shareholder of the Company, and 50% held by HHGrace, a wholly-owned subsidiary of the Company.	Lease agreement between Huahong Real Estate (as lessor) and the Company (as lessee) in relation to the dormitory premises situated at Hua Hong Innovation Park, Nong 2777, Jinxiu Road East, Pudong New Area, Shanghai, PRC ("Dormitory Premises") rented by the Company from Huahong Real Estate for use as staff quarters for the Company's employees. The total gross floor area rented was 17,412.87 square meters.	RMB11,504,000 (approx. US\$1,617,000) ⁽²⁾	RMB12,700,000 (approx. US\$1,780,000)

DIRECTORS' REPORT

Transaction	Transaction Date	Parties to the Transaction	Connected Relationship	Transaction	Actual Transaction Amount 2024	Proposed Annual Caps 2024
(10)	1 January 2024	Huajin Property Management (as property manager) The Company (as lessee)	Huajin Property Management is a wholly-owned subsidiary of Huahong Technology Development, a company 50% held by and consolidated with Huahong Group, a substantial shareholder of the Company, and 50% held by HHGrace, a wholly-owned subsidiary of the Company.	Property management agreement between Huajin Property Management (as property manager) and the Company (as lessee) in relation to the engagement of Huajin Property Management by the Group to provide property management services for the Dormitory Premises.	RMB3,933,000 (approx. US\$553,000)	RMB5,700,000 (approx. US\$799,000)
(11)	1 January 2023	Huahong Real Estate (as lessor) HHGrace (as lessee)	Huahong Real Estate is a wholly-owned subsidiary of Huahong Technology Development, a company 50% held by and consolidated with Huahong Group, a substantial shareholder of the Company, and 50% held by HHGrace, a wholly-owned subsidiary of the Company.	Lease agreement between Huahong Real Estate (as lessor) and HHGrace (as lessee) in relation to the dormitory premises situated at Hua Hong Innovation Park, Nong 2777, Jinxiu Road East, Pudong New Area, Shanghai, PRC ("Additional Dormitory Premises") rented by the Company from Huahong Real Estate for use as staff quarters for the Company's employees. The total gross floor area rented was 9,977.17 square meters.	RMB6,586,000 (approx. US\$927,000) ⁽³⁾	RMB7,300,000 (approx. US\$1,023,000)

DIRECTORS' REPORT

Notes:

- (1) As China IC Fund ceased to be the substantial shareholder of the Company since 27 June 2024, therefore, Hua Hong Wuxi is no longer a connected subsidiary of the Company since the same date, and the relevant transaction between the Group and Hua Hong Wuxi ceased to be a connected transaction under the Listing Rules since that date and the disclosure of the amount of the above continuing connected transaction only covers the period from 1 January 2024 to 27 June 2024 (inclusive).
- (2) The Group entered into a twenty-year lease with respect to certain dormitory premises from Huahong Real Estate before the adoption of Hong Kong Financial Reporting Standard 16. Thus, the Group are not required to re-comply with the notifiable or connected transaction Rules. The amount of rent payable by the Group under the lease is US\$1,617,000 per year. As at 31 December 2024, the balances of those right-of-use assets and lease liabilities were US\$9,694,000 and US\$12,237,000, respectively.
- (3) The Group entered into an additional lease of dormitory premises from Huahong Real Estate. The amount of rent payable by the Group under the lease is US\$927,000 per year. As at 31 December 2024, the balances of those right-of-use assets and lease liabilities were US\$6,341,000 and US\$6,611,000, respectively.

The price and terms of the continuing connected transactions as described above were determined in accordance with the pricing policies and guidelines as set out in the relevant announcements of the Company. The Board (including the Independent Non-Executive Directors) has reviewed the continuing connected transactions as described above and confirmed that such transactions did in fact continue in 2024:

- (i) in the ordinary and usual course of business of the Company;
- (ii) either on normal commercial terms or, if there are no sufficient comparable transactions to judge whether they are on normal commercial terms, on terms no less favourable to the Company than terms available to or from (as appropriate) independent third parties; and
- (iii) in accordance with the relevant agreements on terms that are fair and reasonable and in the interests of the Shareholders of the Company as a whole.

The auditors of the Company have confirmed in a letter to the Board that, with respect to the aforesaid continuing connected transactions of 2024:

- (i) nothing has come to their attention that causes the auditors to believe that the disclosed continuing connected transactions have not been approved by the Company's Board;
- (ii) for transactions involving the provision of goods or services by the Group, nothing has come to their attention that causes the auditors to believe that the transactions were not, in all material respects, in accordance with the pricing policies of the Company;
- (iii) nothing has come to their attention that causes the auditors to believe that the transactions were not entered into, in all material respects, in accordance with the relevant agreements governing such transactions; and
- (iv) with respect to the aggregate amount of each of the continuing connected transactions, nothing has come to their attention that causes the auditors to believe that the disclosed continuing connected transactions have exceeded the relevant annual caps disclosed in the relevant announcement(s) with respect to each of the disclosed continuing connected transactions.

DIRECTORS' REPORT

Related Party Transactions

During the year ended 31 December 2024, the Group entered into certain transactions with parties regarded as “related parties” under the applicable accounting standards. Details of the related party transactions entered into by the Group during the year ended 31 December 2024 are disclosed in note 35 to the financial statements. The Company has complied with the disclosure requirements set out in Chapter 14A of the Listing Rules. Save as disclosed in the section headed “Continuing Connected Transactions and Connected Transactions” in this annual report, the other related party transactions disclosed in note 35 were not regarded as connected transactions or were exempt from reporting, announcement, and shareholder approval requirements under the Listing Rules.

Significant Investments

The Group did not hold any significant investment (with a value of 5% or more of the Group's total assets) as of 31 December 2024.

Future Plans for Material Investments and Capital Assets

Save as disclosed in this report, the Group did not have other concrete plans for material investments or capital assets as of 31 December 2024.

Annual General Meeting

The AGM will be held on Thursday, 8 May 2025.

Closure of Register of Members

For determining the eligibility of Shareholders to attend and vote at the AGM

Latest time to lodge transfer documents for registration	4:30 p.m. on 30 April 2025 (Wednesday)
Closure of register of members	2 May 2025 (Friday) to 8 May 2025 (Thursday) (both dates inclusive)
Record date	8 May 2025

In order to be eligible to attend and vote at the Annual General Meeting, unregistered holders of shares should ensure all share transfer forms accompanied by the relevant share certificates are lodged with the Company's branch share registrar Tricor Investor Services Limited, at 17/F, Far East Finance Centre, 16 Harcourt Road, Hong Kong for registration no later than the aforementioned latest time.

DIRECTORS' REPORT

Directors and Directors' Service Contracts

The Directors of the Company during the year and as of the date of this report were:

Executive Directors:

Mr. Junjun Tang (*Chairman*) (*appointed as Chairman on 31 December 2024*)

Dr. Peng Bai (*President*) (*appointed on 1 January 2025*)

Mr. Suxin Zhang (*resigned on 31 December 2024*)

Non-Executive Directors:

Mr. Jun Ye

Mr. Guodong Sun

Mr. Bo Chen (*appointed on 7 March 2025*)

Ms. Chengyan Xiong (*appointed on 28 March 2024*)

Mr. Limin Zhou (*appointed on 19 January 2024, resigned on 7 March 2025*)

Independent Non-Executive Directors:

Mr. Stephen Tso Tung Chang

Mr. Kwai Huen Wong, JP

Mr. Songling Feng (*appointed on 28 March 2024*)

Mr. Long Fei Ye (*resigned on 28 March 2024*)

Each of the Directors of the Company is appointed for a specific term of three years and is subject to re-nomination and re-election by the Company in general meetings, unless his/her appointment has been early terminated in accordance with the terms and conditions of the relevant letter of appointment or director's service contract.

Mr. Jun Ye, Mr. Guodong Sun and Mr. Stephen Tso Tung Chang will retire by rotation from office as directors at the Annual General Meeting in accordance with articles 117 to 118 of the Articles. Dr. Peng Bai and Mr. Bo Chen were appointed by the Board as Executive Director and Non-Executive Director on 1 January 2025 and 7 March 2025, respectively, and will retire at the Annual General Meeting in accordance with article 122 of the Articles. Mr. Jun Ye, Mr. Guodong Sun, Mr. Stephen Tso Tung Chang, Dr. Peng Bai and Mr. Bo Chen, being eligible, will offer themselves for re-election pursuant to the Articles.

None of the Directors proposed for re-election at the general meeting has a service contract which is terminable by the Group within one year without payment of compensation, other than statutory compensation.

The Company has received annual confirmation of independence from each of the existing Independent Non-Executive Directors and Mr. Long Fei Ye in accordance with Rule 3.13 of the Listing Rules. The Company considers that all the aforesaid current and former Independent Non-Executive Directors are independent in accordance with the Listing Rules.

Profiles of Directors and Senior Management

Profiles of Directors and Senior Management of the Company are set out on pages 12 to 20 of this report.

DIRECTORS' REPORT

Remuneration of the Highest Paid Individuals and Directors and Senior Management

Details of the remuneration of the Directors and the five highest paid individuals are set out in Note 9 to the consolidated financial statements in this annual report, respectively.

Interests of the Directors and the Chief Executive in Shares and Underlying Shares of the Company

As at 31 December 2024, save as disclosed below, none of the Directors or the Chief Executive of the Company had any interests or short positions in the shares, underlying shares, or debentures of the Company or any associated corporation (within the meaning of Part XV of the SFO), as recorded in the register kept under section 352 of the SFO, or as otherwise notified to the Company and the Hong Kong Stock Exchange pursuant to the Model Code contained in the Listing Rules.

Name of Director	Capacity	Number of underlying shares held in long position ⁽¹⁾	Approximate percentage of interests
Mr. Junjun Tang	Beneficial owner	448,500	0.03%

Note:

- (1) Long position in (a) 437,500 underlying shares of the Company under share options granted pursuant to the Share Option Scheme and (b) 11,000 RMB Shares he held.

Interests of Directors in a Competing Business

During the year, none of the Directors of the Group had any interests in a business which competes, either directly or indirectly, with the business of the Company or the Group.

Interests of Directors in Transactions, Arrangements or Contracts of Significance

No transaction, arrangement or contract of significance to which the Company or any of its subsidiaries or associates was a party and in which a Director or an entity connected with a Director has or had a material interest, whether directly or indirectly, subsisted at the end of the year ended 31 December 2024 or at any time during the year.

Directors' Securities Transactions

The Company has devised its own code of conduct regarding Directors dealing in the Company's securities (the "Company Code") on terms no less exacting than the Model Code. Specific enquiry has been made to all the Directors, and the Directors have confirmed that they have complied with the Company Code and the Model Code throughout 2024.

DIRECTORS' REPORT

Indemnity and Insurance

The Company provides directors and officers liabilities (D&O) insurance for the Directors and Officers. The D&O insurance covers day-to-day management liability and is renewed every year.

Director(s) of the Subsidiaries

The names of Directors who have served on the boards of the Company's subsidiaries during the year ended 31 December 2024, or during the period from the end of the year 2024 to the date of this report, were as follows:

Name of the Subsidiary	Place of Incorporation	Name of the Director(s)
HHGrace	Shanghai, PRC	Mr. Junjun Tang Dr. Peng Bai Mr. Jun Ye Mr. Bo Chen Ms. Chengyan Xiong Mr. Stephen Tso Tung Chang Mr. Kwai Huen Wong, JP Mr. Songling Feng Mr. Suxin Zhang ⁽²⁾ Mr. Limin Zhou ⁽²⁾ Mr. Long Fei Ye ⁽²⁾
Hua Hong Wuxi	Wuxi, PRC	Mr. Junjun Tang Mr. Jun Wei Dr. Peng Bai Mr. Guodong Sun Mr. Weihua Wu Mr. Bo Chen Mr. Xin Jin Mr. Suxin Zhang ⁽³⁾ Mr. Limin Zhou ⁽³⁾
Hua Hong Manufacturing	Wuxi, PRC	Mr. Junjun Tang Mr. Jun Wei Dr. Peng Bai Mr. Guodong Sun Mr. Weihua Wu Mr. Bo Chen Mr. Xin Jin Mr. Suxin Zhang ⁽⁴⁾ Mr. Limin Zhou ⁽⁴⁾
Huahong Real Estate (Wuxi) Co., Ltd.	Wuxi, PRC	Mr. Weiping Zhou
Global Synergy Technology Limited	Hong Kong, PRC	Mr. Daniel Yu-Cheng Wang Mr. Cheng Fu
Grace Cayman	Cayman Islands	Mr. Suxin Zhang Mr. Jun Ye
HHGrace Semiconductor USA, Inc.	CA, USA	Mr. Daniel Yu-Cheng Wang Mr. Cheng Fu
HHGrace Semiconductor Japan Co., Ltd.	Tokyo, Japan	Ms. Maki Nakamura Mr. Daniel Yu-Cheng Wang Mr. Cheng Fu

DIRECTORS' REPORT

Notes:

- (1) Dr. Peng Bai, Mr. Bo Chen, Ms. Chengyan Xiong and Mr. Songling Feng were appointed as directors of HHGrace in January 2025, March 2025, April 2024 and April 2024, respectively, and have been registered with the relevant market supervision and management authority.
- (2) The resignation of each of Mr. Suxin Zhang, Mr. Limin Zhou and Mr. Long Fei Ye as a director of HHGrace was registered with the relevant market supervision and management authority.
- (3) Dr. Peng Bai and Mr. Bo Chen were appointed as directors of Hua Hong Wuxi in January 2025 and March 2025, respectively. Mr. Suxin Zhang and Mr. Limin Zhou resigned as directors of Hua Hong Wuxi and the registration of the relevant market supervision and management authority is in the process of change.
- (4) Dr. Peng Bai and Mr. Bo Chen were appointed as directors of Hua Hong Wuxi in January 2025 and March 2025, respectively. Mr. Suxin Zhang and Mr. Limin Zhou resigned as directors of Hua Hong Wuxi and the relevant market supervision and management authority is in the process of change.

Interests of Substantial Shareholders and Other Persons in the Shares and Underlying Shares of the Company

As at 31 December 2024, persons other than a Director or Chief Executive of the Company, having interests of 5% or more or short positions in the shares and underlying shares of the Group, were as follows:

Substantial shareholders	Capacity and nature of interest	Number of shares held	Approximate percentage of aggregate interests in issued share capital*
Shanghai Hua Hong International, Inc. ("Hua Hong International") ⁽²⁾	Legal and beneficial owner	347,605,650 ⁽¹⁾	20.23%
Huahong Group ⁽²⁾	Interest in a controlled corporation	347,605,650 ⁽¹⁾	20.23%
	Legal and beneficial owner	1,198,517 ⁽³⁾	0.07%
Sino-Alliance International, Ltd. ("Sino-Alliance International")	Legal and beneficial owner	160,545,541 ⁽¹⁾⁽⁴⁾	9.34%
Sino-Alliance International	Interest in a controlled corporation	28,415,606 ⁽¹⁾	1.65%
SAIL	Interest in a controlled corporation	188,961,147 ⁽¹⁾⁽⁵⁾	10.99%
Xinxin (Hong Kong) Capital Co., Limited	Legal and beneficial owner	118,495,939 ⁽¹⁾	6.90%
Xun Xin (Shanghai) Investment Co., Ltd.	Interest in a controlled corporation	118,495,939 ⁽¹⁾	6.90%
China IC Fund	Interest in a controlled corporation	118,495,939 ⁽¹⁾	6.90%

Notes:

- (1) Long positions in the shares of the Company.
- (2) Hua Hong International is a wholly-owned subsidiary of Huahong Group.
- (3) Huahong Group directly held a total of 1,198,517 A shares.
- (4) Including 3,084 shares held in escrow by Sino-Alliance International pursuant to an escrow arrangement.
- (5) SAIL indirectly held interests in the Company through two wholly-owned subsidiaries, including Sino-Alliance International.

* The percentages are calculated based on the total number of shares of the Company in issue as at 31 December 2024, i.e., 1,718,468,815 shares.

DIRECTORS' REPORT

Save as disclosed above, so far as is known to any of the Directors and the Chief Executive of the Company, as at 31 December 2024, no other person or corporation other than a Director or Chief Executive of the Company had any interests or short positions in any shares or underlying shares of the Company which were recorded in the register required to be kept by the Company pursuant to section 336 of the SFO.

Arrangements to Purchase Shares or Debentures

At no time during the year ended 31 December 2024 were rights to acquire benefits by means of an acquisition of shares in or debentures of the Company granted to any of the Directors or their respective spouses or minor children, or were any such rights exercised by them, or was the Company or any of its holding companies, subsidiaries, or fellow subsidiaries, a party to any arrangements to enable the Directors or their respective spouses or minor children to acquire such rights in any other body corporate.

Major Customers and Suppliers

Purchases attributable to the Group's top five suppliers combined were less than 30% of the Group's total purchases for the Reporting Period.

Revenue from sales attributable to the Group's largest customer and the five largest customers combined accounted for approximately 9.1% and 30.1%, respectively, of the Group's total sales revenue for the Reporting Period.

None of the Directors or any of their close associates (as defined in the Listing Rules) or any Shareholders (whom, to the best knowledge of the Directors, own more than 5% of the total number of issued shares of the Company) had a material interest in the Group's five largest customers during the Reporting Period.

Emolument Policy

As at 31 December 2024, the Group had a total of 7,487 employees. The Group recruits and promotes individuals based on their merit and development potential. The emolument policy for employees of the Group is set up by the Remuneration Committee on the basis of their merit, qualifications, and competence.

The emoluments of the Directors are determined by the Remuneration Committee, having regard to the Group's operating results and individual performance. The emoluments of the Directors on a named basis are set out in note 8 to the financial statements for the year ended 31 December 2024.

Purchase, Sale or Redemption of Securities

For the year ended 31 December 2024, neither the Company nor any of its subsidiaries purchased, sold or redeemed any of the Company's listed securities.

Right of First Refusal

There are no provisions for right of first refusal under the Articles, or the laws of Hong Kong, which would oblige the Company to offer new shares on a pro-rata basis to existing shareholders.

DIRECTORS' REPORT

Corporate Governance

The Company is committed to maintaining a high standard of corporate governance to safeguard the interests of shareholders and to enhance corporate value and accountability.

Information on the corporate governance practices adopted by the Company is set out in the Corporate Governance Report in this annual report.

Compliance with the Relevant Laws and Regulations

As far as the Board is aware, the Company has complied in all material respects with the relevant laws and regulations that have a significant impact on the business and operation of the Company.

Environmental and Social Responsibilities

The Company firmly believes that robust and effective environmental, social, and governance (ESG) management is the foundation for sustainable and high-quality development. The concept of ESG has been deeply integrated into the Company's strategy, management, and long-term development goal and has been involved in the entire process of our business operations, so as to drive continuous business growth and create and share value for all stakeholders.

During the Reporting Period, the Company revised its ESG management objectives to further enhance its management capabilities in energy, greenhouse gas emissions, water resources, and waste disposal to higher standards, aligning with evolving industry trends and seizing market opportunities. This initiative underscores the Company's unwavering commitment to advancing on the path of sustainable development. Moreover, the Company obtained Platinum Award rating certification from the Responsible Business Alliance.

Compliance with the Deed of Non-Competition and the Deed of Right of First Refusal

Huahong Group, SAIL, and INESA (Group) Co., Ltd., being the then controlling shareholders of the Company, entered into a deed of non-competition (the "Deed of Non-Competition") dated 23 September 2014, details of which have been set out in the paragraph headed "Non-Competition Undertaking" in the section headed "Relationship with Controlling Shareholders" of the Company's prospectus dated 3 October 2014 (the "Prospectus"). In addition, Huahong Group and SAIL also entered into a deed of right of first refusal (the "Deed of Right of First Refusal") dated 10 June 2014, details of which have been set out in the paragraph headed "Right of First Refusal" in the section headed "Relationship with Controlling Shareholders" of the Prospectus. The Company has reviewed the written declaration from each of the controlling shareholders mentioned above on their compliance with their undertakings under the Deed of Non-Competition and the Deed of Right of First Refusal (as the case may be) for the year ended 31 December 2024. The Independent Non-Executive Directors have reviewed the status of compliance and confirmed that all the undertakings under the Deed of Non-Competition and the Deed of Right of First Refusal (as the case may be) have been complied with by the relevant parties.

DIRECTORS' REPORT

Sufficiency of Public Float

Based on the information that is publicly available to the Company and within the knowledge of the Directors as at the date of this report, the Directors are satisfied that the Company has maintained the prescribed minimum public float under the Listing Rules.

On behalf of the Board

Junjun Tang

Chairman

27 March 2025

2024 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Report Preparation Instructions

This report is the ninth Environmental, Social and Governance Report of Hua Hong Semiconductor Limited, disclosing to stakeholders the Company's operating philosophy, established management practices, implemented work and results achieved in ESG topics during its operations.

Scope of the Report

The scope of this report covers Hua Hong Semiconductor Limited ("Hua Hong Semiconductor", "the Company" or "we"). Unless otherwise specified, its scope is consistent with the scope of the consolidated financial statements for the same period of Hua Hong Semiconductor (stock code: 01347.HK/688347.SH).

The factories of Hua Hong Semiconductor involved in production and manufacturing include the Shanghai Production base and Wuxi Production Base. The Shanghai Production Base covers Fab 1, Fab 2 and Fab 3, while the Wuxi Production Base covers Fab 7. Wuxi Fab 9 was completed and put into production in December 2024 and is not included in the scope of this report.

Reporting Period

This Reporting Period is from 1 January 2024 to 31 December 2024. Unless otherwise stated, the data in this report refers to the data within this period.

Basis of Preparation

This report is prepared in accordance with Appendix C2 Environmental, Social and Governance Reporting Guide (effective from 31 December 2023) of the Listing Rules issued by the Hong Kong Stock Exchange, Self-Regulatory Guidelines No.14 for Companies Listed on Shanghai Stock Exchange—Sustainability Report (For Trial Implementation) (April 2024) issued by the Shanghai Stock Exchange and the Environmental, Social and Governance (ESG) Indicator System for State-owned Listed Companies in Shanghai (Version 1.0) issued by the Shanghai Municipal State-owned Assets Supervision and Administration Commission ("Shanghai SASAC").

Data Description

The data and cases in the report come from the Company's official records of actual operations. The financial data in the report were all denominated in RMB. If there is a discrepancy between the financial data and the Company's annual financial report, the annual financial report shall prevail.

Report Acquisition Method

This report is published in electronic form. The publishing platform includes the information disclosure platform designated by the stock exchange, and can also be viewed online or downloaded from the Company's official website (<https://www.huahonggrace.com>).

Contact Us

If you have any suggestions regarding the report, please contact us through the following methods:

Contact address: 288 Halei Road, Zhangjiang Hi-Tech Park, Shanghai, PRC

Contact email: IR@hhgrace.com

2024 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Reporting Principles

Materiality

The Company has identified the material topics related to its operations that are of concern to various stakeholders as the focus of this report. While reporting on material topics in this report, attention is also paid to the characteristics of the industry and business operations in which the Company is involved. For details of the process and results of the materiality analysis of topics, please see the “Materiality Assessment” section of this report.

Accuracy

The information in this report is as accurate as possible. Among them, the measurements of quantitative information have been described with data calibrations, calculation bases and assumptions to ensure that the range of calculation errors would not be misleading to the users of the information. For details of the quantitative information and the accompanying information, please see the “ESG Data and Notes” section of this report.

Balance

The contents of this report reflect objective and truthful facts and provide unbiased disclosure of both positive and negative information concerning the Company. During the Reporting Period, no negative events were discovered that should have been disclosed but were not.

Clarity

This report is issued in simplified Chinese, traditional Chinese and English. This report contains information such as tables, model diagrams and lists of laws, regulations and relevant policies that the Company has complied with as an adjunct to the textual content of this report, so as to facilitate stakeholders to better understand the textual content of the report. To facilitate faster access to information by stakeholders, this report provides a table of contents and an index table of ESG standards.

Quantitative

This report discloses key quantitative disclosures and, where possible, historical data.

Comparability

This report maintains a consistent approach to statistics and disclosure of the same quantitative disclosure items in different reporting periods; if there are changes in the method of data collection, measurement and calculation, the relevant data will be adjusted retrospectively, and the circumstances and reasons for the adjustments will be explained in the notes to the report, so as to enable stakeholders to conduct meaningful analyses and assess the trend of the development of the Company’s ESG data levels.

Completeness

The scope of the disclosure object of this report is consistent with the scope of the Company’s consolidated financial statements.

Timeliness

This is an annual report covering the time period from 1 January 2024 to 31 December 2024

Verifiability

The cases and data in this report come from the original records of the Company’s actual operations or financial reports. The sources of data and calculation processes disclosed by the Company are traceable and can be used to support external verification checks.

2024 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

ESG Management Statement of the Board

The Company adheres to the entrepreneurial spirit of “set a course mastering the challenges ahead”, with the vision of empowering our customers through continuous innovation. We focus on “8-inch + 12-inch” and advanced “Specialty IC + Power Discrete” development strategies, providing diversified wafer foundry and related support, and strongly supporting emerging applications in new energy vehicles, green energy, and the Internet of Things. Our commitment to an exceptional quality management system ensures that we meet the stringent requirements of automotive electronic chips.

The Board places great emphasis on Environmental, Social, and Governance (ESG) matters, recognizing them as a core component of the Company’s sustainable development strategy. The Board directs the formulation of ESG management policies and development strategies, guides the identification and determination of significant ESG topics. Directors and senior executives regularly monitor and review the progress of the Company’s ESG objectives to ensure continuous improvement in environmental protection, social responsibility, and corporate governance.

During the Reporting Period, the Company reformulated its ESG management objectives and will systematically improve the full-cycle management efficiency in the fields of energy control, water recycling, greenhouse gas emissions and waste under the guidance of advanced standards, actively responding to the national “Dual Carbon” strategic orientation. Through the construction of a data-driven governance system and in-depth integration of ESG standards, we will dig deep into green economic opportunities, demonstrate strategic determination in clean technology application and industrial chain layout, and firmly determine to forge ahead on the road of sustainable development.

During the Reporting Period, the Company obtained Platinum Award rating certification from the Responsible Business Alliance, focusing on key areas such as employee rights, environmental responsibility, health and safety, business ethics, and management systems. We have systematically integrated social responsibility into production operations to ensure green, healthy, and sustainable development. The management practices and progress of ESG topics in this report were considered and approved at the meeting of the Board of Directors of the Company.

2024 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

1. Materiality Assessment

1.1 Double Materiality Analysis

In compliance with the Hong Kong Stock Exchange's Environmental, Social and Governance Reporting Guide and the Self-Regulatory Guidelines No.14 for Companies Listed on Shanghai Stock Exchange—Sustainability Report (For Trial Implementation) (the "SSE Guidelines") and with reference to international sustainability disclosure standards such as the GRI Sustainability Reporting Standards from the Global Sustainability Standards Board, the Company analyzes and evaluates each ESG topic from the dual perspectives of impact materiality and financial materiality to determine the material topics.

Hua Hong Semiconductor 2024 Topics Double Materiality Analysis Process

Step	Details
Step 1 Understand the Context of Company Activities and Business Relationships	- Gain insights into the Company's strategic plans. - Analyze the external market environment in which the Company operates. - Identify value chain segments that generate impacts and the key stakeholders.
Step 2 Conduct Stakeholder Engagement, Topic Identification and Due Diligence	- Communicate with key stakeholders to identify and determine topics related to the Company, taking into account the industry background and the Company's practices. - Conduct due diligence through engagement, surveys, interviews, and other methods to engage stakeholders and analyze and identify the impacts, risks, and opportunities of the topics.
Step 3 Materiality Assessment	- Establish key indicators and evaluation criteria using a scientific and effective methodology. - Engage senior management and financial leaders to assess the financial materiality of the topics, while involving employees, suppliers, customers, and other stakeholders to evaluate the impact materiality of the topics, thereby determining the ranking of topics based on their overall materiality.
Step 4 Topic Identification and Disclosure	After review and confirmation by the Company's Board of Directors, prioritize the disclosure of topics deemed highly material for the 2024 in this report.

2024 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

1.2 Stakeholder Engagement and Due Diligence

Based on the business and operational characteristics of our Company and leveraging the experience and practices in industry at home and abroad, Hua Hong Semiconductor has determined the following to be our stakeholders: our shareholders and senior management, customers, employees, government and regulatory authorities, partners, communities, and the public. The Company has established a stakeholder engagement mechanism to maintain close engagement with these stakeholders via various channels and methods, including websites, media, meetings, reports, and social activities. This mechanism enables the Company to promptly address the concerns of stakeholders.

Hua Hong Semiconductor Stakeholder Concerns and Engagement Methods

Key Stakeholders	Description	Concerned Topics	Engagement and Response Methods
Shareholders and senior management	Domestic and foreign investors holding equity and debt investments in our Company, and senior management members of the Company	• Corporate governance • Risk and compliance management • Business ethics • Product and service safety and quality	• Financial and performance reports, Shanghai Stock Exchange e-interaction platform, emails, and roadshows • Risk management system • Anti-corruption mechanisms • Comprehensive audits • Quality reviews
Customers	IDMs and fabless semiconductor companies	• Information security and privacy protection • Product and service safety and quality • R&D innovation and intellectual property protection • Green products • Clean technology opportunities • Circular economy	• Information Security Management System (ISMS) • ISO9001 and other quality management certifications • Customer satisfaction surveys • Technical seminars and industry exchange meetings • Product lifecycle management
Employees	Our employees and contract personnel who serve our Company on a continuous basis	• Rights and Interests of Employees • Employee health and safety • Employee development and training	• Employee rights protection systems • Dual prevention mechanism for safety risk classification control and hidden danger investigation and management • Comprehensive training programs for all levels

2024 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Key Stakeholders	Description	Concerned Topics	Engagement and Response Methods
Government and regulatory authorities	Tax, environmental protection, safety and other departments, local governments and regulatory authorities (such as SFC, etc.)	- Compliant operation - Emissions and waste management - Energy management - Water resources management - Climate change mitigation and adaptation	- Compliance and internal control systems - Carbon footprint reports - Water resource risk assessments in factory operations - Environmental information disclosure
Partners	Suppliers, research institutions, industry associations, etc.	- R&D innovation and intellectual property protection - Sustainable supply chain management - Circular economy	- Industry exchanges - Responsible Business Alliance (RBA) certification - Local supplier diversification - Supplier social responsibility audit mechanisms
Communities and the public	Communities in which we operate, the public and media, etc.	- Community and public welfare - Emissions and waste management	- Engagement in Community activities, employee volunteer activities, public welfare activities, social cause campaigns, etc. - Environmental information disclosure

The Company established and gradually improved due diligence mechanism, appointed the ESG Working Group to lead and coordinate various departments to carry out due diligence such as stakeholder communication, interviews and research, so as to analyze, identify and determine the impacts, risks and opportunities of ESG topics in the short term (within 1 year), medium term (1 year to 5 years) and long term (more than 5 years), so as to facilitate targeted response measures.

Hua Hong Semiconductor 2024 Topics Impacts, Risks and Opportunities Analysis

No.	Topics	Timeframe	Key Risks and Opportunities	Value Chain Scope		
				Upstream	Operations	Downstream
1	Climate Change Mitigation and Adaptation	Short, Medium, Long-term	Risk: Increasing compliance costs and low-carbon technology upgrade requirements due to stricter global climate and environmental policies and carbon emission control measures Opportunity: Investments in climate-friendly technologies and development of more efficient, eco-friendly products can enhance market competitiveness and brand reputation	√	√	√

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No.	Topics	Timeframe	Key Risks and Opportunities	Value Chain Scope		
				Upstream	Operations	Downstream
2	Energy Management	Short, Medium, Long-term	Risk: Optimizing energy management systems may incur additional costs and raise concerns from energy-efficiency-focused customers and investors Opportunity: Declining costs of renewable energy (e.g., solar, wind) provide stable, low-cost energy options, reducing reliance on fossil fuels	√	√	√
3	Water Resources Management	Medium, Long-term	Risk: Water shortages in production operations may lead to disruptions, unstable water quality, and reduced capacity and product yield, increasing costs and revenue losses Opportunity: Improved water resources management systems enhance efficiency and reduce operational costs		√	
4	Emissions and Waste Management	Medium, Long-term	Risk: Stricter emissions regulations may invest funds to ensure that its production processes and waste management meet new regulatory requirements, including upgrading treatment facilities or introducing new emission treatment technologies Opportunity: Higher waste recycling rates can transform waste into reusable resources, lowering raw material costs	√	√	
5	Environmental management	Medium, Long-term	Risk: Evolving environmental regulations require diligence and monitoring to ensure the operations comply with all relevant laws and standards. Non-compliance may result in fines, sanctions, or production restrictions Opportunity: Strong environmental practices can attract ESG-focused investors and customers, enhancing capital market image and market reputation	√	√	√

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No.	Topics	Timeframe	Key Risks and Opportunities	Value Chain Scope		
				Upstream	Operations	Downstream
6	Green Products	Short, Medium, Long-term	Risk: In a rapidly evolving technological environment, failure to update product designs and production processes may result in falling behind competitors and losing market share Opportunity: Effective product lifecycle management enables rapid response to market demands and technological advancements, driving product innovation and diversification		√	√
7	Circular Economy	Medium, Long-term	Risk: Without proper management and operational mechanisms for recycling raw materials and waste, product quality may be compromised Opportunity: Improved resource efficiency can reduce raw material procurement costs and waste disposal expenses, enhancing overall operational efficiency	√	√	√
8	Clean Technology Opportunities	Medium, Long-term	Risk: Rapid advancements in clean technology may render the products less competitive if they fail to keep pace Opportunity: Growing global demand for green and clean technologies and products presents opportunities to expand market share and create new revenue streams through innovation		√	√
9	Employee Health and Safety	Medium, Long-term	Risk: In high-intensity production environments, accidents and injuries may occur if safety measures are not effectively managed, potentially leading to employee injuries or even more severe accidents Opportunity: Strengthening occupational health and safety management can improve safety standards, reduce accidents, and mitigate legal and financial risks, creating a safer work environment	√	√	

2024 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

No.	Topics	Timeframe	Key Risks and Opportunities	Value Chain Scope		
				Upstream	Operations	Downstream
10	Rights and Interests of Employees	Medium, Long-term	Risk: The departure of key employees may result in the loss of critical industry knowledge and skills, impacting project progress and execution efficiency Opportunity: Standardized employment policies and a positive work environment can enhance talent retention, supporting sustainable operations and business growth		√	
11	Employee Development and Training	Medium, Long-term	Risk: Failure to provide high-quality training may lead to gaps in employees' professional knowledge and management capabilities, affecting product quality and managerial effectiveness Opportunity: High-quality training fosters innovative thinking and problem-solving skills, enabling the Company to adapt to market changes and technological advancements, thereby enhancing competitive advantage		√	
12	Product and Service Safety and Quality	Short, Medium, Long-term	Risk: Inadequate product quality and customer service may increase after-sales and maintenance costs, including additional labor costs and recall expenses, potentially leading to customer loss and revenue decline Opportunity: Robust product quality management systems and customer relationship management systems can enhance product competitiveness, improve customer satisfaction, and drive revenue growth through increased loyalty	√	√	√

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No.	Topics	Timeframe	Key Risks and Opportunities	Value Chain Scope		
				Upstream	Operations	Downstream
13	Information Security and Privacy Protection	Medium, Long-term	Risk: Strengthening cybersecurity infrastructure requires continuous financial and resource investments, including firewalls, intrusion detection systems, and data encryption technologies, to mitigate the risk of cyberattacks Opportunity: Effective information security management can attract privacy-conscious customers, enhance brand image, increase market share, and drive sales growth		√	√
14	Sustainable Supply Chain Management	Medium, Long-term	Risk: Ensuring supply chain stability and sustainability may require diversifying suppliers and incurring higher procurement costs to meet environmental and social responsibility standards, potentially impacting profitability and competitive advantage Opportunity: Building a sustainable supply chain enhances the Company's ability to identify and manage environmental and social risks, improving operational resilience and reducing potential business risks	√	√	
15	R&D Innovation and Intellectual Property Protection	Short, Medium, Long-term	Risk: Market acceptance of new technologies or products may fall short of expectations, affecting sales and reducing revenue and profitability Opportunity: Success in technological innovation can attract investor attention, and R&D achievements can create financing opportunities and open new business prospects	√	√	√

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No.	Topics	Timeframe	Key Risks and Opportunities	Value Chain Scope		
				Upstream	Operations	Downstream
16	Community and Public Welfare	Short, Medium, Long-term	Risk: If the Company's performance in public benefit activities or social responsibility fails to meet public expectations, it may harm brand image and reputation Opportunity: Involvement and investment in targeted communities can help the Company better understand local market needs, seize expansion opportunities, and strengthen competitive advantage		√	
17	Corporate Governance	Medium, Long-term	Risk: Non-compliant corporate governance may lead to regulatory investigations and fines, impacting financial health Opportunity: Strong corporate governance can attract more investors, enhance risk management capabilities, and foster trust, driving high-quality development	√	√	√
18	Business Ethics	Medium, Long-term	Risk: Violations of business ethics may result in legal disputes, hefty fines, and increased financial burdens Opportunity: Improving governance structures and transparency can strengthen internal controls and risk management, reducing the likelihood of violations	√	√	√
19	Risk and Compliance Management	Medium, Long-term	Risk: Failure to comply with relevant laws and regulations may lead to legal disputes, fines, or sanctions, damaging the Company's reputation and market trust Opportunity: Optimizing internal processes and systems can improve operational efficiency, reduce compliance risks, and support long-term business development while minimizing compliance costs	√	√	√

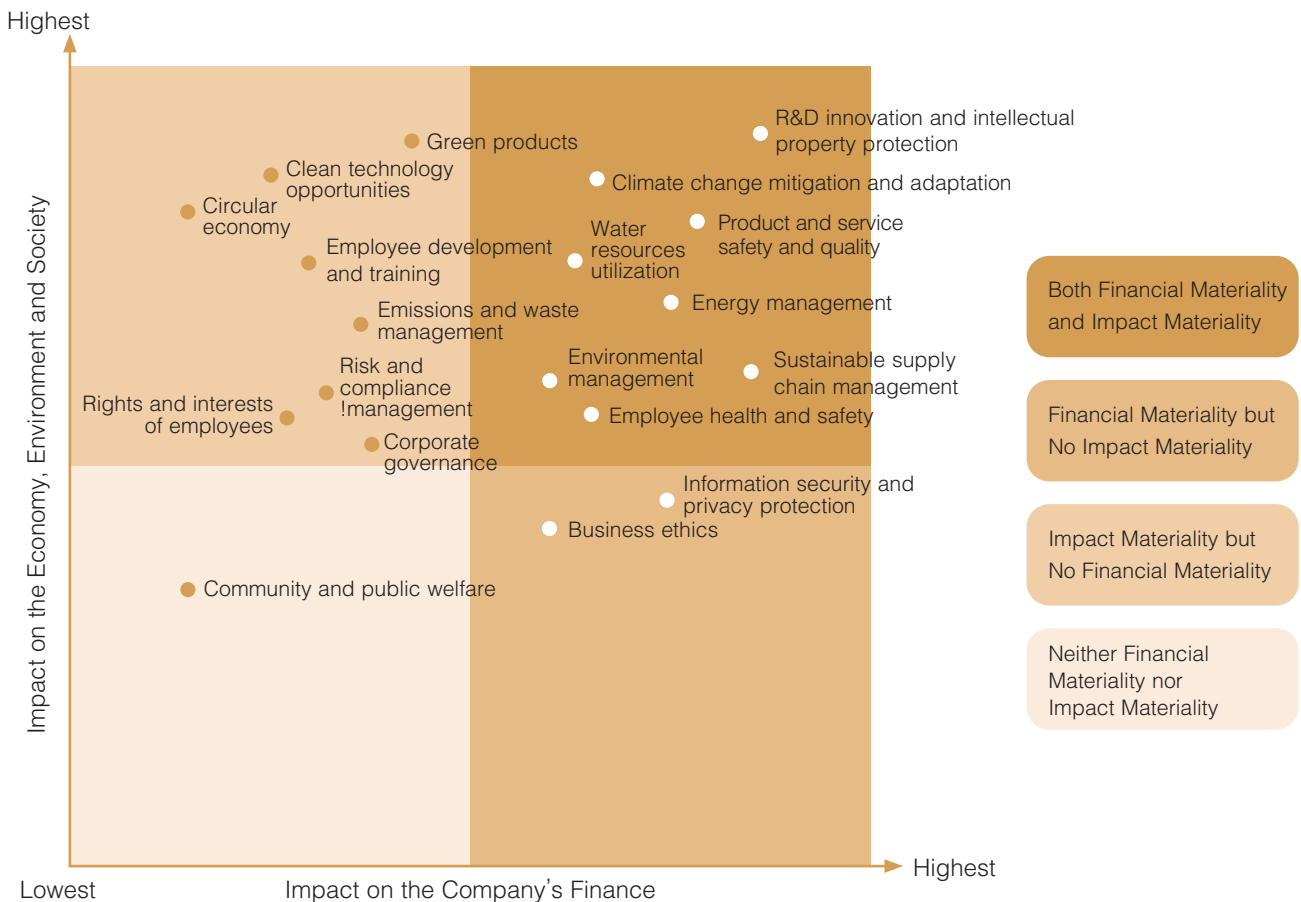
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1.3 Materiality Analysis Conclusion

In 2024, through the double materiality analysis, Hua Hong Semiconductor identified 19 material topics, categorized as follows: 7 topics with double materiality, 2 topics with financial materiality only, 9 topics with impact materiality only, and 1 topic with neither financial nor impact materiality. The specific categorization is as follows:

- Topics with double materiality: R&D innovation and intellectual property protection, climate change mitigation and adaptation, water resources management, energy management, environmental management, sustainable supply chain management, and employee health and safety;
- Topics with financial materiality only: Information security and privacy protection and business ethics;
- Topics with impact materiality only: Green products, clean technology opportunities, circular economy, employee development and training, product and service safety and quality, emissions and waste management, risk and compliance management, rights and interests of employees, and corporate governance;
- Topics with neither financial materiality nor impact materiality: Community and public welfare.

Hua Hong Semiconductor 2024 Topics Materiality Matrix



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Note: Among the 21 topics set in the SSE Guidelines, the Company does not involve the topics of “ecosystem and biodiversity protection” and “science and technology ethics”; “due diligence” and “stakeholder engagement” are processes for ESG topic identification, assessment and management, and are responded to in the “Materiality Assessment” section, not included in the matrix as ESG topics. The remaining Guideline topics are addressed in the main body of the report or in the index table. For the specific chapter mapping and explanation, please refer to the “Benchmarking Index Table of Self-Regulatory Guidelines No.14 for Companies Listed on Shanghai Stock Exchange—Sustainability Report (For Trial Implementation)”. In addition, the Company has independently identified the topics of “Green Products”, “Clean Technology Opportunities”, “Risk Compliance Management” and “Corporate Governance”, all of which are responded to in the main body of the report.

2. ESG Management System

2.1 ESG Management Structure

Based on the corporate vision of “Continuous Innovation and Empowering the Future for Global Customers”, the Company established a top-down environmental, social, and governance (ESG) management structure, continues to improve the ESG management system, encourages innovation-driven development, fosters innovative talents, and strives to reduce the impact of business operation on the environment. We also make efforts to diversify the supply chain capabilities and promote the joint creation of corporate business and social values.

The Board, as the highest decision-making/management body for the Company’s ESG management, is responsible for the following aspects:

- to direct the formulation of ESG management policies and strategies of the Company and ensure that they are up to date, relevant, and in compliance with applicable legal and regulatory requirements;
- to direct the identification and determination of the importance of significant ESG topics of the Company;
- to supervise the setting and implementation of the Company’s ESG goals, including: setting ESG management performance goals of the Company; monitoring progress in achieving the goals; and advising on actions required to achieve the goals;
- to review and approve the Company’s annual Environmental, Social, and Governance Report and other ESG related disclosures.

The management level is responsible for overseeing the overall implementation of the ESG objectives set forth by the Company. The ESG Working Group is tasked with identifying the impacts, risks, and opportunities associated with ESG topics, developing ESG strategies and management policies, and assisting relevant departments in implementing ESG management practices. It also regularly reports to the management team and the Board on the progress of key ESG performance indicators, thereby advancing the achievement of the Company’s ESG management objectives.

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ESG Management Structure



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2.2 ESG Management Strategies and Targets

The Company has integrated ESG management into its products, business operations, and corporate development and formed a complete ESG management strategy covering the four aspects of “Responsibility for Employees”, “Responsibility for the Industry”, “Responsibility for People’s Livelihood”, and “Responsibility for Investors”.

ESG Management Strategies



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The Company has set ESG management targets for water use efficiency, energy use efficiency, GHG emission reduction, pollutant reduction, waste reduction, and conflict mineral due diligence, based on the development of its business and its ESG performance in operations. On an annual basis, the management and the Board review the ESG performance and achievement of the Company's ESG goals for the previous year and disclose the results in the ESG report, so as to promote the achievement of ESG management targets.

Aspect	Target	Progress in 2024
Water resources management	The water consumed per unit product ¹ (m ³ per 8-inch wafer) in 2030 will decrease by 5% as compared with 2023	The water consumed per unit product was 2.76 m ³ per 8-inch wafer, decreasing by 2.49% as compared with 2023
Energy consumption management	Comprehensive energy consumption per unit product (MWh per 8-inch wafer) in 2030 will decrease by 10% as compared with 2023	Comprehensive energy consumption per unit product was 0.27 MWh per 8-inch wafer, decreasing by 9.08% as compared with 2023
GHG emissions management	GHG emissions per unit product (tCO ₂ e per 8-inch wafer) in 2030 will decrease by 10% as compared with 2023	GHG emissions per unit product in 2024 was 0.12 tCO ₂ e per 8-inch wafer, decreasing by 9.53% as compared with (0.14) in 2023
Waste discharge management	The waste produced per unit product (kg per 8-inch wafer) in 2030 will decrease by 4% as compared with 2023	The waste produced per unit product was 8.29 kg per 8-inch wafer, increasing by 8.41% as compared with 2023
Wastewater discharge management	COD discharge concentration in wastewater will be 30% lower than the emission standard	Shanghai Production Base: The average COD discharge concentration was 65.70 mg/L, which is 30% lower than the emission standard of 500 mg/L Wuxi Production Base: The average COD discharge concentration was 29.90 mg/L, which is 30% lower than the emission standard of 50 mg/L
Air emission discharge management	VOCs discharge concentration in air emissions will be 30% lower than the emission standard	Shanghai Production Base: The average VOCs discharge concentration was 5.35 mg/m ³ , which is 30% lower than the emission standard of 50 mg/m ³ Wuxi Production Base: The average VOCs discharge concentration was 0.33 mg/m ³ , which is 30% lower than the emission standard of 100 mg/m ³
Sustainable supply chain management	The due diligence rate on suppliers of conflict minerals will reach 100%, and the utilization rate of compliant minerals will reach 100%	Have conducted due diligence on suppliers of "conflict minerals", with a coverage rate of 100%, and completed the latest version of the investigation report on conflict minerals and extended minerals All suppliers are found to use compliant raw materials with the utilization rate of compliant minerals up to 100%

1 Water consumed per unit product = water consumption from municipal water supply / annual production, excluding recycled water and other water sources.

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Honors and Recognitions Received by Hua Hong Semiconductor in 2024

No.	Honors
	Global
1	Responsible Business Alliance Platinum Award
	National
2	Second Prize in State Science and Technology Improvement Award
3	National Worker Pioneer
4	National Model Unit for Professional Ethics Construction
	Shanghai
5	Shanghai Quality and Technology Progress Award – Excellence Award
6	The 35th Shanghai Outstanding Invention Gold Award
7	Shanghai Green Manufacturing Demonstration List in 2024 (Second Batch) - Green Factory
8	Excellent Workstation of Academician in Shanghai
9	Shanghai Worker Pioneer
10	First Prize for Outstanding Collective in Shanghai Employee Labor and Skill Competition
11	Second Prize in Shanghai Employee Outstanding Innovation Achievement Award
12	Outstanding Achievement Award for Advanced Operational Methods of Shanghai Municipal Employees
13	Shanghai Employee Rationalization Proposal Innovation Award
	Jiangsu
14	Wuxi Model Unit for Happy Enterprise Construction
15	Wuxi City Model Worker's Home

3. Energy Conservation and Emission Reduction to Address Climate Change

3.1 Climate Change Mitigation and Adaptation

In the operational process of Hua Hong Semiconductor, the direct sources of GHG emissions are the burning of natural gas, gasoline, diesel and the fugitive emissions of the production process, and the indirect sources of GHG emissions are purchased heat and electricity. With reference to the International Sustainability Standards Board (ISSB)'s Sustainability Disclosure Standards of IFRS 2 – Climate-Related Disclosures (“IFRS S2”), the Company has established a top-down climate governance framework and formulated development strategies to cope with climate change, so as to enhance its adaptability to climate change and gradually minimize the impact of its operations on the environment.

Hua Hong Semiconductor's Climate Change Management System

Governance	- The Board regularly reviews climate-related risks and opportunities, as well as climate change response strategies and management targets, and regularly monitors progress towards the achievement of those targets. - The ESG Working Group takes responsibility for formulating climate change response strategies and management targets. According to the external regulatory requirements and market demands, the ESG Working Group makes timely adjustments to the timeliness of management policies, supervises the implementation of related initiatives at each plant, and regularly reports the work progress to the Board. - Each plant is responsible for executing specific tasks, such as verifying GHG emissions, reducing GHG emissions through practical actions, regularly collecting and summarizing GHG emission data, and performing self-assessments on the achievement of targets.

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Strategy

- Identifying climate change risks, including transition risks and physical risks, and conducting scenario analysis to evaluate the financial impacts of climate change risks.
 - a) Transition risks: Actively responding to a series of measures under the emission control policies to continuously reduce GHG emissions through various initiatives such as lean production, green procurement, improvement of production processes and replacement of non-essential energy-intensive equipment, details of which are available in the section headed “Energy Management”.
 - b) Market opportunities: Capitalizing on the growth opportunities of product application in wind and solar power generation, white goods and automotive electronics industries, details of which are available in the section headed “Clean Technology Opportunities”.
 - c) Product opportunities: Developing low-power green products and utilizing our process advantages to reduce the ESG emissions at the consumer end. Reducing the carbon footprint of products through whole life-cycle management, details of which are available in the section headed “Green Products”.
- Making clean technology innovation as one of our core strategies and incorporating climate change strategies into our business development frameworks, such as resource use efficiency, energy sources, products and service opportunities.

Impacts, Risks and Opportunities Management

- Integrating the management of climate-related risks and opportunities into the environmental risk management system, and formulating response strategies and implementing management measures for significant climate-related risks and opportunities.
- Conducting ISO14064-1 GHG emission verification and certification to systematically identify the GHG emission sources and verify the GHG emissions.

Metrics and Targets

- Publicly disclosing the GHG emission data annually through the ESG reports and reporting the management targets along with their achievement status.
- Management target of GHG emissions: GHG emissions per unit product (tCO₂e per 8-inch wafer) in 2030 will decrease by 10% as compared with 2023.
- Achievement status: GHG emissions per unit product in 2024 was 0.12 tCO₂e per 8-inch wafer, decreasing by 9.53% as compared with 2023.

The Company regularly identifies climate-related risks and opportunities, assesses their impacts on its business development and business model, and analyzes the potential financial impacts, so as to better adjust its strategies and management approach and continuously improve its response to climate change.

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Potential Financial Impacts on and Response Measures Taken by Hua Hong Semiconductor Towards Climate-related Risks and Opportunities

Risks and Opportunities of Climate-related as Identified		Potential Financial Impacts	Response Measures
Risks	Transition Risks Transitioning to a low-carbon economy, various stakeholders expect companies to take active actions in response to climate change and to enhance the transparency of information disclosure. As a result, any company that fails to respond effectively to these propositions from the stakeholders would be exposed to negative impacts on its own reputation. Reputation Risks The PRC has set a "Dual Carbon" target, and regulatory scrutiny on corporate carbon emissions will continue to intensify in the future. Companies whose carbon emissions do not meet the regulatory requirements shall purchase carbon emission allowances or China Certified Emission Reductions (CCERs), which will incur additional operating costs; companies that fail to achieve their carbon emission quota in full and on time may be subject to penalties such as rectification within prescribed period by relevant government departments. Policy and Legal Risks Customers and consumers are increasingly concerned about the sustainability of products and are demanding higher standards for carbon footprint and energy consumption. If the Company fails to meet the market demands for its products and services in a timely and effective manner, the Company will lose its market advantage. Market Risks	Decreased Revenue Increased Operating Costs Decreased Revenue	- Publicly disclosing the GHG emissions and reporting the target progress of GHG emissions per unit product annually. - Disclosing climate change mitigation and adaptation efforts in accordance with IFRS S2, and reporting the progress to stakeholders. - Conducting carbon accounting work annually, and completing the compliance and achievement of carbon emission quota limits required by relevant ministries and commissions in a timely manner. - The Company's annual carbon emissions do not exceed the carbon quota limits, therefore no additional costs are incurred. - Reducing GHG emissions through various measures, such as upgrading process technologies and enhancing production equipment performance. For example, use of NF_3 with high cleaning efficiency instead of C_2F_6 helps to reduce use of fluorocarbons, thus reducing GHG emissions annually. - Developing products with lower power consumption and higher efficiency to help downstream industries improve energy efficiency and reduce GHG emissions across the value chain.

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Risks and Opportunities of Climate-related as Identified		Potential Financial Impacts	Response Measures
Physical Risks	Acute Physical Risks The Company operates in coastal regions such as Shanghai and Wuxi and may be exposed to climate-related disasters such as typhoons and rainstorms, which may damage fixed assets, including infrastructure, resulting in economic losses.	Reduced Value of Fixed Assets	- Formulating emergency response plans for extreme weather events. - Regularly conducting emergency drills and training for natural disaster incidents.
	Chronic Physical Risks Persistent high-temperature weather caused by climate change may disrupt the Company's business operations, resulting in lower business revenue.	Decreased Revenue	
	Resource Use Efficiency Resource use efficiency shall be improved, including the efficiency of energy and water resources, which can help the Company reduce operating costs during operations.	Decreased Operating Costs	The 12-inch production line in Fab 7 (Wuxi) was awarded Leadership in Energy and Environmental Design ("LEED") Gold certification from the United States Green Building Council ("USGBC").
	Energy Sources A higher utilization rate of clean energy in production activities can help reduce reliance on fossil energy and, in the long term, reduce the cost of purchasing municipal electricity.	Decreased Operating Costs	Developing a rooftop photovoltaic construction plan to use renewable energy instead of non-renewable energy and increase the proportion of green electricity.
Opportunities	Products and Services The Company's products are widely used in energy solutions for household appliances and across all stages of the photovoltaic and energy storage industries, from electricity generation to consumption. The growing demand for chips in these sectors is driving a continuous increase in the Company's business revenue	Increased Revenue	The Company possesses non-volatile memory (eNVM), high-performance microcontroller (MCU) and single-chip integration (BCD) processes, and has accumulated rich technology and experience in the new energy power generation industry and the manufacturing processes in the field of home appliance applications.

During the Reporting Period, the Company completed the self-inspection report on the evaluation of dual-control responsibility for carbon emissions in accordance with the Notice on Conducting 2023 Pilot Evaluation of Dual-Control Responsibility for Carbon Emissions in Key Energy-Consuming Enterprises in the Industrial and Communication Industry 《關於開展 2023 年度工業和通信業重點用能單位碳排放雙控責任評價考核工作(試點)的通知》 issued by Shanghai Municipal Economic and Information Technology Commission. By implementing measures to reduce the GHG emissions from the Company's production and operation at both the management and equipment levels, the Company is progressively advancing toward its green and low-carbon transition objectives.

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The Company's Shanghai Production Base (Fab 1, Fab 2 and Fab 3) is a carbon emission quota management unit in Shanghai. The Shanghai Production Base conducts third-party verification of the GHG emission reports every year and completes the total data control plan for the next year at the end of each year. During the Reporting Period, the Company completed the compliance and settlement work on schedule, with a total payment quota of 251,024 tons.

3.2 Energy Management

Hua Hong Semiconductor is committed to building a green enterprise integrating green technology, green production and green building to realize environment-friendly operation and sustainable development. The Company's energy sources include electricity, heat, natural gas, gasoline and diesel, of which electricity, heat and natural gas are sourced from municipal supplies, with no significant impact on the surrounding environment and natural resources.

Governance

The Company has formulated various administrative systems, including the Resource and Energy Management Procedure and the Management Regulations for Water, Electricity, Steam, and Gas Metering in compliance with the Energy Law of the People's Republic of China and the Energy Conservation Law of the People's Republic of China. During the Reporting Period, the Company improved its energy management system in accordance with ISO 50001 and sorted out and updated its energy management system, to further standardize its energy management work.

The Company has established a three-tier energy management structure comprising the Board, the Management and the ESG Working Group. The Board is responsible for reviewing the energy management strategy and overseeing the achievement of targets. The Management is responsible for formulating the energy management strategy and targets, facilitating implementation of relevant work in each production base and department, overseeing achievement of targets, and reporting to the Board. The ESG Working Group leads the EHS, power and production departments in each production base to formulate specific action plans to implement and realize the management strategy.

Strategy

The Company positions energy conservation as an important strategic development direction. On the one hand, the Company has reduced total energy consumption through energy-saving technological transformation and actively complied with the energy consumption assessment requirements of the governmental or regulatory authorities, to reduce the policy risks. On the other hand, the Company has strategically deployed photovoltaic power generation facilities to safeguard against operational risks caused by interruption of the municipal energy supply, thereby avoiding additional operating costs resulting from energy shortages and price fluctuations.

The Company actively integrates the concepts of clean production and low-carbon energy into its production and operation processes and turns energy conservation achievements into product and service opportunities, to create green products with low environmental impacts. Through eco-design, residual heat recovery and energy-saving renovation, the Company is building green factories. In December 2024, Fab 1 was awarded the Shanghai Green Manufacturing Demonstration List in 2024 (Second Batch) - Green Factory.

Impacts, Risks and Opportunities Management

To address operational risks arising from energy supply interruptions, the Company has developed various operational protocols, such as the Emergency Plan for Emergency Unloading, the Emergency Plan for Emergency Power Cut, the On-site Treatment Plan of the Power Department for Power Cut and the Emergency Plan for Power Circuit Breaker Tripping. Emergency response training and emergency drills were carried out to improve the ability of its employees to manage various emergency power cut scenarios.

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In response to increasingly stringent local government regulations on energy consumption, the Company has formulated internal management targets that are higher than the regulatory requirements, to mitigate the impacts of policy risks. Aligned with the “Hundred One” Energy Conservation and Carbon Reduction Initiative in the Shanghai Industrial and Communication Industry (2022-2025), the Company rigorously implemented the “energy conservation project plan of 3,000 tons of standard coal”. By 2024, all 15 energy-saving renovation projects identified in the 14th Five-Year Plan energy audit work were fully completed, achieving an energy reduction of 3,339 tons of standard coal.

Metrics and Targets

The Company has set an overall energy management target, which is divided up and allocated to each production base for implementation. The Company monitors energy consumption of each production process on a daily basis and regularly reviews the progress towards achieving the target.

Hua Hong Semiconductor's Energy Management Metrics and Targets in 2024

Metric	Unit	2023 Performance	2024 Performance	2030 Target	Progress Towards the Completion of the 2024 Target
Comprehensive energy consumption per unit product	MWh per 8-inch wafer	0.30	0.28	Decreasing by 10% as compared with 2023	Decreasing by 5.91% as compared with 2023 – in progress of completing the target
Honor and Award	• Awarded Shanghai Green Manufacturing Demonstration List in 2024 – Green Factory				

In order to effectively enhance energy efficiency management of equipment, the Company conducted energy consumption statistics on major energy-consuming equipment and formulated a work plan for energy efficiency upgrading and equipment renovation, in accordance with the Notice on Conducting Energy Efficiency Benchmarking and Renovation on Major Energy-Consuming Equipment of Enterprises in the Industrial and Communication Industry (《關於開展工業和通信業企業重點用能設備能效對標及更新改造的通知》) issued by the Shanghai Municipal Economic and Information Technology Commission.

Hua Hong Semiconductor's Energy Saving Initiatives and Achievements in 2024

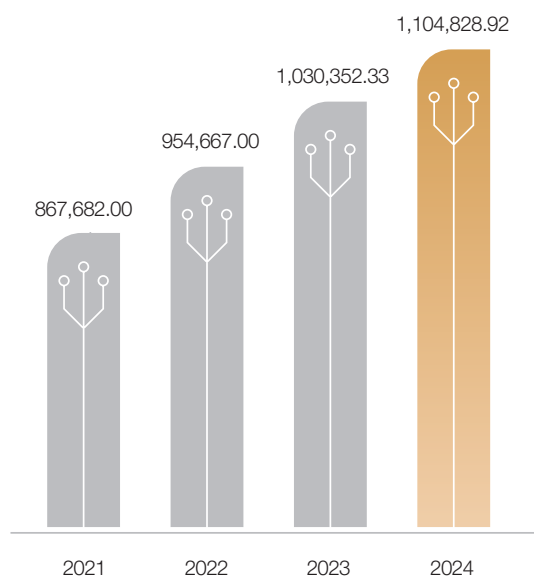
Entity	Specific Measures	Achievements
Shanghai Production Base	Variable frequency renovation on the RO high-pressure pumps in the pure water system	• Annual energy reduction of 28.23 tons of standard coal
	Reducing process steps by 3% and manufacturing cycle by 4% in the eFlash platform	• Annual electricity saving of 960,000 kWh
	Building an intelligent energy management platform Creating high-efficiency cooling rooms	• Annual electricity saving of 3.2 million kWh
	Completing heat recovery renovation on chilled water in the refrigeration unit	• Annual natural gas reduction of 188,000 m ³

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During the Reporting Period, the Company's primary energy consumption was as follows:

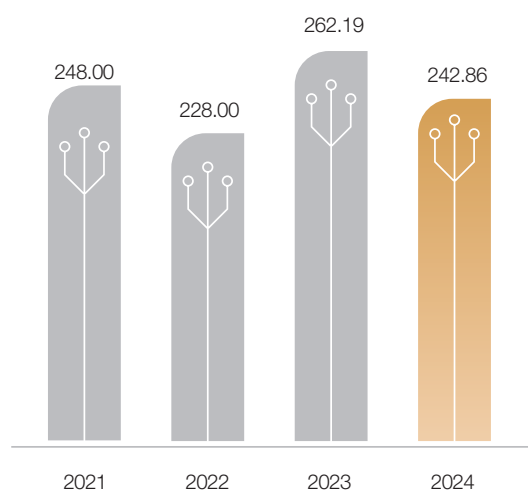
Total electricity consumption

Unit: MWh



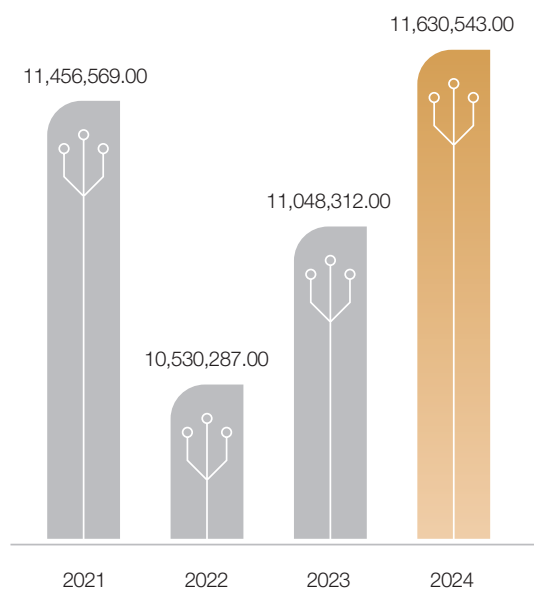
Electricity consumption intensity

Unit: kWh per 8-inch wafer



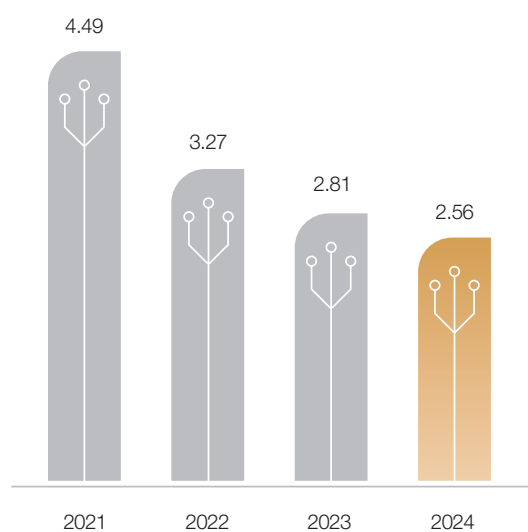
Total natural gas consumption

Unit: m³



Natural gas consumption intensity

Unit: m³ per 8-inch wafer



Note: The production expansion project of the Wuxi Production Base was put into operation in 2023, and the production capacity was expanded in 2024. The total consumption of electricity and natural gas has increased, however, the energy consumption intensity indicators have all decreased in 2024.

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3.3 Clean Technology Opportunities

Hua Hong Semiconductor actively responds to the “dual-carbon” economy call and solidly promotes its “8-inch + 12-inch” strategy and its advanced “Specialty IC + Power Discrete” dual-pronged strategy, to fully support the ecosystem construction across the whole industrial supply chain. Through continuous R&D and innovation, and expansion of specialty process advantages, Hua Hong Semiconductor focuses on the intelligent terminal, communication, Internet of Things, automotive electronics and other fields. Its business not only covers high-end consumer products, from IPM modules to peripheral control and power management, but also covers the power industry supply chain, from power generation to power consumption, as well as the five major chip systems in the field of automotive electronics.

The Company focuses on clean technology innovation as one of its core strategies and continues to promote development of new ecosystems and novel applications, such as embedded non-volatile memory, power management technology, power discrete technology and flash memory technology. This helps its customers to further expand their strategic positioning in new energy sectors, including automotive electronics, premium home appliances, photovoltaic systems and wind energy storage, and capitalize on market opportunities driven by clean technologies, thus actively contributing to future development of their business.

Products Supporting Clean Technology Development

Power Discrete

Power components is an important equipment component for new energy generation and new energy applications, such as photovoltaic and wind power generation equipment, electric vehicles, electric two-wheeled vehicles, the need to use a large number of insulated gate bipolar transistor (IGBT), metal – oxide semiconductor field effect transistor (MOSFET) and other devices.

The Company has accumulated a large number of customers in this field, and maintained a good relationship and deep co-development cooperation with the head enterprises in the field for a long time. So far, the scale of power discrete revenue has become the largest part of the Company's share.

Non-Volatile Memory

Non-volatile memory is widely used in chip applications such as microprocessors (MCUs) and application-specific integrated circuits (ASICs), while these types of chips are widely used in new energy generation equipment.

According to IC Insights, the automotive market accounts for more than 30% of the global MCU consumption market. All Hua Hong Semiconductor manufacturing plants have passed IATF 16949 automotive industry quality system certification, making important contributions to supporting local manufacturing of automotive semiconductors.

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New energy components and application fields involved

Product	Application Field	Percentage of Revenue
Power discrete	Photovoltaic and wind power generation equipment, electric vehicles, electric two-wheeled vehicles, etc.	31.0%
Embedded Non-Volatile Memory	New energy power generation equipment, electric vehicles, etc.	26.3%

Assist the development progress of new energy transformation technology

Automotive Electronics	Industrial New Energy	High-end Consumer Electronics
- Through supply chain collaboration, it helps customers accelerate their products into relevant module factories and complete machine enterprises. - Establish direct cooperative relationship with domestic mainstream automobile enterprises, from mature chip replacement to joint efforts to tackle key and difficult projects, and jointly build sustainable development ecosystem and other multi-dimensional cooperation. Recommended mature chip types cover various fields such as automotive powertrain, body control, cockpit, chassis and safety, remote control and communication, ADAS, charging piles, etc., to achieve mass supply. - A company-level automotive electronic database has been established and continuously improved.	The key products of power discrete have achieved mass supply and significantly increased market share. In the future, with the layout and strong support of the state for the double-carbon economy, the future growth of the new energy market can be expected.	- Cooperate with domestic well-known household appliance brand companies to improve domestic production replacement rate and continuously promote the expansion of high-end consumer electronics business. - Famous domestic household appliance brand companies have adopted IGBTs, display touch control chips, fingerprint lock chips and motor control products produced by the Company's technology platform, and have gradually penetrated into the air-conditioner, refrigerator and other major appliance markets.

The Company will further promote the development of silicon-based power discrete capable of achieving higher energy efficiency, and initiate the development of compound semiconductor power discrete with high power density and low energy consumption, so as to provide continuously optimized solutions for products in clean energy application fields such as inverter appliances and new energy vehicles, and further improve energy efficiency.

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4. Lean Production, Pioneering a Green Future

4.1 Environmental Management

Hua Hong Semiconductor's production and manufacturing fabs include the Shanghai Production Base and the Wuxi Production Base. Among them, Fab 1, Fab 2, Fab 3, and Fab 7 are key units monitored for water environment and environmental risks, while Fab 3 and Fab 7 are key units monitored for atmospheric environment. The Company discloses environmental information annually, in compliance with legal requirements.

The Company strictly adheres to the Environmental Protection Law of the People's Republic of China and the relevant environmental regulations of local governments and has established internal policies, such as the Standard Operating Procedures for Industrial Water Supply System, Internal Control Standards for Pollutants, and Operating Norms for Industrial Waste Management.

Governance

The ESG Working Group is responsible for formulating environmental management strategies and objectives, promptly tracking regulatory requirements from local governments and industry standards, identifying environmental management risks within the Company, overseeing environmental compliance in the daily operations of each fab, and reporting on key matters to the management team.

The EHS Department is responsible for coordinating establishment of the Company's environmental management system, including formulation of management regulations, performance analysis, and evaluation, with respect to energy and resource use, emissions management, etc. It also assists external agencies in the audit and testing of the Company's environmental management system.

Strategies

In terms of wastewater and air emission management, the Company prioritizes continuous improvement in environmental governance, with up-to-standard discharge as a key operational objective, to avoid operational risks caused by non-compliant discharge. The Company is located near office buildings and residential areas, where a significant number of people gather, so the Company ensures the normal operation of exhaust gas treatment facilities, avoids the spread of harmful substances to the surrounding environment, and creates potential exposure risks to the respiratory system and ecosystem of community residents.

The Company identifies risks throughout the lifecycle of pollutants, from generation and collection to treatment and discharge. Through regular monitoring and inspections, it ensures the proper operation of environmental protection facilities and compliance with air emission and wastewater treatment standards. Annually, the Company allocates a budget for environmental management and implements environmental protection and technical transformation projects, such as upgrading photoresist equipment and wastewater recycling systems. These initiatives aim to reduce raw material usage, extend the lifespan of chemicals, and minimize wastewater and air emissions, thereby mitigating the environmental impact of operations and production.

The Company emphasizes the capability of its staff to handle environmental emergencies, aiming to prevent environmental risk incidents, such as chemical leaks, fires, or direct pollutant discharges due to mismanagement. The Company regularly updates the emergency response plans and alternatives for environmental incidents at all fabs, formulates an annual emergency drill schedule each year and conducts emergency drills for potential environmental incidents. Fab 1 conducted on-site response drills for unexpected shutdowns of exhaust treatment systems, Fab 2 conducted on-site response drills for waste liquid leaks, Fab 3 conducted drills for SiF₄ cylinder leaks, and Fab 7 conducted drills for chemical spills.

Additionally, the Company has established a green office strategy to strengthen employees' environmental awareness through cultural initiatives, daily behaviour guidelines, new employee orientation and advocacy. This approach promotes the implementation of green office practices.

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Hua Hong Semiconductor's Practice in Green Culture

Saving paper around the office	- Implementing office informatization to reduce paper consumption. - Making efforts to promote the use of recycled paper, including for printing business cards of employees, to support recycling.
Saving electricity	- Regularly holding environmental management sharing sessions to strengthen employees' awareness of economical use of office resources and energy. - Turning off the power supplies when leaving work or a long absence. - Reasonably setting air conditioning temperature above 26°C in summer and below 20°C in winter.
Saving water	Developing employees' awareness of saving water and posting water saving signs.
Waste disposal	- Classifying domestic waste and implementing waste classification and disposal procedures, in accordance with the requirements at the place of operation. - Actively promoting waste classification initiatives to enhance employees' environmental awareness.
Commuting	- Encouraging employees to commute by public transport. - Using new energy vehicles as shuttle buses for the Company.

Impacts, Risks, and Opportunities Management

The pollutant discharge standards in the region and industry the Company operates in are continuously updated. To proactively mitigate policy risks, the Company has adopted internal pollutant discharge standards that are stricter than the regulatory requirements. In 2024, the local government of Shanghai updated the Discharge Standards of Pollutants for the Semiconductor Industry. In response, the Company's four fabs each established Internal Control Standards for Pollutants, to prepare for increasingly stringent environmental regulatory requirements.

The Company regularly identifies and assesses environmental risk topics at its production sites and refines its environmental management system. All four fabs have obtained ISO14001: 2015 certification. During the Reporting Period, no violation against environmental laws and regulations occurred. During the Reporting Period, the Company fully paid relevant taxes with respect to environmental protection.

Environmental Management System Certification Status of Hua Hong Semiconductor

Entity	Certification Name	Validity of Certification
Shanghai Production Base	ISO 14001: 2015 Environmental Management System	18 April 2027
Wuxi Production Base	ISO 14001: 2015 Environmental Management System	18 April 2027

The Company uses its safety management auditing and tracking system to analyze, sort out, and list the nonconforming items against environmental protection regulations found in daily management, with follow up and record keeping of subsequent rectifications through the regular reminder function of the system.

Metrics and Targets

The Company has set overall targets for environmental management, with the EHS department leading regular monitoring and evaluation to assess progress toward these targets and the actual effectiveness of control measures. In 2024, the Company invested RMB112.56 million in safety, environmental protection, and technical transformation projects, as part of our continuing commitment to improving environmental management facilities.

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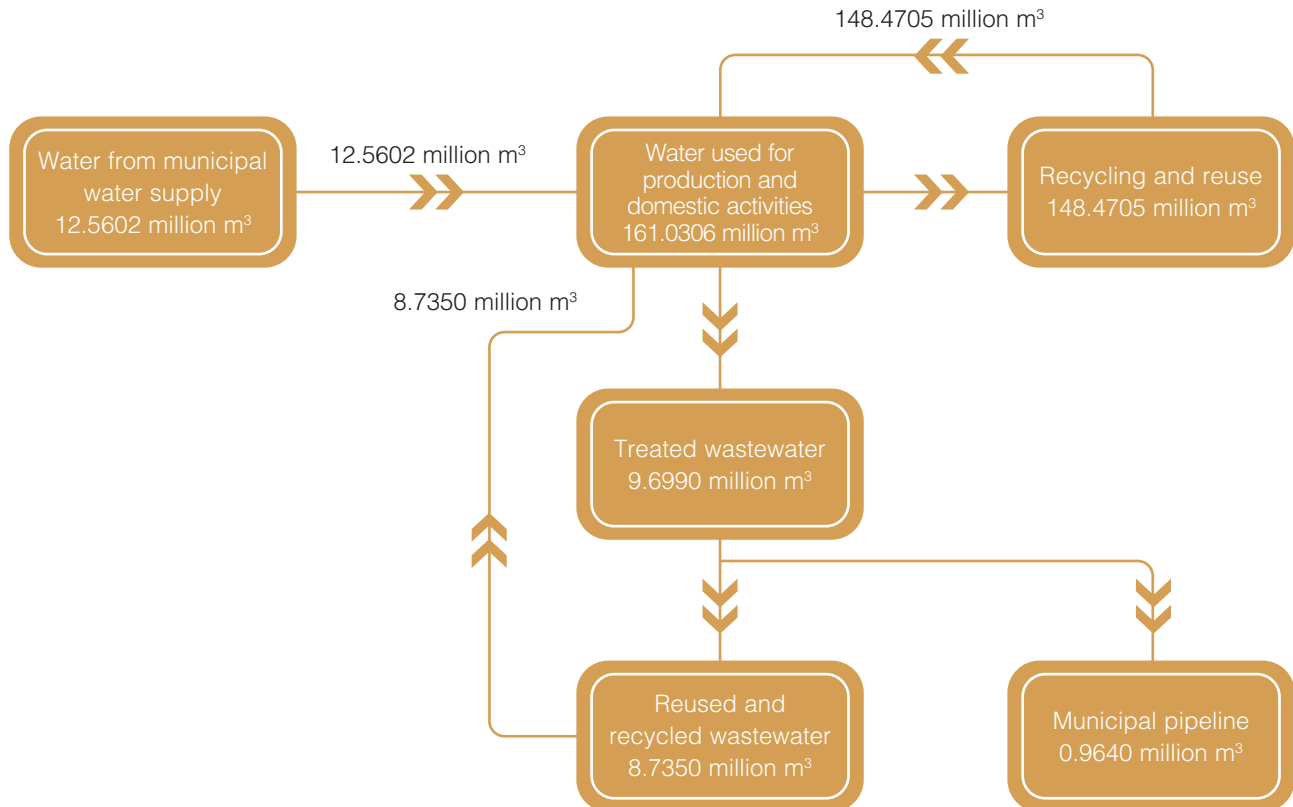
2024 Environmental Management Metrics and Targets of Hua Hong Semiconductor

Metric	Unit	2024 Performance	2024 Target
Number of environmental violations	Cases	0	0
Percentage of production base certified with ISO 14001	%	100	100
Total environmental expenditure	RMB	95,057,129	–

4.2 Water Resources Management

Water used by the Company comes to a large extent from the municipal water supply, in addition to a smaller amount of recycled water and air conditioning condensate from the pure water manufacturing process. In strict accordance with laws, rules and other relevant regulations, including the Water Law of the People's Republic of China, the Shanghai Administrative Measures for Water Conservation, and the Jiangsu Water Conservation Ordinance, the Company has established management policies, including the Standard Operating Procedures for Industrial Water Supply System and the Tap Water Anomaly Handling Procedure, to monitor the supply and quality of water resources in its operational areas. The Company implements water-saving technical transformation, recycles production wastewater, and organizes water conservation awareness activities, to reduce water waste both in mindset and practice.

Overview of Water Used for Production and Operation of Hua Hong Semiconductor in 2024



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Governance

The Company has implemented a three-tier water conservation management system, comprising the “Fab Manager – Water Conservation Leadership Group – Water Conservation Management Team.” Led by the fab manager, the water conservation leadership group establishes water resource management objectives for the fabs, develops water usage regulations, and ensures that all departments adopt effective measures to achieve these objectives and comply with the policies. Additionally, each fab has established a water conservation management team, which designs water-saving initiatives tailored to production processes and operational workflows, oversees daily operations, monitors water consumption, and collects and reports data on water consumption.

Strategy

Semiconductor manufacturing requires water purity of high standards and consumes substantial amounts of water resources during production. As a water-intensive enterprise, the Company utilizes water across various production stages, some of which involving the use of pure water.

Recognizing the critical importance of a stable supply of water and pure water for on-going production, the Company has enhanced water use efficiency and increased investments and initiatives in water recycling. These measures aim to mitigate potential challenges such as water outage and unstable water quality arising from increased water costs and water scarcity, thereby ensuring stable production and maintaining high product yield.

To mitigate operational risks related to water resources, the Company regularly identifies and monitors water-related risks in its operations, evaluates the likelihood and impact of physical and policy risks, and develops corresponding management policies and response strategies.

Impacts, Risks and Opportunities Management

Through energy conservation and emission reduction initiatives, the Company continuously enhances the efficiency of water recycling, reduces its dependence on externally sourced ultrapure water and municipal water, and generates ultrapure water using RO reverse osmosis membranes. Furthermore, the Company actively explores water-saving opportunities and recycles water resources across various production stages.

The Company constantly monitors the risk of water resources in areas where we operate through the “Aqueduct Water Risk Atlas”, an external tool from the World Resources Institute (WRI). We analyze the rationality of water consumption for production and the operation of our fabs along with the possible impact of the water intake and implements measures to mitigate water-related risks.

WRI Risk Monitoring Results and Countermeasures of Hua Hong Semiconductor

Water risk monitoring indicators	Water quantity risks: Water stress, groundwater level decline, interannual variability, seasonal variability, drought, river flood risks. Water quality risks: Coastal eutrophication risk, exposure to untreated wastewater. Legal, regulatory and reputational risks: Regulatory and reputational risks, lack of access to drinking water, sanitation risks, ESG reputational risks.

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Monitoring results of Shanghai Fab and Wuxi Fab	Water quantity risks	• Overall water quantity risk: Very high • Water stress: Very high • River flood risk: High • Drought risk: Medium to high • Groundwater level decline risk, annual and seasonal variability: Low to medium • Coastal flood risk: Low
	Water quality risks	• Overall water quality risk: Medium to high • Exposure to untreated wastewater: High • Sanitation risks: High • Coastal eutrophication risk: Low to medium
	Legal, regulatory and reputational risks	• Overall legal, regulatory and reputational risks: Medium to high • Regulatory and reputational risks: Medium to high • Lack of access to drinking water: Low to medium • ESG reputational risks: Low to medium
Countermeasures		• Relying on water monitoring sites for each fab, the Company has conducted water balance tests on a regular basis to calculate the process water, recycled water, wastewater, and domestic water use of each fab. • The Company records the flow, volume, and recycling of water resources, so as to analyze whether there is any abnormal utilization of water resources and predict the reasonable allocation of water resources among water-consuming units. • Upgrade or replace equipment with high water consumption, and enhance water consumption efficiency. • Expand the sources of water resources by reusing up-to-standard treated production wastewater and recycling by-products, such as concentrated water from pure water production and air conditioning condensate.

Metrics and Targets

The Company has set overall water resource management targets, which are allocated to each production base for execution. Water usage across all production processes is monitored daily, and progress toward achieving the targets is reviewed periodically.

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2024 Water Resource Management Metrics and Targets of Hua Hong Semiconductor

Metric	Unit	2023 Performance	2024 Performance	2030 Target	Progress towards the Completion of the 2024 Target
Water consumption per unit product	m ³ per 8-inch wafer	2.83	2.76	Decreasing by 5% as compared with 2023	Decreasing by 2.49% as compared with 2023 – In progress of completing the target
Honor and Award	Awarded the title of Advanced Energy-Conservation and Emission-Reduction Enterprise in Xinwu District, Wuxi.				

The Company improves water use efficiency through three measures, including water conservation, recycling production wastewater for processes with lower water quality requirements, and reusing treated production wastewater. Water-saving measures have been implemented in critical water usage areas and integrated wastewater recycling and treatment systems have been established to classify, filter, and reuse production wastewater.

2024 Water-Saving Measures and Achievements of Hua Hong Semiconductor

Entity	Action	Measures	Annual Water-Saving Results
Shanghai Production Base	Wastewater reuse	Concentrate and recycle reverse osmosis concentrate; treat and reuse equipment rinse water, instrument water, and condensate.	A total of 250,000 tons of water was saved during the year
Wuxi Production Base	Wastewater reuse	Concentrate and recycle reverse osmosis concentrate; treat and reuse equipment rinse water, instrument water, and condensate.	A total of 420,000 tons of water was saved during the year
	Wastewater recycling system upgrade	Upgrade backwash wastewater recycling system to increase the usage of recycled water.	A total of 2,500 tons of water was saved during the year

4.3 Emissions and Waste Management

Air Emission Management

Air pollutants generated during the production process of the Company include sulfuric acid mist (H₂SO₄), hydrogen chloride (HCl), nitric oxide (NO_x), ammonia (NH₃), and volatile organic compounds (VOCs).

Hua Hong Semiconductor strictly adheres to the Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution, the Discharge Standards of Pollutants for the Semiconductor Industry set by the relevant industry association of Shanghai and other applicable laws, regulations, and requirements. During the Reporting Period, each of the four fabs developed its own Internal Control Standards for Pollutants, adopting stricter internal discharge control measures that exceed regulatory requirements.

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Types and Treatment Methods of Air Pollutant of Hua Hong Semiconductor

Type	Treatment Method	
Air emission	Acid air emission	Up-to-standard discharge after removing most of the components through pretreatment and centralized treatment of the washing tower.
	Alkaline air emission (mainly ammonia gas)	Purification through a washing tower.
	Organic air emission	Purification through activated carbon adsorption, or combustion after concentration.
	Air Emissions containing dust (mainly small particulates of silicon dioxide)	Removal through a dust-extraction unit.

The Company formulates an annual testing plan, deploys online monitoring facilities, and performs regular maintenance of air emission treatment systems, to ensure effective treatment efficiency and compliance with air emission discharge standards. The Company proactively addresses regulatory requirements by gradually promoting the use of low-VOCs cleaning agents, thereby reducing untreated air emissions of volatile organic compounds during cleaning processes. In 2024, the Company's air emission testing results confirmed that all air emissions met discharge standards.

2024 Air Emission Management Metrics and Targets of Hua Hong Semiconductor

Metric	Unit	Production Base	2024 Performance		Progress towards the Completion of the 2024 Target
				2024 Target	
Annual average VOCs discharge concentration	mg/m ³	Shanghai Production Base	5.35	Better than the emission standard (50) by more than 30%, that is, <35	Emission concentration is more than 30% better than the emission standard, achieving target
		Wuxi Production Base	0.33	Better than the emission standard (100) by more than 30%, that is, <70	

2024 Air Pollutant Reduction Measures and Achievements of Hua Hong Semiconductor

Entity	Specific Measures	Results
Shanghai Production Base	Extended the chemical lifespan of SPM tanks (H ₂ SO ₄ +H ₂ O ₂) through research	Reduced annual sulfuric acid usage by 57 tons
Wuxi Production Base	Reduced SPM usage at cleaning stations	Reduced annual sulfuric acid mist emissions by 0.66 tons
	Upgraded boilers with low-carbon burners	Reduced annual nitric oxide emissions by 0.94 tons

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Wastewater Discharge Management

The Company strictly complies with the Law of the People’s Republic of China on the Prevention and Control of Water Pollution and the Integrated Wastewater Discharge Standard. The Shanghai Production Base complies with the Discharge Standard of Water Pollutants for the Electronic Industry, while the Wuxi Production Base follows the Jiangsu Discharge Standards for the Semiconductor Industry. The Company has formulated internal management systems, such as the Operation Manual for Wastewater and Drainage Discharge and the Internal Control Standards for Pollutants. Through enhancements in wastewater treatment processes and the expansion of wastewater reuse initiatives, the Company has minimized the generation of wastewater pollutants.

Both the Shanghai Production Base and the Wuxi Production Base are equipped with online monitoring systems for wastewater pollutants, with discharge concentrations transmitted in real-time to the environmental regulatory authorities’ public information platform, ensuring reliable, transparent, and traceable environmental information.

Types and Treatment Methods of Water Pollutants at Hua Hong Semiconductor

Type	Treatment Method	
Wastewater	pH, COD, ammonia nitrogen, fluoride ion, etc.	Discharged into the municipal sewage network upon meeting the discharge standards after being treated through a wastewater treatment system utilizing processes such as coagulation sedimentation, air stripping, acid washing absorption, aerobic biological contact, acid-base neutralization, MBR, etc., and then further treated by urban sewage treatment plants before being released into natural water bodies

During the Reporting Period, the wastewater test results of the Company indicated that all types of wastewater pollutants achieved compliant discharge.

Water Pollutant Management Metrics and Targets of Hua Hong Semiconductor in 2024

Metric	Unit	Base	2024 Performance	2024 Target	2024 Progress Towards Target
Annual COD discharge concentration	mg/L	Shanghai Production Base	65.7	Better than the emission standard (500) by more than 30%, that is, <350	Emission concentration is more than 30% better than the emission standard, achieving the target
		Wuxi Production Base	29.9	Better than the emission standard (50) by more than 30%, that is, <35	

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Measures and Achievements in Reducing Water Pollutant Discharges at Hua Hong Semiconductor in 2024

Specific Measures	Achievements
Recycling and reusing relatively clean cleaning wastewater to reduce wastewater discharge from hydrofluoric acid and deionized water (DHF) solution cleaning	Reducing DHF wastewater discharge by 10,000 tons/year
Completing the switch to 55LP Plus eFlash through the 55LP eFlash platform, reduce process steps by 3% and shorten manufacturing cycles by 4%	Reducing wastewater discharge by 3,708 tons/year

Waste Management

The Company complies with the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes and the Standards for Pollutant Control in the Storage of Hazardous Wastes and has formulated management systems, such as the Waste Management Procedure and the Code of Practice for Industrial Waste Management, to standardize the processes of waste generation, temporary storage, transfer, and disposal. The Company also registers the waste disposal methods and destinations through the unified environmental protection management system of the government to ensure traceability. The waste is properly recycled, landfilled or incinerated by qualified transportation and disposal units.

During the Reporting Period, in accordance with the Notice on Further Strengthening the Standardized Environmental Management of Hazardous Wastes in the City issued by Shanghai Municipal Bureau of Ecology and Environment, the Company established an electronic tag application management system for hazardous wastes, achieved real-time connection with the solid waste system of Shanghai, and added the Management Measures for the Electronic Tag Application System for Hazardous Wastes, to standardize the electronic management of hazardous waste tags.

Types and Treatment Methods of Wastes at Hua Hong Semiconductor

Type		Treatment Method
Non-hazardous waste	Domestic waste and kitchen garbage	Entrusting the environmental sanitation departments in the places where we operate for unified disposal on a regular basis
	Raw materials for production and office supplies	Recycling within plant premises
	Sludge, etc.	Landfilling, and brick manufacturing
Hazardous waste	Waste acid, waste isopropanol, waste phosphoric acid, and organic waste liquid, etc.	Handled by suitable enterprises, or reused in other industries, for a higher reuse rate
	Waste glass bottles, 200L chemical barrels, and waste liquid from laboratory, etc.	Chemical treatment
	Cleaning cloths, plastic bottles, waste activated carbon, waste resin, and arsenic-containing waste, etc.	Incineration

The Company identifies and categorizes wastes, as well as adopts appropriate management measures and reuse methods, to strive in maximizing the recycling rate of wastes.

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Waste Management Metrics and Targets of Hua Hong Semiconductor in 2024

Metric	Unit	2023 Performance	2024 Performance	2030 Target	Progress towards the Completion of the 2024 Target
Waste generation per unit product	kg/8-inch wafer count	7.65	8.29	Decrease by 4% compared to 2023	Increase by 8.41% compared to 2023 towards the target

4.4 Circular Economy

The main types of raw materials for the Company's production and operation include silicon slices, quartz, target materials, chemicals, etc. To standardize the use of raw materials, the Company has formulated raw material management systems, such as the Raw Materials Shelf Life Control Policy, the Risk Identification and Response Measures for Key Materials, and the Key Materials Risk Analysis Table, ensuring that raw materials are within their shelf lives and that there are no quality or safety issues with key materials. For production auxiliaries, such as chemicals and gases, the Company has established the Materials Management Department's Management Standards for Chemical Storage and Gas-based Operations, promoting safe storage and handling procedures.

On the basis of standardizing raw material management, the Company, adhering to the principles of "reduction from the source" and "circular economy" and complying with the Law of the People's Republic of China on the Promotion of Circular Economy, strives to minimize the use of raw materials, especially chemicals, to further reduce safety risks. Additionally, it reduces waste of resources by improving production processes and rationally allocating resources for recycling.

Measures and Achievements in Saving Raw Materials at Hua Hong Semiconductor in 2024

Entity	Specific Measures	Achievements
Shanghai Production Base	Implementing modifications to the equipment used for photoresists, to reduce raw material consumption	Annual photoresist reduction by about 1,000 liters
	Improving production processes and extending the service life of chemicals	Annual savings of 9,100 liters of ammonia water and 4,300 liters of hydrogen peroxide
	Carrying out thin film process renovation	Annual savings of 1,217 kilograms of hexafluoroethane
Wuxi Production Base	Adjusting process parameters and reducing cleaning frequency	Annual savings of 2,520 liters of sulfuric acid Annual savings of 420 liters of hydrogen peroxide

4.5 Green Products

Chemical Control

Multiple processes in the Company's manufacturing operations require the use of chemicals, among which some hazardous and toxic chemicals require special management.

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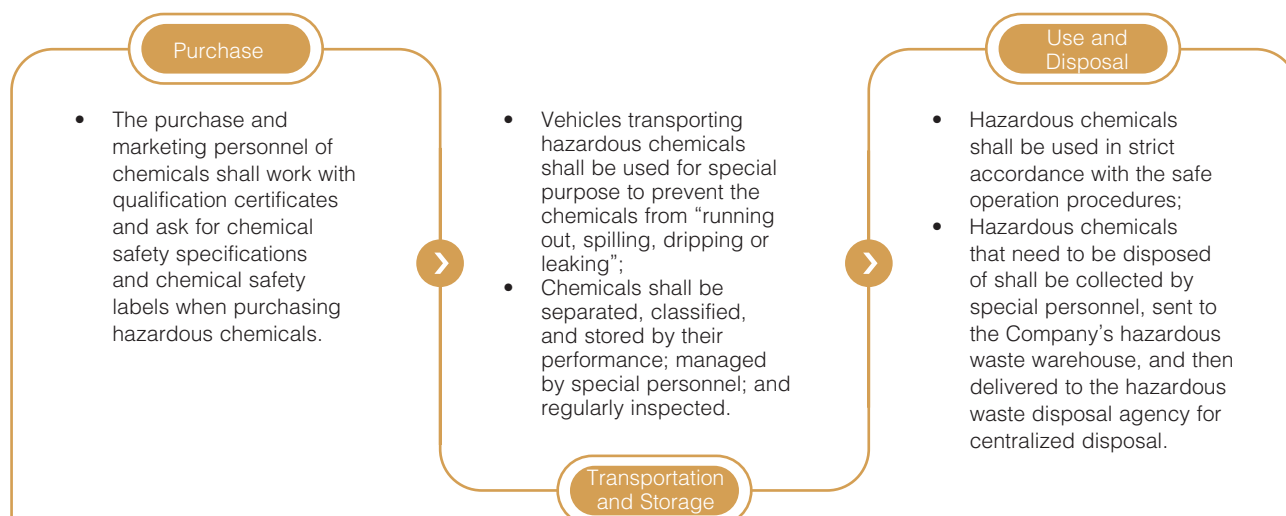
Types of Hazardous Chemicals of Hua Hong Semiconductor

Type	Name
Flammable liquid	Isopropanol, photoresist, and diesel fuel
Oxidants and organic peroxides	Hydrogen peroxide
Toxic chemicals	Phosphine and fluorine
Corrosive chemicals	Sulfuric acid, hydrochloric acid, hydrofluoric acid, phosphoric acid, mixed acid, ammonia water, and sodium hydroxide
Compressed and liquefied gases	Hydrogen, methane, silane, nitrogen, oxygen, argon, helium, ammonia, and chlorine

The Company has formulated a number of management policies and operation procedures, including the Chemicals Management Procedure, the Inspection and Registration System for Chemicals Coming In and Out of the Warehouse, the Hazardous Chemical Safety Management Regulations, and the Management Measures for Hazardous Chemicals, aiming at reducing the risks associated with chemical operations through standardized label management and in/out registration management.

The Company has established a Factory Chemical Review Committee and formulated the Chemical Substance Review Procedure, to comprehensively evaluate the environmental protection and safety qualifications as well as the risk prevention and control capabilities of chemical suppliers in advance. The Company employs the chemical substance management system to: manage the handling, storage, and disposal of chemicals; control the maximum storage quantity of chemicals; and dynamically monitor their use and consumption to ensure the safe use of chemicals and eliminates environmental pollution caused by chemicals.

Management Process of Hazardous Chemicals of Hua Hong Semiconductor



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Management for the Full Life Cycle of Products

The Company adopts the concept of circular economy, reduces the amount of raw materials used, continuously explores the recycling links of wastewater, energy, and waste, and lowers the impact of the full life cycle of products on the environment.

Environmental Management for the Full Life Cycle of Products of Hua Hong Semiconductor

 Warehousing of Raw Materials	 Product Production	 Product Transportation	 End-user Products	 Disposal
- Carry out hazardous substance examination and systematic control on raw materials - Review the qualification and environmental compliance of suppliers and require suppliers to sign the Environmental Protection Undertaking Letter	- Choose low-energy and high-efficiency production equipment to reduce the use of raw materials and energy - Treat production wastewater to meet standards and reuse it in production to increase the wastewater reuse rate - Optimize production technologies and pollution treatment processes to reduce the generation of wastewater and waste gas	- Use environmentally friendly packaging materials whenever possible - Recycle and reuse packaging materials - Optimize transportation routes to reduce repeated and no-load transportation	- Develop lowpower and highperformance chips to minimize environmental impact - Develop new products that are smaller in size but more efficient to reduce environmental pollution	- All wafers are tested for harmful substances to reduce their environmental impact when discarded - End-of-life products are disposed of as electronic waste by consumers through qualified institutions for harmless disposal, with some parts or metals being dismantled, refined, and recycled

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5. Caring for Employees and Promoting Harmonious Development

5.1 Rights and Interests of Employees

Employee Employment and Recruitment

The types of employee at Hua Hong Semiconductor include full-time contract workers, dispatched labor workers, and employees of other forms (like retired rehires and trainees). During the process of employment and recruitment, Hua Hong Semiconductor strictly adheres to the Labor Contract Law of the People's Republic of China and the Law of the People's Republic of China on the Protection of Women's Rights and Interests. We insist on fair employment, implement the principle of equal pay for equal work, and ensure that employees are not discriminated against or treated differently based on non-work factors including age, gender, place of birth, religious belief, marital status, or disability. We prohibit the employment of child labor or forced labor.

The Company has formulated relevant internal regulations, including the Employment Procedures, the Management Procedures for Trainees, and the Resignation Management Regulations. The Company strictly checks the identity information of employees and never employs adolescents under the age of 16. If such a situation is identified and verified, it will be immediately suspended and investigated for rectification, targeting at the omission of links around the recruitment review process, so that each process can be improved. During the Reporting Period, the Company has experienced no illegal or non-compliant incidents in connection with employee recruitment and dismissal, work hours and holidays, job promotion and equal opportunities, anti-discrimination and diversity, the employment of child labor or forced labor, nor had any litigation in connection with the aforesaid matters.

In order to better carry out the Company's talent reserve and cultivation, the Company launched a university campus summer internship program to provide internship opportunities for students to help them understand the Company's corporate culture, operation system, management model, etc. as soon as possible, for future employment and career preparation. The Company assigns senior professional staff to guide interns in all aspects of work, study and life, and provides certain remuneration for their work.

Employee Employment Norms of Hua Hong Semiconductor

Recruitment and Dismissal

- Recruitment: Adhering to the principle of fairness, equity and openness;
- Dismissal: The Company and employees go through the dismissal procedure according to relevant laws, regulations, and the Dismissal Management Procedure.

Remuneration

- Providing competitive remuneration to employees that are sufficient for them and their family members to enjoy a decent standard of living;
- Contributing to social insurance and housing fund for full-time employees, and procuring commercial insurance such as accident injury insurance and critical illness insurance beyond the statutory requirements.

Working Hours and Vacation System

- A standard working hours system is adopted. A comprehensive or flexible working hours system is adopted for certain positions with the approval of the administrative department of human resources and social security;
- Based on holidays and festivals specified by the government, supplementary annual leaves are provided for full-time employees.

Democratic Participation

- Establishing labor union, employee congress, etc. to ensure the democratic participation of employees in the Company's decision making.

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The Company firmly believes that a diverse and inclusive culture is a key factor in stimulating team vitality and promoting sustainable corporate development. In the recruitment process, the Company actively expands diversified recruitment channels to attract and accept outstanding talent with different cultural backgrounds, educational experiences, and technical expertise, while providing equal employment and development opportunities. Meanwhile, the Company attaches importance to diversity and equality in the workplace, ensuring that all employees can contribute their strengths in an environment that respects and supports differences.

Practices of Employee Diversity of Hua Hong Semiconductor

Gender Diversity

- Upholding the principle of “gender equality” in recruitment, employment, and promotion, the Company incorporates employee aptitude and performance assessments into the standards of employment and promotion.

Age Diversity

- Upholding the principle of “age equality”, the Company provides job and promotion opportunities for employees of different age groups.

Functional Diversity

- The Company offers various positions and levels in management, technology, and functional support, allowing employees to choose based on their own development plans.

Employee Composition of Hua Hong Semiconductor in 2024

Gender Distribution		
26%		74%
Female		Male
Age Distribution		
43%	55%	2%
<30 years old	30-50 years old	> 50 years old
Over 1,700 Persons Recruited in 2024, Including		
49%	35%	9%
Front-line production personnel	Engineering and technical personnel	R&D personnel

Employee Care

The Company creates a caring work environment for its employees, providing benefits in terms of office facilities, dining, accommodation, travel, etc., and fostering a warm, loving, and energetic work atmosphere.

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Employee Care System of Hua Hong Semiconductor

Office	- The ventilation system is installed in all offices and additional air purification devices added to improve office air quality. - The soft furnishings in employee lounges, such as refrigerators, TVs, and seats, are updated. - Greenery is increased within the factory premises, with the addition of fountains, decorative fishponds, and other landscaping features.
Diet	- There are staff canteens and coffee shops in all factories. - Establishing a food safety supervision team, adopting the mode of centralized purchasing of food materials and qualified supply chain management, and inviting employees and department representatives to carry out supervision. - Advocating healthy diet, constructing a healthy dietary system, scientific management of meals with nutritional balance and oil and salt control, effectively enhancing the rationality of employees' dietary structure, and realizing the dynamic balance between deliciousness and health.
Accommodation	- Construction of dormitory with private bathrooms, 24-hour supply of hot water, and WIFI network, etc. - The dormitory area has a library, computer room, snooker room, laundry, TV room, parcel locker, and other facilities.
Travel	- Providing all employees with travel allowance. - Providing free commuter bus services between the park, subway stations, and the dormitory.
Culture and sports	- Setting up various cultural and sports associations, including calligraphy and painting association, gardening association, tea art association, fitness association, cycling association, etc., which can be signed up for participation by all employees. - Organizing all kinds of competitions, including basketball, football, swimming, dry land curling, tennis, badminton, table tennis, etc., which can be signed up for participation by all employees.
Extending solicitude	- Celebrations and comfort activities are held during major holidays. - Providing holiday and birthday gift packages for employees, so that employees can feel the warmth and care of the Company.
Health checkup	- Offering annual health check-ups for all employees, including screenings for multiple types of cancer, and establishing employee health records for systematic tracking of changes in employee health status. - Setting up a "Health Protection Column", carrying out health special lectures, publish popular science articles to advocate healthy lifestyle. - Provide mutual aid insurance for employees every year, improve the level of medical insurance for employees, and reduce the medical burden of employees.

The Company complies with laws and regulations, such as the Measures for Labor Protection of Female Employees in Shanghai and the Measures for Urban Maternity Insurance in Shanghai, and has concluded a Collective Contract for the Protection of Female Employees, to safeguard the legitimate rights and interests of female employees. Mammy Huts are established across all factories, and the Labor Union allocates funds annually to support the development of female employees, planning festival welfare for International Women's Day each year.

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Employee Care Actions of Hua Hong Semiconductor in 2024

Action Name	Type and Effect
Expanding service areas	The Volunteer Service Corps is established to deepen volunteer joint construction activities in each factory area and to create a safe and healthy work environment, thereby continuously enhancing employees' sense of happiness, satisfaction and security.
Carrying out people-centric engagement programs	Bases in Shanghai and Wuxi have built new employee dormitories, and organized a rationalization proposal activity titled "Building Good Living Spaces, and Creating a Satisfactory Environment", combining contemporary employee needs to build leisure facilities.

Employee Communication

Employee communication is an important part of corporate sustainability. The Company is committed to establishing transparent and open communication mechanisms, to ensure that employees can fully express their opinions and participate in the Company's decision-making. The Company has formulated the Employee Communication Rules and encouraged multi-way communication between the Company and employees, between officers and subordinate officers, and among employees.

The Company listens to employees' voices and responds to their concerns in a timely manner by holding regular employee representative meetings, employee joint meetings, communication meetings and other forms. In addition, the Company allows employees to fully participate in the decision-making of the Company, promotes communication between management and employees, safeguards the legitimate rights and interests of employees and creates a harmonious working atmosphere. Through multiple forms and channels, such as conducting dynamic research on employees' thoughts, a rationalization suggestion platform and departmental communication meetings, the Company helps itself understand employees' needs, actively responding to reasonable demands, and enhancing employees' sense of responsibility and identity.

In addition, the Company conducts employee satisfaction surveys from time to time to collect opinions and needs of various employees extensively through different forms, including forums for young employees, an OA online platform, and internal departmental communications. The results of the employee satisfaction survey in 2024 remained at around 90 points, reflecting the overall recognition and satisfaction of employees with the work of the Company. In response to specific opinions put forward by employees, the Company actively responded and solidly promoted comprehensive supporting projects in Shanghai and Wuxi through the practice of "I do practical things for the masses", addressed the needs of employees, and further enhanced the sense of belonging and happiness of employees.

5.2 Employee Health and Safety

The Company strictly adheres to laws and regulations, such as the Occupational Disease Prevention and Control Law of the People's Republic of China, the Work Safety Law of the People's Republic of China, and the Work Injury Insurance Regulations, in its daily production and operation. To strengthen work safety efforts and establish a sound safety production responsibility system, the Company has formulated management procedures, including Implementation Measures for the Safety Production Responsibility System of the Safety Production Committee, the Environmental, Occupational Health, and Safety Management Manual, the Safety Production Expense Management Procedure, and the Work-Related Injury Management Method, in accordance with the requirements of the ISO45001:2018 Occupational Health and Safety Management System, thus providing employees with a good working environment and occupational health guarantees.

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Governance

The Company follows the principle of “one position with one responsibility” for the primary responsibility system of safety production, while improving the overall safety production responsibility system for all employees. The Company has established a Safety Production Committee, adhering to the principles of “strictly implementing primary responsibilities, strengthening direct supervision by departments, consolidating on-site supervision within the factory area, and reinforcing comprehensive safety supervision” and continuously promoting the standardization, systematization, and intelligent implementation of safety work.

The Safety Production Committee sets management objectives for safety production and occupational disease prevention and control, links safety management objectives with the safety production responsibility system, and regularly reviews the achievement of these objectives.

Strategy

The Company formulates an occupational health and safety management policy, strictly follows safety, health, and environmental protection laws and regulations, creates a safe, healthy, and comfortable working environment for its employees, and relentlessly pursues the ultimate goal of “zero disaster” and sustainable operation, aiming to become a model global corporate citizen.

The Company continuously promotes special rectification actions for safer production, covering aspects such as hazardous chemicals, engineering construction, fire protection, gas, electricity, and special equipment. During the Reporting Period, the Company held 4 safety committee meetings to deploy key tasks of the Three-Year Action Plan for Fundamentally Improving Safety Production. The management review meeting annually reviews the implementation of the occupational health and safety policy, updates legal and regulatory requirements, and deploys implementation plans.

Impacts, Risks, and Opportunities Management

The Company has formulated the Safety Production Expense Management Procedure, determines the budget at the beginning of the year, reduces risks and hazards in key areas and critical facilities, actively carries out safety technology improvement programs, and reports the progress of these programs on a weekly basis. The Company routinely identifies safety hazards, establishes emergency response infrastructure and teams, adopts a digital safety management system, clarifies work injury identification and handling methods, and establishes a complete safety production management system.

Safety Risk Identification and Management System of Hua Hong Semiconductor

Management Processes	Management Measures
Hazard identification	Grid-based Hazard Inspection: By adopting risk classification control and hazard identification, we have deeply promoted grid-based hazard screening. In 2024, we conducted a total of 410 supervision inspections and checked and corrected 16,139 hidden dangers. Special Inspection for Major Programs: We have strengthened safety management for major construction projects, implemented special actions for hazard identification and rectification, conducted safety inspections specifically for high-risk engineering tasks, adhered to twice-daily joint inspections, and successfully completed the “three simultaneous” phased work for major construction projects.
Emergency response	Fire Protection System Facilities: A comprehensive indoor and outdoor fire hydrant system, automatic fire extinguishing system, automatic fire alarm system, smoke exhaust system, fire emergency broadcasting system, and evacuation indication and emergency lighting system have been established.

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Management Processes	Management Measures
Digital management	Alarm Monitoring System: The clean room is equipped with alarm systems for toxic, harmful, and flammable gases, a liquid leak detection system, and a very early smoke detection alarm system. Emergency Response Team Support: An Emergency Response Team (ERT) has been established to conduct professional skills training. Emergency response plans tailored to different types of disasters have been developed. Specialized disposal drills are organized regularly, and issues identified are promptly rectified. Digital Systems: Safety management systems such as a special equipment registration system and an infrared inspection record system for equipment have been established using data records to ensure the implementation of rectification measures and standardize procedures.
Work-related injury handling	In accordance with the Work-Related Injury Management Regulations of the Company, when a work-related injury occurs, the department involved must report the incident to the safety department within 24 hours. The safety department shall then organize an investigation into it and convene a work-related injury seminar together with the Human Resources Department, the Labor Union, and the Medical Clinic under the Comprehensive Management Department and submit the application for work-related injury recognition to the social insurance administrative department.

Furthermore, to extend the development of our safety culture and enhance the safety awareness of all employees, the Company has launched thematic activities, such as “Safety for Everyone, and Emergency Response by All – Keeping Lifelines Open” for Safety Production Month and “Fire Safety for All, and Life Above All Else” for Fire Prevention Awareness Month. Through various safety promotion and exhibition activities, the Company aims to effectively improve employees’ safety awareness and knowledge and promote the fulfillment of safety commitments and responsibilities by all staff.

Safety Production Culture Creation Action of Hua Hong Semiconductor in 2024

Action Name	Content and Effect
Strengthening safety training	- Safety education on various safety topics and for all types of key personnel were conducted. In 2024, a total of 420 safety trainings were conducted, with a total of 60,458 person-times of employee participation and 27,789 person-times of contractor participation. - The participation rate in terms of safety education and training reached 100%, and the certification rate for personnel holding required certificates reached 100%.
Enhancing emergency response capability	- The expert review and filing of production safety emergency response plans have been completed, normative documents for establishing and improving rapid emergency response procedures against abnormalities at the production base have been put in place, and the goals of weekly training, quarterly drills, and annual competitions have been achieved. - Standardized training and actual combat drills for emergency rescue teams (ERT) were strengthened. In 2024, a total of 442 various emergency plan drills and 38 random ERT drills were organized, and more than 45,000 person-times of various skills training were carried out. - During the “Fire Prevention Month”, fire safety knowledge exhibition boards were displayed, and fire skills training as well as evacuation drills were conducted for all staffs, to enhance overall safety awareness and emergency response capabilities.

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Safety technical improvement assessment

- An evaluation activity for excellent safety technical transformation projects covering six dimensions was conducted. In 2024, a total of 52 safety technical improvements were implemented and 13 outstanding safety technical improvements were selected in the previous year.

The Company regularly identifies and evaluates safety risks. During the Reporting Period, 3 work-related injuries occurred in the Company, and targeted protective education has been strengthened in this regard, including safety training for all personnel in the affected departments and on-site engineering control measures.

Certification Status of Occupational Health and Safety Management System of Hua Hong Semiconductor

Entity	Certification Name	Validity Period of Certification
Shanghai Production Base	ISO45001: 2018 Occupational Health and Safety Management System	18 April 2027
Wuxi Production Base	ISO45001: 2018 Occupational Health and Safety Management System	18 April 2027

In order to prevent, control and eliminate occupational hazards and protect employees' occupational health and rights, the Company has established a sound occupational health management system. In terms of occupational disease prevention and control, the Company regularly identifies and monitors occupational hazard factors, informs employees of these factors upon their entry, provides consultation on personal protective equipment, formulates standards for protective equipment, regularly organizes occupational hazard post education and training, and supervises the correct use of protective equipment. The positions involving occupational hazard factors in the Company mainly include ion injection, diffusion, etching, chemical mechanical grinding, power gasification and other equipment operation positions.

Occupational Disease Hazard Prevention and Control System of Hua Hong Semiconductor

Job Positions with Occupational Hazards	Occupational Hazard Factors	Countermeasures	Occupational Health Monitoring
• Ion implantation, diffusion, etching, chemical mechanical grinding, power gasification, and other positions involving equipment operation.	• Fluorine and its inorganic compounds, hydrofluoric acid, hydrochloric acid, nitric acid, sulfuric acid, phosphoric acid, ammonia water, hydrogen peroxide, arsenic and its compounds, phosphorus and its compounds, isopropanol, etc.	• The equipment in the clean room is automatically operated in a closed space and is equipped with a closed process exhaust system; • Provide employees with personal protective articles and emergency response devices, regularly checking such articles and devices to ensure their effectiveness.	• Annual occupational health monitoring and assessment of current occupational hazards; • Strict pre-employment, on-the-job, and post-employment medical examinations for 100% employees at positions exposed to occupational disease hazards.

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Metrics and Targets

The Company has been certified with the Occupational Health and Safety Management System ISO 45001: 2018. All employees have signed the Safety Responsibility Letter with a 100% participation rate, and all contractors have signed the Letter of Commitment on Safety and Environmental Protection with a 100% commitment rate, so as to make every department and every employee take their respective responsibility. In 2024, the total investment in safety production was RMB34,162,300.

Occupational Health and Safety Metrics and Targets of Hua Hong Semiconductor in 2024

Metric	Unit	2024 Performance	2024 Target
ISO 45001 certification coverage	%	100	100
Employee signing rate of the Safety Responsibility Letter	%	100	100
Contractor signing rate of the Letter of Commitment on Safety and Environmental Protection	%	100	100
Annual number of work-related fatal accidents	Times	0	0
Annual number of occupational disease cases	Times	0	0

5.3 Employee Development and Training

Employee Training

The Company has established a sound employee education and training system, which is constantly adjusted based on strategic development and employee needs. In 2024, the Company updated personnel rules and regulations, such as Education and Training Procedures, to meet the all-round and multi-level training needs of employees in different positions.

The Company has complete training facilities, equipped with dedicated training classrooms and training equipment comma and an online platform for learning and sharing, including online training enrollment management, training materials and job question banks, multimedia learning courseware, etc. In addition, when necessary, the Company utilizes external resources to provide basic guarantees for employees' learning and development.

In 2024, the Company refined the classic programs of the special training camp for new college students, concentrated and updated the training courses, further stimulated the subjective initiative of learning through innovative forms, helped new college students to quickly integrate into the Company's and meet the challenges of future work with full enthusiasm.

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Employee Grading Training System of Hua Hong Semiconductor

Trainees	Training Contents	2024 Performance
Grassroots managers	Role recognition, self-management, managing others, work management	- Training hours per capita 137.30 hours - Employee training coverage 100%
Front-line managers	Develop management skills of front-line shift and team leaders, cultivate a front-line management team with high quality and high business ability, and lay a solid foundation for the Company's management	
Newly-employed university students	Career quality, corporate culture, introduction to special skills, and other courses	
Front-line employees	Courses about theory and practical training of the semiconductor manufacturing module	

The Company provides new employees with growth mentors, systematically imparting professional knowledge and practical experience to help them quickly adapt to the working environment and be competent at their jobs. The Company provides a variety of training courses covering job skills, professional technology, management ability, etc. We are committed to building a knowledge-based, skilled and innovative workforce, encouraging employees to carry out scientific research and innovation activities based on their positions, thereby enhancing the core competitiveness of the Company.

Employee Skill Enhancement Action by Hua Hong Semiconductor in 2024

Action Name	Actions and Achievements
Innovation studio	Based on 15 municipal and group-level employee innovation studios, the Company has established a platform for mass labor competitions in various forms and channels, hosting employee scientific paper contests, front-line employee skill competitions, energy-saving and emission-reduction groups, and other labor competitions, covering all departments and positions. Within the year, 105 papers were received, 178 patents were awarded, and 111 energy-saving and emission-reduction projects were completed.
Youth vanguard team	The Company launched company-wide youth vanguard team creation activities with the themes such as "Youth Taking Responsibility on 520, and Striving to Exceed by 100 Points", "Daring to Take on Responsibilities as Chip Youth, and Contributing to Hua Hong's High-Quality Development", and "Youth Setting Sail Forever Forward, and Assisting Hua Hong on Its New Journey". Over the past five years, a total of 147 company-level youth vanguard teams have been established, focusing on innovation, efficiency, and excellence in process development, flexible production, cost reduction, and supply chain safety.

Career Development

The Company is committed to building a clear and transparent career development path for employees, conducting regular performance evaluations and giving feedback. According to the standard practice of the industry, we have set up three professional development paths, including management, technology and function support, with corresponding job training, which not only supports employees to develop in a single sequence but also encourages conversion from the technical path to the management path, to take advantage of personal capabilities and promote professional aspirations.

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To ensure a high-quality talent pool, the Company enhances employees' comprehensive capabilities through various initiatives, including specialized training, technical exchanges, and lectures, to constantly optimize the talent cultivation mechanism. The Company has formulated the Measures for Academic Education Subsidy, which supports employees in pursuing on-the-job continuing education, enriching their professional knowledge and strengthening the Company's overall competitiveness.

5.4 Community and Public Welfare

The Company actively engages in social welfare, dedicating itself to contributing in various fields such as community service, education, and rural revitalization. It spreads love and warmth, establishing itself as a model of corporate responsibility.

Main Actions and Achievements of Community and Public Benefit of Hua Hong Semiconductor in 2024

Action Name	Action Content and Achievements
Volunteer Service	- Employee volunteers have been visiting the Meixin Nursing Home for 19 consecutive years, to carry out volunteer service, organizing activities such as singing, dancing, and doing handicrafts. They put up festive couplets at the nursing home during the Spring Festival, delivered zongzi and mooncakes on traditional festivals, and provided heat relief supplies in summer. - Employees donated blood 166 times.
Community Co-building	- During the Zhangjiang Science Hall Science Festival themed "Enlightening with Light, Exploring with Children (以光育光, 探索'童'行)", the Company organized a total of five sessions of integrated circuit-themed science popularization activities. - Through the fun course "Turning Sand into Gold", over 500 children were educated about the chip manufacturing process and the application of chips in daily life. - The Company has been providing the "First Aid Course for Accidents" in the community where the headquarters operates for seven consecutive years, covering basic first aid knowledge and cardiopulmonary resuscitation, to help residents master skills for handling emergencies.
One to-one Targeted Poverty Alleviation Program	- The Company launched a one to-one targeted poverty alleviation program with Yangbi Yi Autonomous Prefecture in Yunnan, purchasing local agricultural products, such as walnuts and tea, of approximately RMB1.2 million in aggregate. - The Company launched a one to-one targeted poverty alleviation program with Youqiao Village in Chongming District, Shanghai, donating RMB50,000.

6. Innovation-driven Development to Ensure Quality and Safety

6.1 R&D Innovation and Intellectual Property Protection

R&D Innovation

Relying on the layout advantage of "8-inch + 12-inch", the Company is committed to continuous innovation of specialized process technologies and building core competitiveness around embedded/stand-alone nonvolatile memory, power discrete, analog and power management, logic and RF and other specialized process platforms. Adhering to the advanced "Specialty IC + Power Discrete" dual-engine strategy, the Company is focused on high-speed penetration into emerging markets such as communications, new energy, Internet of Things, and automotive electronics.

Guided by the vision of "Continuous Innovation to Create 'Chip' Dreams for Global Customers", the Company strictly adheres to laws and regulations, such as the Law of the People's Republic of China on Scientific and Technological Progress and relevant requirements. It is committed to aligning with specialized technical processes, continuously enhancing its R&D innovation capabilities.

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Governance

The Company has established a governance structure comprising the “Board of Directors – Management – R&D Department”. The Board of Directors and Management are responsible for the Company’s overall R&D strategy and ensuring that the direction of R&D is consistent with the Company’s long-term goals. Management is responsible for implementing the Board of Directors’ decisions, formulating specific R&D plans and technology roadmaps, and coordinating resources to drive the innovation process. The R&D Department, as the core execution team, is responsible for day-to-day technology research, product development and innovation, to ensure continuous breakthroughs and improvements in new technologies and products.

Strategy

The Company recognizes the importance of continuously strengthening R&D innovation to refine manufacturing processes and continues to provide excellent products and services to customers around the world. When making strategic decisions on R&D innovation, the Company thoroughly evaluates the impact, risks and opportunities of innovation on product promotion. For example, the current digitalization trend is gradually enhancing the collaboration and influence between automotive manufacturers and chip designers in the supply chain. Additionally, the Company improves its resilience to risks by sensing market trends and enhancing resource utilization efficiency.

Impacts, Risks, and Opportunities Management

R&D Innovation Management System of Hua Hong Semiconductor

Management Process	Management Measures
Identification and Assessment	- Continuously monitor market changes and technological trends to ensure the technology platform adapts to evolving needs. - Regularly review internal resources and technical capabilities to ensure support for new product R&D and production. - Identify potential risk points, such as technical barriers, market acceptance, and regulatory changes, and assess their likelihood and financial impact.
Management and Optimization	- Reduce risk levels by improving processes and increasing R&D investment. - Increase investment in potential chip technology and promote research and development of relevant technologies. - Establish a flexible and efficient decision-making process to quickly respond to opportunities arising from market changes and technological advancements.

The Company has established broad product lines across multiple key technology platforms, with end-use applications covering diverse product needs, including consumer electronics, industrial control, automotive electronics, Internet of Things, communications and computers, and power management.

During the Reporting Period, the Company actively promoted the the beginning to end industrial ecological cooperation strategy and jointly promoted the sustainable development of the chip industry with its partners. Adhering to the development concept of “openness, innovation and cooperation”, the Company actively cooperates with upstream and downstream enterprises in the industrial chain. In the field of automotive electronics, with more than 20 years of successful experience in mass production of automotive electronic chips, the Company helped automotive products pass the AEC-Q100 Grade0 verification, and improved a zero-defect management mode for automotive electronics, providing comprehensive high-quality chip processing services for automotive electronic application systems.

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R&D Innovation Indicators and Targets of Hua Hong Semiconductor in 2024

Indicators	Unit	2023 Performance	2024 Performance
R&D Investment	RMB10,000	147,858	164,322
R&D Investment as % of Revenue	%	9.11	11.13
Number of R&D Personnel	Person	1,285	1,427
R&D Personnel as % of Total Employees	%	18.72	19.06
Honors and Awards	- National Science and Technology Progress Award (Second Prize) 35th Shanghai Outstanding Invention Gold and Silver Award (2024) - Shanghai Outstanding Academician Expert Workstation (2024) - Shanghai Employee Outstanding Innovation Achievement Award		

Intellectual Property Protection

The Company strictly adheres to laws and regulations, such as the Patent Law of the People's Republic of China, the Copyright Law of the People's Republic of China, and the Trademark Law of the People's Republic of China, as well as related requirements. It has established internal management systems, including the Intellectual Property Management System, to build a comprehensive and efficient intellectual property protection framework. This framework promotes technological innovation while standardizing intellectual property management.

The Company continuously optimizes and refines its intellectual property management mechanisms, striving to integrate intellectual property protection concepts into every business process. Each year, the Company sets goals for patent applications, actively safeguarding its own intellectual property. It commits to respecting and protecting the intellectual property rights of all organizations and individuals while implementing stringent protection measures for the product and technical information of upstream and downstream partners.

To mitigate the risks of intellectual property infringement, the Company standardizes and strengthens the assessment of customers' credibility and potential legal risks. Additionally, the Company has established technology licensing partnerships with multiple key technology providers to ensure that its products and services are developed on a legal and compliant basis.

Intellectual Property Protection Metrics and Targets of Hua Hong Semiconductor in 2024

Metric	Unit	2023 Performance	2024 Performance
Cumulative Number of Patent Applications	Piece	8,969	9,649
Cumulative Number of Patents Granted	Piece	4,427	4,644
Number of Patent Applications Completed	Piece	672	680
Number of Patents Approved	Piece	270	230

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6.2 Product and Service Safety and Quality

Product Quality and Safety

The Company consistently upholds high standards in product quality, adhering to the “zero-defect” philosophy and striving to deliver exceptional products and services to customers.

Governance

The Company complies with ISO9001, IATF16949 quality management system and related requirements. It has established internal management systems, including the Quality Manual, Code of Practice for Quality Objective Management, Non-conforming Product Control Procedure, and Supplier Management Regulations. These systems specify the responsibilities of the Quality and Reliability Assurance Department in ensuring product quality and safety, requiring regular reporting to management and the Board of Directors to promote comprehensive planning and implementation of quality management.

Strategy

The Company emphasizes the profound impact of quality management on product and business development, and treats quality as a core element of its corporate strategy. It has established a rigorous quality management system to identify and mitigate risk factors that may affect product quality, enhancing the Company’s adaptability to external environmental changes.

Impacts, Risks, and Opportunities Management

According to the Non-conforming Products Control Procedures, the Company has established a non-conforming products management rules covering the entire product cycle, specifying the handling specifications and applicable circumstances for each process, including incoming materials, production, testing, inspection, customer feedback, transportation and storage, etc. For identified non-conforming products, they are disposed in accordance with the relevant provisions of the regulations to prevent their unintended use.

Quality Management System Certifications of Hua Hong Semiconductor in 2024

Entity	Name	Expiration Date
Shanghai Base	ISO 9001 Quality Management System	17 May 2027
	IECQ QC 080000 Hazardous Substance Process Management System	11 December 2026
Wuxi Base	IATF 16949 Quality Management System for Automotive Industry	17 May 2027
	ISO 9001 Quality Management System	11 November 2025
	IECQ QC 080000 Hazardous Substance Process Management System	11 December 2026
	IATF 16949 Quality Management System for Automotive Industry	7 May 2026

During the Reporting Period, the Company implemented multiple measures to drive quality improvement, strengthen quality reviews, standardize supplier management, and conduct quality training, aiming to comprehensively enhance product quality and customer satisfaction.

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Product Quality Management Measures and Achievements of Hua Hong Semiconductor in 2024

Aspect	Specific Measures and Achievements
Driving Quality Improvement	- Conducted investigation and evaluation for five modules: R&D, production, manufacturing, testing, and services, and formulated improvement plans. - Proposed improvement solutions for each module and share our experiences in relation to the quality issues related to automotive-grade processes.
Strengthening Quality Reviews	- Established the Company Quality Objective (CQO) and conduct the review process. - Carried out activities such as the evaluation of the Quality Improvement Report Competition (Eight Disciplines Report) and high-quality project reviews.
Standardizing Supplier Management	- Established performance indicators for supplier management, including supplier complaint rates and scrap rates due to supplier raw material quality. - Established the Electronic Certificate of Analysis (ECO A) for suppliers and implemented Statistical Process Control (SPC) for key raw material parameters.
Conducting Quality Training	- The Shanghai and Wuxi bases conducted quality management and Zero Defects quality awareness training simultaneously, covering all employees, totaling 6,826 person-times. - Held quality month activities every year, including quality lectures and debates, supplier exchanges, information security weeks, and quality essay and calligraphy competitions, to promote quality culture and enhance employee quality awareness.

Product Quality Management Metrics and Achievements of Hua Hong Semiconductor in 2024

Metric	Unit	2023 Performance	2024 Performance	Target
Product Recalls	Time	0	0	0
CQO	%	93	84	80
Automotive Customer that Passed Audits	Time	14	33	–
Honors and Awards	- Shanghai Quality Technology Progress Award – Excellence Award: “Integration of 0.11-micron eFlash and BCD Automotive Process Platforms” - In 2024, the “Theme Activity of ‘Zero Defect of Characteristic Processes and High-quality Development of Hua Hong’” was recognized as the Quality Management Model (Organization) Award (Excellent Level) by the Shanghai Association for Quality			

Hazardous Substance Control

The Company places high importance on controlling hazardous substances in its products and follows international standards such as REACH, WEEE, RoHS and relevant requirements. It has established internal management systems, such as the Hazardous Substances Management Procedure, to build a comprehensive hazardous substance management system, ensuring product quality and safety. During the Reporting Period, the Company conducted internal research on the use of Per – and Polyfluoroalkyl Substances (PFAS). For raw materials containing PFAS, the Company collaborated with customers to evaluate the replacement of raw materials, ensuring compliance with overseas regulations.

During the Reporting Period, the Company implemented measures across three dimensions, namely source control, raw material testing and product certification, to ensure compliance and safety in the use of hazardous substances.

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Hazardous Substance Control Measures of Hua Hong Semiconductor in 2024

Aspect	Specific Measures
Source Control	The Company incorporates hazardous substance control into the product R&D process to reduce the risk of using hazardous substances from the source.
Raw Material Testing	- Suppliers are required to provide the product test report for hazardous substances and sign the Letter of Commitment on Product and Environmental Protection. - We included hazardous substance compliance clauses in supplier audits and regularly conducted sampling tests to ensure the safety of raw materials.
Product Certification	A third-party organization is entrusted to carry out product Testing and certification in accordance with the Directive on Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations (RoHS) and the Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) to ensure that our products meet the requirements of relevant certification standards.

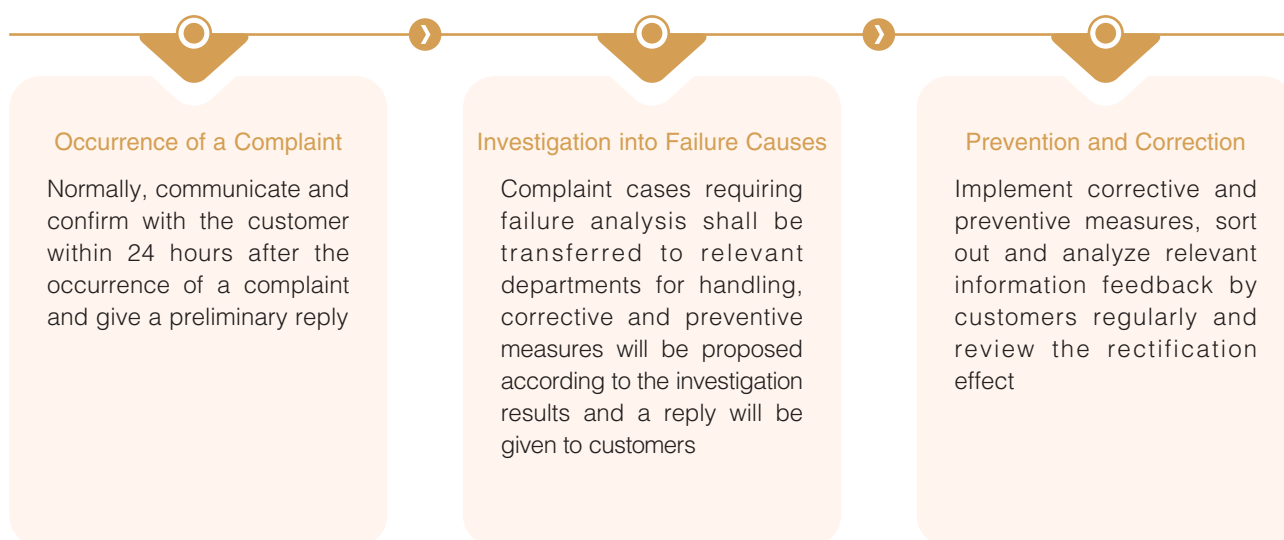
Customer Relationship Management

Guided by the concept of “providing customers with more convenient and safe services”, the Company has strengthened its customer service management system, covering “customer communication – customer complaints – customer satisfaction surveys”. In adherence to applicable laws and regulation, including the Law of the People's Republic of China on the Protection of Consumer Rights and Interests and relevant requirements, the Company has formulated internal management systems, such as the Customer Complaint Management Procedure and the Customer Return Product Confirmation Procedure, to continuously elevate customer service standards and improve customer satisfaction.

To ensure prompt responses to customer feedback and concerns, the Company has outlined detailed standard procedures and response strategies for handling customer complaints in line with the Customer Complaint Management Procedure. Multiple customer complaint channels, including email, hotline, letter, and fax, confirming acceptance of customer complaints within 24 hours, providing 3D reports (problem prevention measures report) within 48 hours and submitting 8D reports (problem solving report) of common products within 14 calendar days, ensuring timely resolution of customer complaints. As of the end of the Reporting Period, the Company received a total of 2 customer complaints, achieving a 100% complaint resolution rate.

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Customer Complaint Handling Procedure of Hua Hong Semiconductor



The Company consistently conducts customer satisfaction surveys. During the Reporting Period, the Company continued to enhance customer satisfaction by conducting customer satisfaction surveys and promoting quality improvement of its products and services, in accordance with the Customer Satisfaction Evaluation and Improvement Procedures. Management of the Company reviews the annual customer satisfaction survey results, conducts analysis and diagnostics, and implements corrective actions based on the results. The Company continuously monitors the effectiveness of these measures, while providing feedback to customers.

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Customer Satisfaction Survey Results of Hua Hong Semiconductor

2023	2024	Score change
8.97 points	8.89 points	↓ 0.08 point

6.3 Information Security and Privacy Protection

To continuously enhance information security and privacy protection, the Company complies with laws and regulations, such as the Cyber Security Law of the People's Republic of China, the Data Security Law of the People's Republic of China, the Cyber Security Management Regulations and the Regulation on the Administration of Commercial Cipher Codes, as well as other relevant requirements. During the Reporting Period, the Company revised management systems, including the Data Management Procedures and the Personal Information Management Procedures, in response to changes in external management regulations, to protect customer intellectual property, user privacy, and personal information security.

Governance

The Company continuously improves its Information Security Management System (ISMS) and has enhanced the management structure of "President – Information Security Committee – Information Security Working Group", to ensure the effective implementation and efficient operation of information security strategies. The Company has obtained ISO/IEC 27001:2022 Information Security Management System certification, with a validity period until February 2025. During the Reporting Period, the Company did not experience any complaints or incidents related to the infringement of customer privacy or loss of customer data.

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ISMS Structure of Hua Hong Semiconductor



Strategy

The Company fully acknowledges the critical importance of information security and privacy protection. In response to the dual challenges of increasingly stringent regulatory requirements and rapid technological advancements, the Company has embedded information security into its overall development strategy. By proactively allocating resources and establishing a systematic management framework, the Company strives to identify and mitigate potential risks in advance, while capitalizing on strategic opportunities in the field of information security.

Impact, Risks, and Opportunities Management

During the Reporting Period, the Company enhanced its overall capabilities in information security and privacy protection through initiatives such as personal information access management, risk assessments and self-inspections, and the execution of attack-defence drills. The Company is dedicated to establishing a more comprehensive, efficient, and sustainable information security management system.

Information Security and Privacy Protection Management System of Hua Hong Semiconductor in 2024

Management Process	Management Measures
Information access	- Enhanced protection measures across all stages of personal information processing and upgraded the visitor registration system. - Revised the Personal Information Management Procedures to enforce privacy protection requirements.
Risk assessment	Strengthened the information security management system and revised the Information Security Risk Assessment Management Procedures to comply with data classification and grading requirements.
Risk self-inspection	Promoted special initiatives on cyber security, attaining a “Level 2 Networked Industrial Enterprise” designation from the Ministry of Industry and Information Technology.
Practical drills	Implemented cyber security protection reinforcement initiatives and participated in the “Cyber Security Enhancement with Industrial Empowerment” practical attack-defence drill organized by the Shanghai Municipal Commission of Economy and Informatization, receiving the “Outstanding Blue Team Enterprise” award.

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Metrics and Targets

The Company conducts quarterly training sessions on information security and privacy protection, monitors participant numbers, and reviews training outcomes. Training topics include system certification, information confidentiality, trade secret protection, and strategies to counter cyberattacks.

Information Security and Privacy Protection Training of Hua Hong Semiconductor in 2024

Theme	Coverage	Participants in 2023	Participants in 2024
ISMS Training – Q1	Shanghai & Wuxi Production Bases	8,233	6,683
ISMS Training – Q2		6,554	6,117
Introduction to the New Version of ISO 27001 System Standards and Information Security Awareness Training – Q3		6,476	7,346
Introduction to the New Version of ISO 27001 System Standards and Information Security Awareness Training – Q4		6,919	7,491
Confidentiality and Information Security Compliance Training		6,802	7,314
Specialized Training for Attack and Defense Exercises		–	7,525
ISO 27001 Standards and Audit Skills Training		–	99

6.4 Sustainable Supply Chain Management

Sustainable Supply Chain Management

The Company primarily relies on suppliers of silicon wafers, chemicals, and gases. The Company actively adheres to industry standards and norms, such as the Responsible Business Alliance (RBA). During the Reporting Period, the Company received the RBA “Platinum Award” certification.

Governance

The Company has established a supply chain task force composed of engineering departments from various bases, the Quality and Reliability Assurance Department, and the Procurement Department. The management team is responsible for setting strategic directions and overseeing execution, with regular reporting to the Board to ensure that supply chain policies align with the Company’s objectives. The supply chain task force is tasked with evaluating, selecting, and conducting regular audits of suppliers, establishing a supplier performance management system and compliance review mechanism, to ensure the comprehensive implementation of quality, environmental, and social responsibility requirements.

The Company has formulated management systems, such as the Supplier Risk Identification, Planning, and Control Management Procedure and the Social Responsibility Management Manual, to clarify the responsibilities and requirements of supply chain management, ensuring a scientific and rigorous process for supplier screening, qualification, and management.

Strategy

By establishing a systematic supply chain management process, the Company integrates multi-dimensional risks and opportunities related to the supply chain into its overall strategy, promoting the development of a green supply chain. Through regular identification and assessment of key influencing factors within the supply chain, the Company ensures that its management strategies can effectively respond to external environmental shocks and market changes.

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At the same time, the Company deeply integrates supply chain management with its strategic goals. Not only does it ensure business continuity through risk control, but it also actively explores the potential of the supply chain in cost optimization, technological collaboration, and localized development. This enables the synergistic advancement of supply chain management and the Company's development.

Overview of the Social Responsibility Requirements for Suppliers of Hua Hong Semiconductor

 Labor	• Prohibition of forced labour • Non-employment of minors	• Working hours • Wages and benefits	• Humane treatment • Non-discrimination/non-harassment • Freedom of association and collective bargaining
 Environmental Health and Safety	• Occupational safety • Emergency preparedness • Work injury and disease	• Industrial hygiene • Heavy work • Mechanical safety protection	• Public health, food and accommodation
 Environmental protection	• Environmental licensing and reporting • Pollution prevention and resource conservation • Hazardous substances	• Solid waste • Exhaust emissions • Restricted materials	• Water management • Energy consumption and greenhouse gas emissions
 Business ethics	• Business integrity • No unfair advantage • Information disclosure	• Intellectual property rights • Fair dealing, advertising and competition • Identity protection and prohibition of retaliation	• Responsible mineral sourcing • Privacy
 Management system	• Management responsibilities and employee responsibilities • Legal and customer requirements • Risk assessment and risk management	• Improvement objectives • Training • Communication	• Audit and evaluation • Corrective action

Impacts, Risks, and Opportunities Management

The Company adheres to the Responsible Business Alliance (RBA) standards for social responsibility audits in the electronics industry. It clearly defines the basic requirements for suppliers in terms of quality, supply stability, labor management, environmental protection, and business ethics. The Company has established a management system that includes initial reviews before supplier access, annual evaluations, and regular training sessions. This system helps maintain stable cooperative relationships with high-performing suppliers.

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Impacts, Risks, and Opportunities Management System of Sustainable Supply Chain of Hua Hong Semiconductor

Management Process	Management Measures
Supplier access	During the supplier access phase, conduct initial reviews of performance in areas such as quality requirements, stable supply, labor management, environmental protection, and business ethics. Screen out suppliers with negative information or those that fail to meet requirements. Key suppliers must pass the initial review before being registered on the Approved Supplier List (ASL) to mitigate risks at the initial stage of the supply chain.
Supplier review	Conduct comprehensive risk assessments annually. In accordance with the Supplier Risk Identification, Planning, and Control Management Procedure, identify potential risk points in suppliers through third-party audits or audit questionnaires, and propose corrective actions for identified risks. If a supplier fails to implement effective corrections or commits major violations, the cooperative relationship will be terminated to ensure supply chain stability and compliance.
Performance evaluation	- Strictly control key performance, such as raw material quality and compliance with hazardous substance contents. - Conduct annual supplier performance evaluations and recognize outstanding suppliers with awards to incentivize high-performing suppliers.
Supplier dissemination	Regularly conduct dissemination and training covering multiple categories of suppliers. Align suppliers with environmental, ethical, and quality standards, provide technical support, and jointly explore potential opportunities for supply chain optimization and improvement.

The Company enforces strict anti-bribery and anti-corruption policies for suppliers, requiring all suppliers to sign a business ethics commitment letter. Through regular audits and performance evaluations, the Company ensures that their business practices align with its integrity and compliance standards.

The manufacturing process of semiconductor silicon wafers requires a significant amount of water resources and carries a high risk of pollution emissions. Failure to properly address pollution emissions and wastewater treatment during production could exert greater pressure on water resource regeneration. To address this, the Company has implemented water resource management initiatives and performance investigations for silicon wafer suppliers, including water-saving goals, water consumption, and water-saving measures, aiming to mitigate the impact of their production operations on water resources. The Company set a goal of “achieving 100% coverage of water resource investigations for major silicon wafer suppliers”, which was accomplished during the Reporting Period.

During the Reporting Period, the Company conducted 270 investigations on related enterprises and established contacts with over a hundred domestic suppliers, further optimizing the supply chain management system. This ensures the stability and efficiency of the supply chain, providing strong support for business development.

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Metrics and Targets of Sustainable Supply Chain Management of Hua Hong Semiconductor in 2024

Metric	Performance in 2023	Performance in 2024
Coverage Rate of Social Responsibility Review for Key Supplier	100%	100%
Number of Training Programs for Key Suppliers	20	20
Number of Newly Introduced Domestic Suppliers	28	18
Diversification rate of “8-inch + 12-inch” raw material suppliers	65.4%	76%
Diversification rate of “8-inch” raw material suppliers	72%	84%
Diversification rate of “8-inch” target materials and silicon wafers suppliers	> 90%	98%
Diversification rate of “12-inch” raw material suppliers	55%	65%

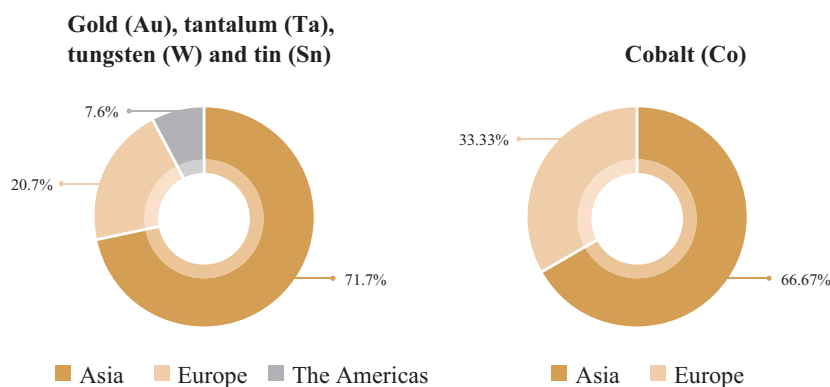
Responsible Minerals Management

“Conflict Minerals” refer to minerals mined in conflict zones that fund armed groups through illegal trade. These minerals are extracted through violent coercion of laborers, child labor, and damaging the environment and ecology. The trade of such minerals frequently leads to human rights violations, environmental damage, and social instability. According to the Dodd-Frank Wall Street Reform and Consumer Protection Act and research by international nongovernmental organizations, conflict minerals may enter the information, communication, and technology (ICT) industry and be used in electronic and electrical products, such as mobile phones and computers.

In the Company’s production process, minerals such as gold (Au), tantalum (Ta), tungsten (W), tin (Sn), and cobalt (Co) are used. To prevent the procurement and funding of mineral sources with negative social and environmental impacts, the Company has established the Conflict Minerals Management Policy to ensure that the minerals procured do not originate from conflict zones.

Over 71% of gold, tin, tantalum, and tungsten used in the Company’s production process are from Asia, with over 20% from Europe, and the remaining portion from the Americas. Two-thirds of the cobalt used comes from Asia, and one-third from Europe. As of the end of the Reporting Period, none of the gold, tantalum, tungsten, or tin used by the Company was from the regions with armed conflict.

Types and Sources of Minerals Used of Hua Hong Semiconductor



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In addition, the Company adheres to international standards such as the Responsible Minerals Initiative (RMI) and the Organization for Economic Co-operation and Development (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. It conducts traceability and due diligence on suppliers, requiring all suppliers to promise not to purchase conflict minerals in Conflict-Affected and High-Risk Areas. This ensures that the mineral sources in the supply chain comply with regulatory and ethical requirements.

Conflict Minerals Management Policy of Hua Hong Semiconductor

1. Suppliers whose raw materials contain gold (Au), tantalum (Ta), tungsten (W), and tin (Sn) are required to purchase materials according to the Responsible Minerals Policy, while suppliers whose raw materials contain cobalt (Co) are required to disclose the smelters of cobalt

The Company takes global social and environmental responsibility as its goal and follows green procurement principles and has promised to undertake the following social and environmental responsibilities in its metal supply chain

2. Suppliers are required to provide the declaration that they do not use gold (Au), tantalum (Ta), tungsten (W), tin (Sn), and cobalt (Co) from "conflict minerals" and we issue the Conflict Minerals Reporting Template (CMRT) and the Extended Minerals Reporting Template (EMRT) to suppliers

During the Reporting Period, the Company conducted questionnaire surveys on metal target materials suppliers, achieving a coverage rate of 100%, including both newly introduced and existing suppliers. The Company traced the sources of mineral raw materials used in its products to ensure that the origin information of each batch of minerals was clear and traceable. The traceability scope covered mines, smelters, and the entire supply chain. During the Reporting Period, the traceability results showed that 100% of the Company's suppliers do not use conflict minerals.

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7. Robust Governance and Adherence to Business Ethics

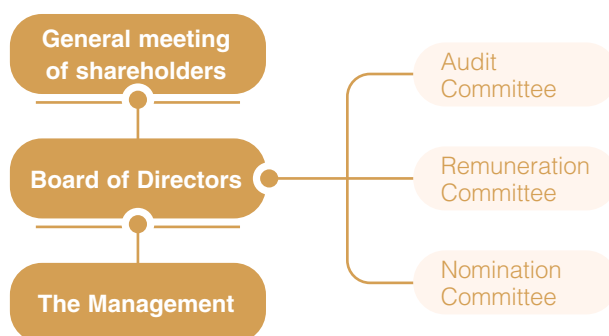
7.1 Corporate Governance

Corporate Governance

As a listed company on the Main Board of the Hong Kong Stock Exchange and the STAR Market of the Shanghai Stock Exchange, the Company strictly complies with applicable laws and regulations of the place of incorporation, the place of overseas listing and the PRC, such as the Companies Ordinance of Hong Kong, the Listing Rules of the Stock Exchange, the Securities Law of the People's Republic of China, and the STAR Market Listing Rules of the Shanghai Stock Exchange. It has established regulations such as the Articles of Association, the Rules of Procedure for Shareholders' General Meetings, and the Rules of Procedure for Board of Directors, forming a corporate governance structure and operational mechanism where the shareholders' general meeting, the board of directors, and its specialized committees work in coordination. This promotes scientific decision-making, standardized operations, and further enhances the Company's management level.

The Company's Board has established specialized committees, including the Audit Committee, Remuneration Committee, and Nomination Committee. Each committee performs its respective duties, overseeing the Board's responsibilities and supporting its scientific decision-making. The Company has appointed three Independent Non-Executive Directors to participate in decision-making and supervision, enhancing the objectivity and scientific rigor of the Board's decisions.

Corporate Governance Structure of Hua Hong Semiconductor



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As of the end of the Reporting Period, the Board of the Company consists of 9 members, including 1 female director. During the Reporting Period, the Company held 16 Board meetings and considered 58 proposals.

Information Disclosure

The Company strictly adheres to applicable laws and regulations and relevant requirements, such as the Administrative Measures for the Disclosure of Information of Listed Companies of the China Securities Regulatory Commission (CSRC), and has established relevant documents, such as the Information Disclosure Management System. It is committed to ensuring the authenticity, accuracy, timeliness, fairness, and completeness of information disclosure to meet the information needs of stakeholders. During the Reporting Period, the Company strictly complied with relevant information disclosure regulations, promptly reported significant matters, and continuously improved the quality and compliance of its information disclosure.

The Company regulates the shareholding behavior of directors and senior management by disclosing their shareholding plans. In August 2023, the Company released the Announcement Regarding the Plan for Additional Acquisition of A Shares of the Company by Certain Senior Management, explicitly mentioning the share increase plans of executive directors and senior management. The plan was fully implemented by 4 January 2024. Through centralized bidding, the Company's senior management collectively increased their holdings of the Company's A-shares by 53,618 shares, with a total amount of RMB2.3094 million. After the increase, the total shareholding ratio rose to 0.0275%.

Protection of Investors' Rights and Interests

The Company places great emphasis on protecting shareholders' rights and interests. By formulating reasonable profit distribution policies and dividend plans, it actively rewards shareholders and is committed to creating stable long-term returns for investors. The Company has established an investor relations management department to maintain proactive communication with stakeholders, address key concerns of investors, and ensure that their reasonable demands are properly handled.

Adhering to the principle of "equal treatment of all investors" and the requirement of "compliant information disclosure", the Company follows the guidance of "integrity, compliance, and interactive communication". It disseminates information about the Company's operations, finances, product technologies, and significant matters to the capital market through various channels, such as shareholders' general meetings, regular reports, direct hotline of investors, SSE e-Interaction, special email for investors, online and offline communication meetings, official website and WeChat account of the Company.

During the Reporting Period, the Company held 1 shareholder general meeting and considered 13 resolutions. All meetings were open to all shareholders, including small and medium-sized investors, effectively safeguarding their participation and right to know. Additionally, the Company organized 4 performance exchange meetings to engage in in-depth discussions with investors, enhancing transparency and trust.

7.2 Risk and Compliance Management

The Company places great importance on risk and compliance management, strictly adhering to the laws and regulations applicable to its operating locations. It closely monitors the promulgation, changes, and revisions of laws and regulations, identifies provisions relevant to the Company's operations and production, and promptly aligns internal management systems with external regulations to ensure compliance with the requirements of laws and regulations.

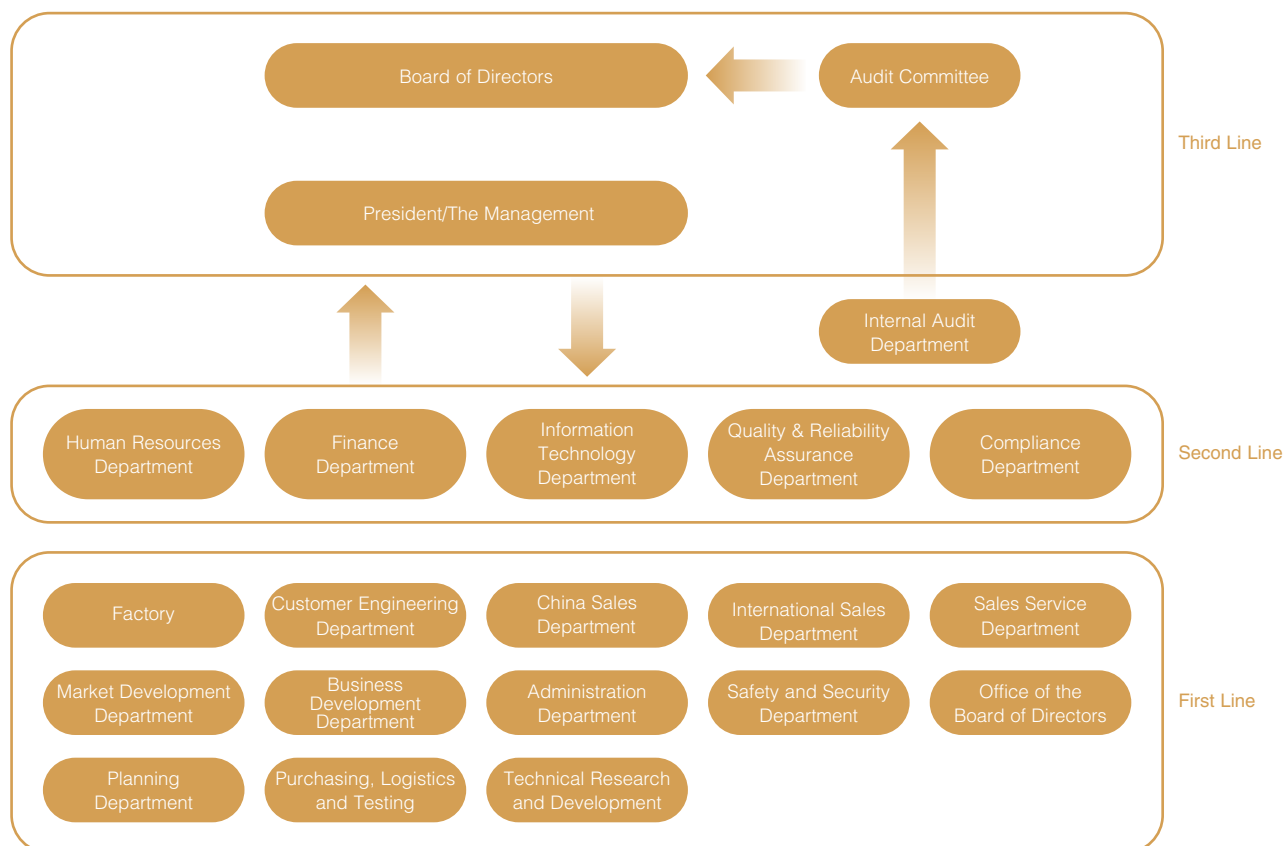
The Company has established the Rules about Comprehensive Control of Risks that covers all business processes. By regularly identifying and analyzing risk lists, it builds a long-term management mechanism, implements risk prevention measures across different levels and business lines, and enforces effective risk control measures in key areas.

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Drawing on the “Three-Line Model” by the Institute of Internal Auditors (IIA), the Company, under the authorization of the Audit Committee and management, has established a risk management system tailored to its characteristics. It clearly defines the division of responsibilities for addressing major risks, including the responsible leaders, leading departments, and their respective roles.

Hua Hong Semiconductor’s Three Lines of Defence for Risk Management in the Economic Sector

Organisation Governing Body (accountable to stakeholders, with supervisory responsibilities)



Functions of the First Line: to provide products/services to customers and manage risks;

Functions of the Second Line: to provide expertise, support, monitoring, and reasonable challenge on risk-related matters;

Functions of the Third Line: to provide independent and objective confirmation and advice on all matters related to the achievement of objectives.

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Based on the “Three-Line Model” of risk management, the Company adheres to the principle of combining comprehensiveness and importance, continuously optimizes its risk map, integrates and categorizes certain similar risk factors, revises and supplements examples of risks, and identifies 59 major risk factors. This enables comprehensive prevention and effective supervision of both internal and external risks.

During the Reporting Period, the Company conducted annual risk assessments at its Shanghai and Wuxi Production Bases. It designed risk survey questionnaires and systematically analyzed and identified key risk areas through one-on-one interviews, multi-department seminars, on-site research sampling, and other methods.

Risk Management System of Hua Hong Semiconductor

Management Process	Management Measures
Risk assessment	We identify and analyze risk areas through methods such as questionnaires, one-on-one interviews, and multi-department seminars and score the risk areas to generate an annual risk management report.
Risk reporting	We implement a quarterly risk communication and reporting mechanism, where each business unit collects and reports risk events within their respective areas on a quarterly basis or as needed.
Communication and training	From time to time, we organize risk line management meetings, conduct risk training, and communicate risk issues across business units and at the company level.

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Risk Response Mechanism of Hua Hong Semiconductor

Risk Category	Risk Content	Strategy
Operation	Research and Development	Continuously improve the R&D project management system, comprehensively monitor the project initiation, implementation and post-evaluation of R&D, continuously improve the project manager's ability, and timely develop new technologies and products with commercial value
	Product Structure	Continuously promote technical product upgrading iteration, increase flexible production capacity, promote process interoperability among factories, and optimize product structure
	Talent Reserve and Development	Establish a talent resume database, develop talent inventory, continuously explore recruitment channels, optimize salary structure, improve supporting welfare policies, and comprehensively enhance the attractiveness of enterprises and employee satisfaction
	Supply Chain	Continuously develop diversified supply channels to ensure the stability of the supply chain; set safety stock values for each production material, regularly review the rationality of safety stock values, and timely adjust high-risk materials with market changes
	Information Security	Establish information security framework and management policy, implement information security risk assessment process every year, and continuously monitor all critical information through DLP data protection system to ensure that the best interests of the Company, shareholders, customers, suppliers and employees are protected
	Exchange Rate Control	Adhering to the concept of exchange rate risk neutrality, the Company reduces the exchange rate risk of existing US dollar debts through currency conversion, interest rate swaps and the adoption of exchange rate risk management products
Finance		
Environment and Safety	Security Inspection	Continuously and regularly carry out safety inspection focusing on hidden danger investigation and equipment fault diagnosis
	Occupational Health	The Company formulates environmental occupational health and safety objectives, indicators and scheme management tables according to the objectives, indicators and scheme management procedures of the HSE management system
	Environment	The Company identifies, evaluates and controls the planning and management procedures according to environmental factors, and makes a list of major environmental factors

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7.3 Business Ethics

Anti-commercial Bribery and Anti-corruption

The Company is consistently committed to fostering a corporate culture of integrity, honesty, and fairness. It strictly complies with laws and regulations, such as the Criminal Law of the People's Republic of China and the Interim Provisions on Prohibition of Commercial Bribery, and has established internal management systems, including the Social Responsibility Management Manual, the Undertaking System on Anti-Corruption and Business Ethics, and the Business Ethics Talk Measures. These ensure adherence to high standards of integrity in partnerships and daily operations.

The Company integrates business ethics into its overall governance framework. Management is responsible for overseeing the implementation and execution of this strategy, while functional departments, such as the Compliance Department, Human Resources Department, and Procurement Department, are specifically tasked with the management and supervision of business ethics.

Anti-corruption and Anti-bribery Mechanism of Hua Hong Semiconductor

All employees (including part-time employees), senior management, and Board members are required to abide by relevant laws and regulations and practice and behave with integrity, diligence, and self-discipline. Corruption and bribery in all forms are prohibited, including:

- prohibiting commercial bribery and maintaining fair competition order;
- prohibiting seeking for illegitimate benefits through taking advantage of influence in position and work;
- never violating financial management and operation regulations, or seeking personal gain in the name of the Company;
- prohibiting practicing fraud to undermine the legitimate interests and reputation of the Company;
- prohibiting any receipt of presents, cash gifts, securities and monetary items that may cause a negative influence on work.

The Company has established a systematic management system for business ethics to ensure that all operation activities of the Company always comply with high standards of business ethics. The Company regularly conducts comprehensive assessments of business ethics and anti-corruption efforts, covering all business operations. The Company not only assesses the effectiveness of anti-corruption mechanisms, but also identifies potential integrity risks and proposes improvement measures. In addition, the Company has established a regular verification mechanism for business ethics to ensure that ethical policies are consistent with business developments and industry norms.

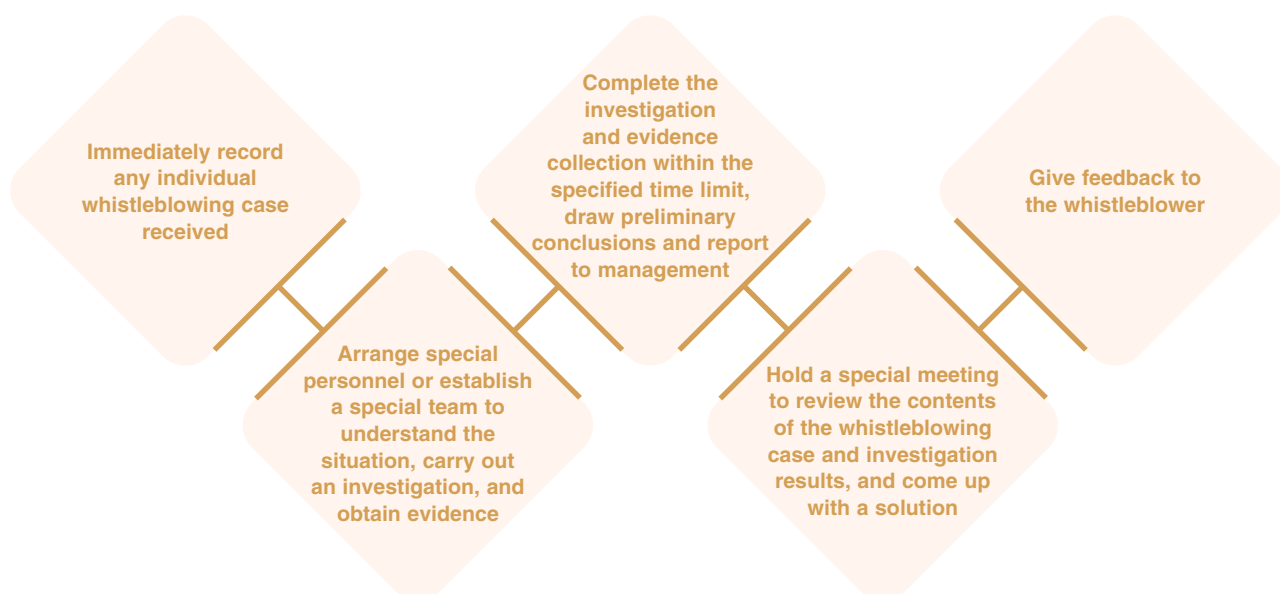
The Company is committed to creating a clean business ethics atmosphere. It conducts Responsible Business Alliance (RBA) Code of Conduct training for new employees, emphasizing clean business and other ethical business behaviors; and organizes anti-corruption and business ethics training, covering all employees in key positions, to promote the in-depth development of a culture of integrity and create a healthy work environment. During the Reporting Period, signing Ceremonies for the Undertaking on Business Ethics were held in Shanghai and Wuxi, targeting the department heads and above, aiming to reinforce the commitment to ethical conduct and further enhance the transparent atmosphere within the Company.

The Company encourages employees to actively participate in supervision and whistle-blowing to maintain a clean working environment, and provides multiple whistle-blowing channels, such as email, telephone and mailbox, and employees can choose to report in real name or anonymously. The Company always maintains an open attitude to ensure timely handling of reported information, so as to promptly identify and solve problems and prevent and control risks.

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To safeguard the fairness and transparency of whistle-blowing, the Company has established a sound business ethics supervision and whistle-blowing handling mechanism. All reported cases are investigated in detail and the results are reported to the whistleblower after consideration. With regard to whistleblower protection, the Company ensures that their information is kept strictly confidential and prevents whistleblowers from being dismissed, demoted, suspended or subjected to any form of retaliation for taking a lawful approach to whistle-blowing.

Hua Hong Semiconductor's Business Ethics Supervision and Whistle-blowing Case Handling Procedures



As of the end of the Reporting Period, the Company had no commercial bribery or corruption related incidents and litigation cases.

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Hua Hong Semiconductor's 2024 Business Ethics Metrics and Targets

2024 Target	Achievement of 2024 Target
All suppliers have signed the Anti-Commercial Bribery Commitment Letter	100%
All employees in critical positions have signed the Integrity Commitment Letter	100%

Anti-Unfair Competition

Hua Hong Semiconductor strictly complies with the Anti-Unfair Competition Law of the People's Republic of China and other laws and regulations and relevant requirements, explicitly prohibits unfair competitive behaviors, such as false advertising, trade secret infringement, and abuse of market dominance. The Company has established a relatively comprehensive governance structure and internal supervision and management procedures, implemented risk assessment and compliance review processes, and ensure timely identification and correction of any unfair competitive behaviors. Meanwhile, the Company conducts regular training for its employees to strengthen their legal compliance awareness, thereby preventing and addressing unfair competitive behaviors.

The Company has clearly defined the responsibilities of each department to ensure effective identification of and response to unfair competition risks. At the same time, through strengthened analysis of the market and competitive environment, the Company conducts regular assessments of potential risks and opportunities and formulates corresponding strategies to make adjustments.

As of the end of the Reporting Period, the Company has not been subject to any unfair competition lawsuits or administrative penalties, nor had it violated any laws or regulations regarding the use of product labels and promotional content.

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8. Appendix

8.1 ESG Data and Notes

Environment¹

Performance Indicators	Unit	2022	2023	2024
Emissions				
Total exhaust air emissions	10,000 m ³	2,391,024	2,747,929	2,478,838
Nitrogen oxide (NO _x) emissions	Kg	32,650	33,719	35,333
Sulfur dioxide (SO ₂) emissions	Kg	3,546	5,252	4,013
Total wastewater discharge	10,000 m ³	832	898	970
Total Hazardous waste produced ²	Ton	20,385	20,797	27,601
Hazardous waste produced per unit product	Kg/8-inch wafers	4.88	5.29	6.07
Total Non-hazardous waste produced ²	Ton	9,864	9,269	10,134
Non-hazardous waste produced per unit product	Kg/8-inch wafers	2.36	2.36	2.23
Use of Resources				
Integrated energy consumed ³	MWh	1,065,002	1,168,170	1,272,331
Integrated energy consumed per unit product	MWh/8-inch wafers	0.25	0.30	0.28
Of which: Electricity purchased ¹	MWh	954,667	1,030,352	1,104,829
Natural gas consumed ¹	m ³	10,530,287	11,048,312	11,630,543
Gasoline consumed ¹	L	–	43,949	43,923
Diesel consumed ¹	L	–	15,911	21,244
Heat purchased ¹	GJ	–	134,940	141,125
Total water consumed ⁴	m ³	18,010,226	19,076,734	21,295,153
Of which: Water from municipal water supply	m ³	10,284,063	11,127,266	12,560,168
Wastewater reused	m ³	7,726,163	7,949,468	8,734,985
Water consumed per unit product ⁵	m ³ /8-inch wafers	2.46	2.83	2.76
Recycled/reused water	m ³	107,163,560	126,544,660	148,470,458
Total packaging materials used for the shipment of finished products	Ton	313.32	336.92	420.32
Packaging materials used for the shipment of per unit finished product	Kg/8-inch wafers	0.07	0.09	0.09
Recycled packaging materials used for the shipment of finished products	Ton	54.90	66.33	84.71
GHG Emission				
GHG emissions ⁶	tCO ₂ e	497,938	537,070	562,487
Of which: Direct GHG emissions	tCO ₂ e	24,877	22,881	25,331
Indirect GHG emissions ⁷	tCO ₂ e	473,060	514,189	537,156
GHG emissions per unit product	tCO ₂ e/8-inch wafers	0.12	0.14	0.12

Notes:

1. The expansion project of the Wuxi Production Base was put into operation in 2023, and the production capacity was expanded in 2024. Therefore, integrated energy consumed, total wastewater discharge, waste produced increased in 2024, but the intensity performance indicators of most unit products have decreased.
2. Hazardous waste mainly includes waste isopropanol, waste acid, waste oil, waste packaging materials, etc. Hazardous waste mainly includes waste sludge and domestic garbage.
3. Integrated energy consumption included electricity purchased, natural gas, gasoline, diesel and heat purchased.
4. Total water consumption = water consumption from municipal water supply + wastewater reuse.

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5. In calculation, water consumed per unit product only includes water from the municipal water supply.
6. GHG emissions are calculated in accordance with the GB/T 32150 General Guideline for Calculation and Reporting of GHG Emissions from Industrial Enterprises and the GB/T 32151 Requirements on Calculation and Reporting of GHG Emissions published by the Standardization Administration of China.
7. The indirect greenhouse gas emissions for the Shanghai and Wuxi plant were calculated based on the Notice on Adjusting the Emission Factor Values in the Municipal Greenhouse Gas Emissions Accounting Guidelines issued by the Shanghai Municipal Ecology and Environment Bureau and the Announcement on the Release of 2022 CO₂ Emission Factors for Electricity (December 2024) issued by China's Ministry of Ecology and Environment, respectively. In 2024, Shanghai plant used a default value of electricity emission factor of 0.42 tCO₂/MWh, and Wuxi plant used the national average grid emission factor of 0.5366 tCO₂/MWh when calculating.

Employment and Labor Practice

Performance Indicators		Unit	2022	2023	2024
Employment					
Total number of full-time employees		Person	6,760	6,863	7,487
By Gender	Male employees	Person	4,932	5,039	5,525
	Female employees	Person	1,828	1,824	1,962
By Type of Employment	Employees working under a labor contract with the employer	Person	6,760	6,863	7,487
	Employees working under a labor contract with a labor dispatch (not included in the total number of full-time employees)	Person	81	53	49
	Part-time employees	Person	0	0	0
	Employees aged under 30	Person	2,983	2,894	3,228
By Age	Employees aged between 30 and 50	Person	3,624	3,811	4,091
	Employees aged above 50	Person	153	158	168
	Non-management employees	Person	–	–	7,361
By Level	Management employees	Person	–	–	126
	Employees with graduate degree or above	Person	–	–	1,987
By Educational Level	Employees with undergraduate degrees	Person	–	–	2,662
	Employees with less than undergraduate degrees	Person	–	–	2,838
	Employees working in Mainland China	Person	6,751	6,855	7,479
By Region	Employees working in Hong Kong, Macao, Taiwan and overseas	Person	9	8	8
Employee turnover rate ¹		%	12.0	10.0	11.2
By Gender	Female employee	%	9.7	7.1	6.3
	Male employee	%	12.8	11.3	12.5
By Age	Employees aged under 30	%	18.3	14.0	17.2
	Employees aged between 30 and 50	%	7.2	7.5	6.3
	Employees aged above 50	%	0.7	1.9	1.2
By Region	Employees working in Mainland China	%	12.0	10.0	11.2
	Employees working in Hong Kong, Macao, Taiwan and overseas	%	0.0	9.7	0.0

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Performance Indicators		Unit	2022	2023	2024
Health and Safety ²					
Occupational disease incidence		%	0	0	0
Coverage of employees attending occupational disease medical examinations		%	100	100	100
Number of work-related fatalities		Person	0	0	0
Percentage of work-related fatalities		%	0	0	0
Lost days due to work injury		Day	83	61	126
Employee Training					
Average training hours completed per full-time employee ³		Hour	122.2	133.7	137.3
By Level	Average training hours completed per non-management	Hour	123.7	135.6	139.1
	Average training hours completed per management	Hour	26.5	31.6	29.3
By Gender	Average training hours completed per female	Hour	124.3	125.1	119.6
	Average training hours completed per male	Hour	121.4	136.8	143.6
Percentage of full-time employees trained ⁴		%	100	100	100
By Level	Percentage of non-management employees trained	%	100	100	100
	Percentage of management employees trained	%	100	100	100
By Gender	Percentage of female employees trained	%	100	100	100
	Percentage of male employees trained	%	100	100	100
Total employee training expenditure		RMB ten thousand	—	—	195
Employee Rights					
Employee labor contract signing rate		%	100	100	100
Employee social insurance coverage rate		%	100	100	100
Number of employee discrimination incidents		Case	0	0	0
Amount of employee work injury insurance input		RMB ten thousand	—	—	963
Employee work injury insurance coverage rate		%	100	100	100

Notes:

- 1 Employee turnover rate for each category = number of employees in that category turned over during the year/number of employees in that category at the end of the year.
- 2 Coverage rate for employee occupational disease physical examinations is calculated based on employees in occupational risk positions at the end of the Reporting Period. During the Reporting Period, the Company incurred 3 work-related injuries and has strengthened protection education, including safety training and education for all employees of the departments involved, on-site engineering control measures, etc.
- 3 Average training hours for each category of employees = total hours of training received by each category of employees/number of employees in that category at the end of the year.
- 4 Coverage rate of training for each category of employees = number of employees of that category receiving training/number of employees of that category at the end of the year.

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Product Responsibility and Customer Service

Performance Indicators	Unit	2022	2023	2024
Product Responsibility and Customer Service				
Number of incidents of non-compliance with relevant laws and regulations on products and services during the Reporting Period	Case	0	0	0
Product return rate	%	0.11	0.087	0.037
Percentage of products sold subject to recalls for safety and health reasons	%	0	0	0
Customer Service				
Number of complaints received in relation to products and services	Case	0	4	2
Percentage of customer complaints resolved ¹	%	–	100	100

Note:

- 1 Percentage of customer complaints resolved = number of customer complaints resolved/number of complaints received about products and services *100%.

Information security and privacy protection

Indicator Name	Unit	2022	2023	2024
Number of confirmed incidents of leakage, theft or loss of customer information	Case	0	0	0
Amount involved in data security incidents	RMB ten thousand	0	0	0
Amount involved in customer privacy leakage incidents	RMB ten thousand	0	0	0

Supply Chain Management

Performance Indicators	Unit	2022	2023	2024
Total number of suppliers	Supplier	551	561	581
By region				
Total number of suppliers in Mainland China	Supplier	413	420	436
Total number of suppliers from Hong Kong, Macao, Taiwan and overseas	Supplier	138	141	145
Number of suppliers assessed ¹	Supplier	112	114	139
Number of suppliers subject to rectification	Supplier	0	0	0
Percentage of raw and auxiliary material suppliers signing the Environmental Protection Undertaking	%	100	100	100
Percentage of raw materials purchased from local suppliers ²	%	31	32	36

Notes:

- 1 Refers to the number of suppliers for which the Company has conducted assessments in respect of labor, health, environment and ethics.
- 2 Raw material procurement includes: silicon wafers, quartz, target materials, gases, chemicals and other raw materials for production.

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Anti-corruption

Performance Indicators	Unit	2022	2023	2024
Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the Reporting Period	Case	0	0	0
Cumulative hours of anti-corruption training received by employees	Hour	/	2,542	2,245
Average training hours per employee on anti-corruption ¹	Hour	/	/	1.2

Note:

- 1 Employees who have received anti-corruption training include all new employees and employees in key positions. Average training hours per employee on anti-corruption = training hours for new employees and employees in key positions/number of new employees and employees in key positions.

Community Investment

Performance Indicators	Unit	2022	2023	2024
Number of employees participating in volunteer services	Person	4,189	1,108	1,100
Cumulative hours of volunteer activities	Hour	6,283	1,364	1,212
Community investment	RMB	–	50,000	50,000

Economic Performance

Performance Indicators	Unit	2022	2023	2024
Social contribution per share ¹	RMB	5.46	3.59	1.87

Note:

- 1 Social contribution per share = (net profit of the Company + tax paid to the state during the year + salaries paid to employees + interest on borrowings paid to banks and other creditors + value created for other stakeholders, e.g. donations – other social costs due to environmental pollution)/total number of shares of the Company.

8.2 List of Laws and Regulations Observed by the Company

Fields	Names of Laws and Regulations
Environmental Responsibility	
Environmental Management	Environmental Protection Law of the People's Republic of China, Environmental Impact Assessment Law of the People's Republic of China, Clean Production Promotion Law of the People's Republic of China, Environmental Protection Tax Law of the People's Republic of China, etc.
Emissions and Waste Management	Law of the People's Republic of China on Prevention and Control of Atmospheric Pollution, Law of the People's Republic of China on the Prevention and Control of Water Pollution, Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes, Regulations on Administration of Recovery and Disposal of Waste Electrical and Electronic Products, Regulations on the Administration of Pollution Discharge Permits, etc.
Energy and Resource Management	Energy Conservation Law of the People's Republic of China, Law on Energy of the People's Republic of China, Renewable Energy Law of the People's Republic of China, Law on Circular Economy Promotion of the People's Republic of China, Water Conservation Regulations, etc.
Product Quality	Law of the People's Republic of China on Product Quality, Anti-Unfair Competition Law of the People's Republic of China, EU Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals ("REACH"), Waste Electrical and Electronic Equipment Directive ("WEEE"), Restriction of Hazardous Substances ("RoHS"), etc.

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Information Security and Privacy Protection	Cyber Security Law of the People's Republic of China, Data Security Law of the People's Republic of China, Personal Information Protection Law of the People's Republic of China, Cryptography Law of the People's Republic of China, Regulations on the Protection of Computer Software, Regulations on Network Data Security Management
Intellectual Property Protection	Patent Law of the People's Republic of China, Copyright Law of the People's Republic of China, Trademark Law of the People's Republic of China, Implementation Rules of the Patent Law of the People's Republic of China, Regulations on National Science and Technology Awards, etc.
Responsibility for Employees	
Employee Interests	Labor Law of the People's Republic of China, Law of the People's Republic of China on Employment Contracts, Social Insurance Law of the People's Republic of China, Law of the People's Republic of China on Protection of Women's Rights and Interests, Vocational Education Law of the People's Republic of China, Regulations on the Prohibition of Child Labor
Occupational Health and Safety	Law of the People's Republic of China on Prevention and Control of Occupational Diseases, Production Safety Law of the People's Republic of China, Special Equipment Safety Law of the People's Republic of China, Regulation on Work-Related Injury Insurances, Regulations on Labor Protection in Workplaces Using Toxic Substances, Special Regulations on Labor Protection for Female Employees, Regulations on Emergency Response to Production Safety Accidents, etc.
Corporate Governance	
Corporate Governance	Company Law of the People's Republic of China, Securities Law of the People's Republic of China, Hong Kong Companies Ordinance, etc.

8.3 Benchmarking Index

The Hong Kong Stock Exchange's Environmental, Social and Governance Reporting Guide (effective from 31 December 2023)

Part B: Mandatory Disclosure Requirements

Mandatory Disclosure Items	Section in the Report
Governance Structure	ESG Management System
Reporting Principles	Report Preparation Instructions
Reporting Boundary	Report Preparation Instructions

Part C: "Comply or explain" Provisions

Aspects, General Disclosures and KPIs	Section in the Report
Subject Area A. Environmental	
Aspect A1. Emissions	
General Disclosure A1	Emissions and Waste Management
KPI A1.1	Emissions and Waste Management ESG Data and Notes
KPI A1.2	ESG Data and Notes

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Aspects, General Disclosures and KPIs	Section in the Report
KPI A1.3	ESG Data and Notes
KPI A1.4	ESG Data and Notes
KPI A1.5	Emissions and Waste Management ESG Management Strategies and Targets
KPI A1.6	Emissions and Waste Management ESG Management Strategies and Targets
Aspect A2. Use of Resources	
General Disclosure A2	Energy Management Water Resources Management
KPI A2.1	ESG Data and Notes
KPI A2.2	ESG Data and Notes
KPI A2.3	Energy Management ESG Management Strategies and Targets
KPI A2.4	Water Resources Management ESG Management Strategies and Targets
KPI A2.5	ESG Data and Notes
Aspect A3. Environment and Natural Resources	
General Disclosure A3	Environmental Management Water Resources Management Circular Economy
KPI A3.1	Water Resources Management Circular Economy
Aspect A4. Coping with Climate Change	
General Disclosure A4	Climate Change Mitigation and Adaptation
KPI A4.1	Climate Change Mitigation and Adaptation
Subject Area B. Social Employment and Labour Practices	
Aspect B1. Employment	
General Disclosure B1	Rights and Interests of Employees
KPI B1.1	ESG Data and Notes
KPI B1.2	ESG Data and Notes
Aspect B2. Health and Safety	
General Disclosure B2	Employee Health and Safety
KPI B2.1	ESG Data and Notes
KPI B2.2	ESG Data and Notes
KPI B2.3	Employee Health and Safety
Aspect B3. Development and Training	
General Disclosure B3	Employee Development and Training
KPI B3.1	ESG Data and Notes

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Aspects, General Disclosures and KPIs	Section in the Report
KPI B3.2	ESG Data and Notes
Aspect B4. Labor Standards	
General Disclosure B4	Rights and Interests of Employees
KPI B4.1	Rights and Interests of Employees
KPI B4.2	Rights and Interests of Employees
Subject Area B. Social Operating Practices	
Aspect B5. Supply Chain Management	
General Disclosure B5	Sustainable Supply Chain Management
KPI B5.1	ESG Data and Notes
KPI B5.2	Sustainable Supply Chain Management
KPI B5.3	Sustainable Supply Chain Management
KPI B5.4	Sustainable Supply Chain Management
Aspect B6. Product Responsibility	
General Disclosure B6	Product and Service Safety and Quality
KPI B6.1	Product and Service Safety and Quality
KPI B6.2	Product and Service Safety and Quality ESG Data and Notes
KPI B6.3	R&D Innovation and Intellectual Property Protection
KPI B6.4	Product and Service Safety and Quality
KPI B6.5	Information Security and Privacy Protection
Aspect B7. Anti-corruption	
General Disclosure B7	Business Ethics
KPI B7.1	ESG Data and Notes
KPI B7.2	Business Ethics
KPI B7.3	Business Ethics
Aspect B8. Community Investment	
General Disclosure B8	Community and Public Welfare
KPI B8.1	Community and Public Welfare
KPI B8.2	ESG Data and Notes

Self-Regulatory Guidelines No.14 for Companies Listed on Shanghai Stock Exchange—Sustainability Report (For Trial Implementation) (April 2024)

Disclosure Requirement	Corresponding Sections of the Report
Coping with Climate Change	Climate Change Mitigation and Adaptation
Pollutant Emissions	Emissions and Waste Management
Waste Disposal	Emissions and Waste Management

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Disclosure Requirement		Corresponding Sections of the Report
Ecosystem and Biodiversity Conservation		In terms of biodiversity conservation, the four factories of the Company are located in industrial plots and do not involve control requirements such as ecological protection red lines and water source protection areas.
Environmental Compliance Management		Environmental Management
Energy Utilization		Energy Management
Water Resource Utilization		Water Resources Management
Circular Economy		Circular Economy
Rural Revitalization		Community and Public Welfare
Social Contribution		Community and Public Welfare
Innovation-Driven		R&D Innovation and Intellectual Property Protection
Technology Ethics		The Company's core business focuses on the production and manufacturing of semiconductor wafers and does not involve this topic.
Supply Chain Security		Sustainable Supply Chain Management
Equal Treatment for SMEs		As of the end of 2024, the balance of the Company's accounts payable (including notes payable) will not exceed RMB30 billion or account for more than 50% of total assets.
Product and Service Safety and Quality		Product and Service Safety and Quality
Data Security and Customer Privacy Protection		Information Security and Privacy Protection
Employee		Rights and Interests of Employees Employee Health and Safety Employee Development and Training
Due Diligence		Stakeholder Engagement and Due Diligence
Stakeholder Communication		Stakeholder Engagement and Due Diligence
Anti-Commercial Bribery and Anti-Corruption		Business Ethics
Anti-Unfair Competition		Business Ethics
Self-disclosure topics	Green Products	Green Products
	Clean Technology Opportunities	Clean Technology Opportunities
	Risk Compliance Management	Risk Compliance Management
	Corporate Governance	Corporate Governance

2024 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Index Table of Environmental, Social and Governance (ESG) Indicator System for State-owned Listed Companies in Shanghai (Version 1.0)

KPIs		Section in the Report
E Environment		
E1 Environmental Management		
E1.1	Environmental Management Objectives and Systems	ESG Management Strategies and Targets Environmental Management
E1.2	Passing Environmental Management System Certification	Environmental Management
E1.3	Research and Development of Green Products and Use of Environmental Protection Technologies	Green Products Clean Technology Opportunities
E1.4	Total Investment in Environmental Protection	Environmental Management
E1.5	Environmental Protection Training Performance	Environmental Management
E2 Energy		
E2.1	Energy Management Goals and Planning	ESG Management Strategies and Targets Energy Management
E2.2	Energy Saving Measures	Energy Management
E2.3	Renewable Energy Development and Application	Energy Management
E2.4	Total Energy Consumption	ESG Data and Notes
E3 Resources		
E3.1	Resource Management System and Planning	Water Resources Management Circular Economy
E3.2	Water Resource Goals and Planning	Water Resources Management
E3.3	Water Conservation Measures	Water Resources Management
E3.4	Total Annual Water Consumption	ESG Data and Notes
E3.5	Other Resource Usage Management	Green Products
E4 Pollutants		
E4.1	Sewage Management Goals and Planning	ESG Management Strategies and Targets Emissions and Waste Management
E4.2	Measures to Reduce Sewage Discharge	Emissions and Waste Management
E4.3	Sewage Recycling Usage	ESG Data and Notes
E4.4	Sewage Pollutant Discharge	ESG Data and Notes
E4.5	Waste Gas Management Goals and Planning	ESG Management Strategies and Targets Emissions and Waste Management
E4.6	Measures to Reduce Waste Gas Discharge	Emissions and Waste Management
E4.7	Waste Gas Pollutant Emissions	ESG Data and Notes

2024 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

KPIs		Section in the Report
E4.8	Solid Waste Management Goals and Planning	ESG Management Strategies and Targets Emissions and Waste Management
E4.9	Solid Waste Treatment Measures	Emissions and Waste Management
E4.10	Solid Waste Emissions	ESG Data and Notes
E4.11	Solid Waste Recycling, Utilization, and Disposal Volume	ESG Data and Notes
E4.12	Other Pollutants Management	The Company adopts noise prevention and control measures such as building noise insulation, installation of vibration-damping devices for equipment, etc.
E5 Climate Change		
E5.1	Identify Climate Change Risks and Establish Goals and Strategies to Address Climate Change	ESG Management Strategies and Targets Climate Change Mitigation and Adaptation
E5.2	Measures to Support the “Emission Peak and Carbon Neutrality” Goal	Climate Change Mitigation and Adaptation
E5.3	Carbon Verification/Review Measures	Climate Change Mitigation and Adaptation
E5.4	Greenhouse Gas Emissions	ESG Data and Notes
E6 Biodiversity		
E6.1	Biodiversity Conservation System	In terms of biodiversity conservation, the four factories of the Company are located in industrial plots and do not involve control requirements such as ecological protection red lines and water source protection areas.
E6.2	Biodiversity Conservation Measures	
S Social		
S1 Products and services		
S1.1	Product Safety and Quality Management System	Product and Service Safety and Quality
S1.2	Passing Product Quality Management System Certification	Product and Service Safety and Quality
S1.3	Product Research and Development Innovation	R&D Innovation and Intellectual Property Protection
S1.4	Intellectual Property Protection	R&D Innovation and Intellectual Property Protection
S1.5	Customer Information Protection and Privacy	Information Security and Privacy Protection
S1.6	Customer Service Management System	Product and Service Safety and Quality
S1.7	Responsible Publicity	Product and Service Safety and Quality
S1.8	Number of Customer Complaints/ Complaint Resolution rate	Product and Service Safety and Quality
S1.9	Customer Satisfaction	Product and Service Safety and Quality

2024 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

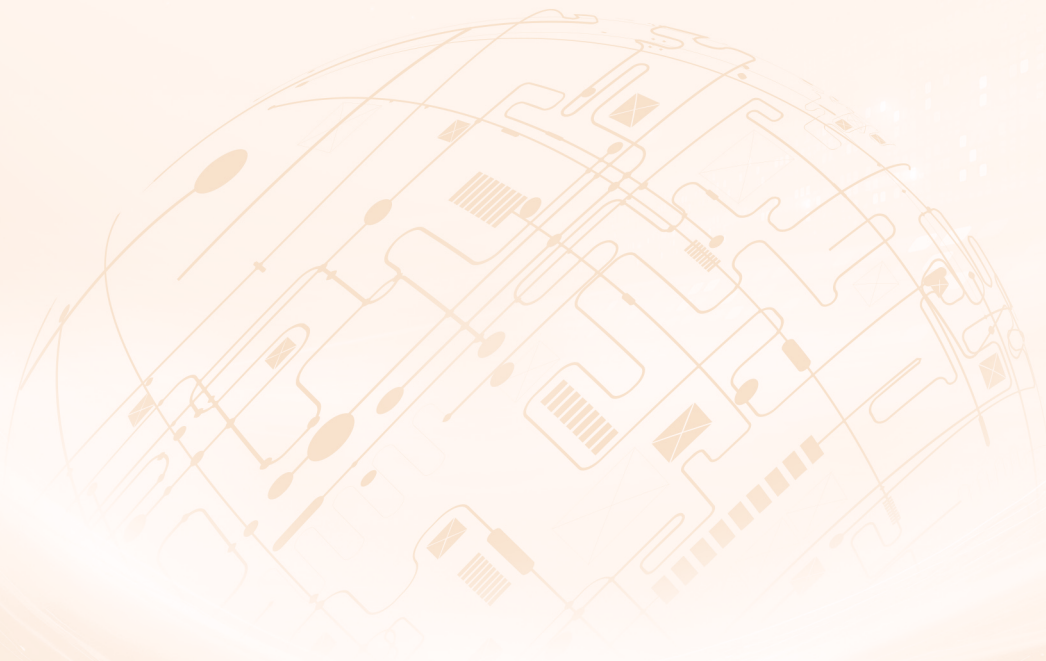
KPIs		Section in the Report
S2 Employee Responsibility		
S2.1	Staff Employment and Staff Composition	Rights and Interests of Employees
S2.2	Employee Turnover Rate	ESG Data and Notes
S2.3	Democratic Management of Employees	Rights and Interests of Employees
S2.4	Salary and Benefits System	Rights and Interests of Employees
S2.5	Employee Care	Rights and Interests of Employees
S2.6	Employee Satisfaction	Rights and Interests of Employees
S2.7	Employee Occupational Health and Safety Management	Employee Health and Safety
S2.8	Passing Occupational Health and Safety Management System Certification	Employee Health and Safety
S2.9	Safety Emergency Management Measures	Employee Health and Safety
S2.10	Total Investment in Production Safety	Employee Health and Safety
S2.11	Production Safety Training Performance	Employee Health and Safety
S2.12	Work-related Injuries and Deaths	ESG Data and Notes
S2.13	Employee Physical Examination Coverage	ESG Data and Notes
S2.14	Employee Career Development System	Employee Development and Training
S2.15	Employee Training and Practical Measures	Employee Development and Training
S2.16	Employee Development Performance	Employee Development and Training
S3 Supply Chain Responsibility		
S3.1	Supplier Management System	Sustainable Supply Chain Management
S3.2	Supplier ESG Review	Sustainable Supply Chain Management
S4 Community Responsibility		
S4.1	Carrying out Public Welfare and Charity Activities	Community and Public Benefit
S4.2	Public Welfare and Charity Investment	ESG Data and Notes
S4.3	Volunteer Service Performance	ESG Data and Notes
S5 Corporate Responsibility		
S5.1	Serving National Strategy or Shanghai Strategy	R&D Innovation and Intellectual Property Protection Clean Technology Opportunities Community and Public Benefit
S5.2	Responding to Public Crises	Climate Change Mitigation and Adaptation
S5.3	Information Security	Information Security and Privacy Protection
S5.4	Public Services	Community and Public Benefit
S5.5	Tax Contribution	Financial Statements Section of Hua Hong Semiconductor Limited 2024 Annual Report (A Share)

2024 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

KPIs		Section in the Report
G Governance		
G1 Corporate Governance		
G1.1	Party Leadership	Environmental, Social Responsibility and Other Corporate Governance Section of Hua Hong Semiconductor Limited 2024 Annual Report (A Share)
G1.2	Separation of Chairman/General Manager	Separation of Chairman and General Manager
G1.3	Percentage of Directors	Corporate Governance
G1.4	Compliance Management System	Risk Compliance Management
G1.5	Risk Management System	Risk Compliance Management
G1.6	Audit System	Business Ethics
G1.7	Measures to Avoid Violating Business Ethics	Business Ethics
G1.8	Anti-monopoly and Fair Competition	Business Ethics
G2 ESG Governance		
G2.1	Board Involvement in ESG Management	Board of Directors ESG Management Statement ESG Management Framework
G2.2	ESG Organizational Structure	ESG Management Framework
G2.3	ESG strategy/objectives	ESG Management Strategies and Targets
G2.4	ESG Stakeholder Identification	Stakeholder Engagement and Due Diligence
G2.5	Identification of Material Topics	Double Materiality Analysis
G2.6	ESG-related System	ESG Management Framework
G2.7	Carrying out Stakeholder Communication Activities	Stakeholder Engagement and Due Diligence
G2.8	Management Remuneration Linked to ESG Performance	Environmental, safety, R&D goals linked to management compensation
G2.9	Specific ESG Factors for Business	Climate Change Mitigation and Adaptation Clean Technology Opportunities
G3 Data Governance		
G3.1	Basic Platform Construction	Employee Health and Safety R&D Innovation and Intellectual Property Protection
G3.2	Data Convergence and Interoperability	Production, environment and procurement data are kept in the Company's intranet, which is physically isolated from the extranet by setting access rights for reasons of commercial confidentiality.
G3.3	Data Governance System	Not Involved

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釋義

於本年報內，除非文義另有所指，否則下列詞彙具有下文所載涵義。

「股東週年大會」	本公司擬於二零二五年五月八日舉行的股東週年大會；
「細則」	本公司的組織章程細則(不時修訂)；
「董事會」	本公司董事會；
「國家集成電路產業基金」	國家集成電路產業投資基金股份有限公司，一家於二零一四年九月二十六日在中國註冊成立的公司。公司股東包括中央財政、集成電路產業聚集區企業、大型國有企業、部份金融機構及民營企業，公司重點投向半導體晶圓製造業，兼顧芯片設計、封裝測試、設備及材料等上下游環節；
「國家集成電路產業基金II」	國家集成電路產業投資基金二期股份有限公司，一家於二零一九年十月二十二日在中國成立的公司；公司股東包括財政部、集成電路產業聚集區企業、大型國有企業、部份金融機構及民營企業。其主要透過股權投資於集成電路產業價值鏈進行投資，其中以集成電路芯片生產及芯片設計、封裝測試以及設備及材料為主。據董事作出一切合理查詢後所深知、全悉及確信，根據上市規則第十四A章，國家集成電路產業基金II並非國家集成電路產業基金的聯繫人；
「本公司」或「華虹半導體」	華虹半導體有限公司，一家於二零零五年一月二十一日在香港註冊成立的有限公司，除非文義另有所指，否則包括其所有子公司，或如文義指其成為其現有子公司的控股公司之前期間，則指其現有子公司；
「董事」	本公司董事；

釋義

「EPS」	每股盈利；
「股東特別大會」	本公司股東特別大會；
「Grace Cayman」	Grace Semiconductor Manufacturing Corporation，一家於一九九九年十月五日在開曼群島註冊成立的獲豁免有限公司，為本公司的全資子公司；
「本集團」	本公司及我們的子公司，或如文義所指為本公司成為我們現有子公司的控股公司之前期間(或成為本公司的該等聯營公司)，則指由該等子公司或其前身公司(視乎情況而定)所經營的業務；
「華虹宏力」	上海華虹宏力半導體製造有限公司，一家於二零一三年一月二十四日在中國註冊成立的公司，為本公司的全資子公司；
「香港聯交所」	香港聯合交易所有限公司；

釋義

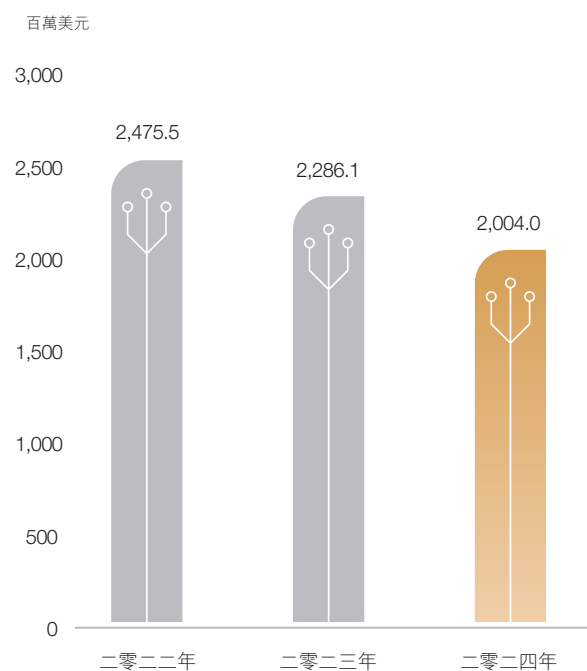
「華虹集團」	上海華虹(集團)有限公司，一家於一九九六年四月九日在中國註冊成立為上海華虹微電子有限公司的公司，並於一九九八年更名為上海華虹(集團)有限公司，為本公司主要股東；
「華虹集團框架協議」	本公司與華虹集團訂立日期為二零二三年十二月三十日之框架協議，旨在規範本集團與華虹集團、其子公司或聯營公司(定義見上市規則第十四A章)之間截至二零二四年十二月三十一日止年度的銷售及採購交易以及提供服務；
「華虹置業」	上海華虹置業有限公司，一家於二零一一年十月二十八日在中國註冊成立的公司，為華虹科技發展的全資子公司；
「華虹科技發展」	上海華虹科技發展有限公司，一家於二零一零年五月十日在中國註冊成立的公司，一家由華虹集團持有50%並與其合併報表及由華虹宏力持有50%的公司，為關連人士；
「華錦物業管理」	上海華錦物業管理有限公司，一家於二零一二年六月八日在中國註冊成立的公司，為華虹科技發展的全資子公司，為本公司關連人士；
「華力微」	上海華力微電子有限公司，一家於二零一零年一月十八日在中國註冊成立的公司，為關連人士；
「上海華力」	華力微及其控股子公司；
「華虹無錫」	華虹半導體(無錫)有限公司，一家於二零一七年十月十日在中國註冊成立的公司，為本公司非全資子公司，由本公司、華虹宏力、無錫錫虹國芯、國家集成電路產業基金及國家集成電路產業基金II分別持有約22.22%、28.78%、20.00%、20.58%及8.42%；
「華虹製造」	華虹半導體製造(無錫)有限公司，一家於二零二二年六月十七日註冊成立的公司，且為本公司非全資子公司，由本公司、華虹宏力、無錫錫虹聯芯及國家集成電路產業基金II分別持有約21.90%、29.10%、20.00%及29.00%；

釋義

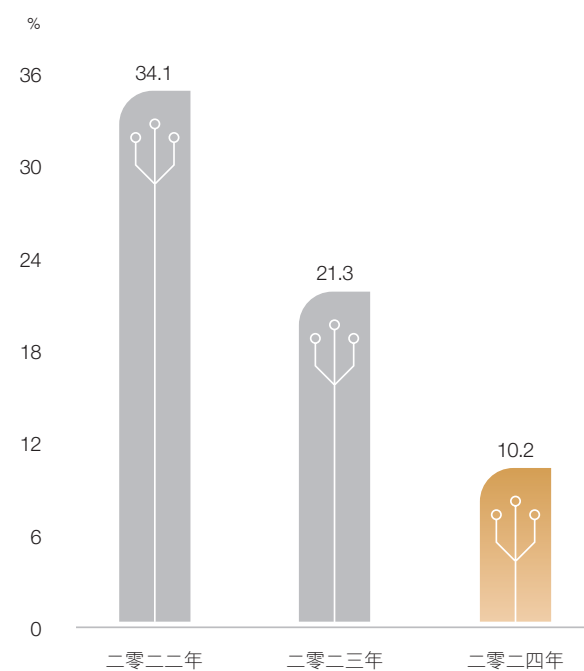
「上市規則」	《香港聯合交易所有限公司證券上市規則》(經不時修訂或補充)；
「人民幣股份」或「A股」	在科創板上市及以人民幣買賣的本公司普通股
「人民幣股份發行」	本公司於二零二三年八月七日發行407,750,000股人民幣股份，其在科創板上市且可供買賣；
「上海聯和」	上海聯和投資有限公司，一家於一九九四年九月二十六日在中國註冊成立的公司，為本公司主要股東；
「證監會」	香港證券及期貨事務監察委員會；
「證券及期貨條例」	香港法例第571章《證券及期貨條例》(經不時修訂或補充)；
「科創板」	上海證券交易所科創板；
「無錫錫虹國芯」	無錫錫虹國芯投資有限公司，一家於二零二三年一月十六日在中國註冊成立的公司，係由市屬及區級國企聯合控制的專業投資公司，持有本公司非全資子公司華虹無錫20.00%股份；
「無錫錫虹聯芯」	無錫錫虹聯芯投資有限公司，一家於二零一七年十二月十九日在中國註冊成立的公司，係由市屬及區級國企聯合設立的專業投資公司，持有本公司非全資子公司華虹製造20.00%股份。

主要財務指標

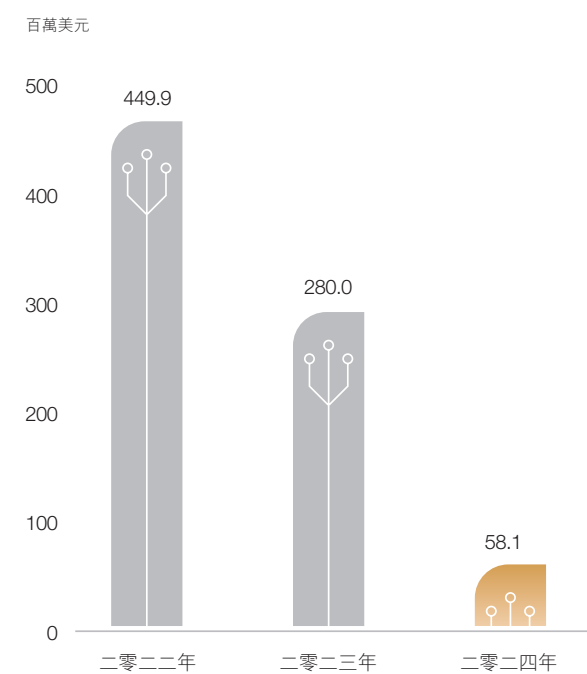
銷售收入



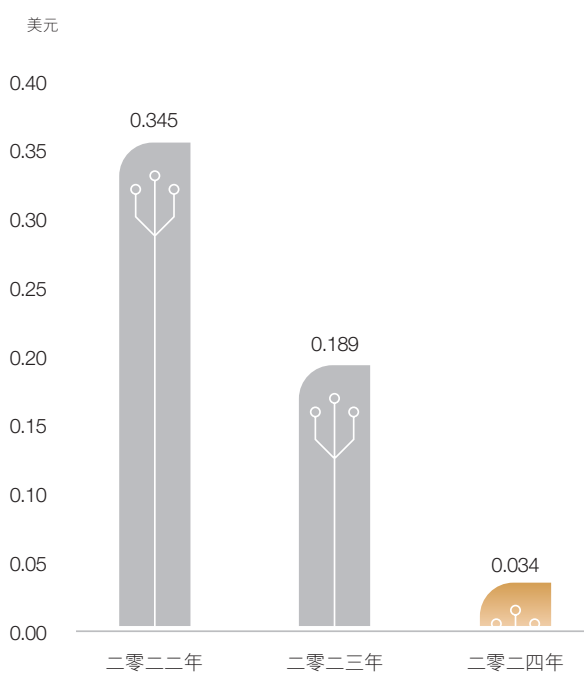
毛利率



母公司擁有人應佔溢利



每股盈利



致股東的信

尊敬的各位股東：

對華虹半導體而言，二零二四年是充滿挑戰的一年，更是砥礪奮進的一年。全球半導體產業在經歷需求疲軟與庫存高壓的行業寒冬後，迎來溫和復甦。儘管面臨除AI及消費電子領域以外市場需求的不確定性，以及成熟製程芯片供給量增加導致的激烈競爭和價格承壓，華虹半導體憑藉在特色工藝持續深耕累積的技術優勢和客戶支持，在複雜多變的環境中仍保持了穩健發展，全年實現銷售收入20.04億美元，平均產能利用率接近滿產，整體業績表現逐季提升。

二零二四年第四季度，位於無錫的第二條12英寸產線——華虹製造項目順利投產，標誌着公司「8英寸+12英寸」戰略實現了又一個重要的里程碑。在歷時十八個月的廠房建設、潔淨室交付、設備搬入及調試驗證後，華虹製造提前建成投產並成功導入各大特色工藝平台，預計從二零二五年開始將帶動收入的穩步提升，為未來業績增長奠定堅實基礎。

作為注重新質生產力的科技企業，創新是保持領先的唯一秘訣。公司持續加大核心競爭力——工藝能力的研發投入，截至二零二四年底，公司累計獲國內外授權專利達到4,644件。通過工藝平台的持續迭代進步，為客戶及生態鏈夥伴提供更優質的產品組合，也為下一步發展打下牢固的根基。在穩步推進業務拓展、產能擴張的同時，公司也不忘在行業築底期進一步提升自身運營效率。通過在銷售與市場、採購與供應鏈、生產製造、營運支持等全方位推行降本增效措施，加強成本控制，夯實公司的競爭優勢。

致股東的信

展望二零二五年，全球半導體市場預計延續溫和回升態勢，AI應用滲透將加速手機、計算機、汽車智駕等領域的升級需求，工業與新能源等領域需求也有望逐步復甦。在新一年中，華虹半導體將堅定推進產能擴張，確保華虹製造項目按計劃進行產能爬坡；持續優化先進「特色IC + 功率器件」的工藝及產品組合，提升高價值產品佔比；深化與客戶及終端生態夥伴的戰略協同，應對中國市場供應鏈本土化所帶來的持續需求提升。面對未來，公司將以創新為引擎，以品質為基石，在行業新一輪增長週期中搶佔先機，為股東創造可持續價值，與合作夥伴共繪半導體產業的新篇章！

唐均君

主席兼執行董事

白鵬

總裁兼執行董事

中國上海

二零二五年三月二十七日

公司資料

企業文化

企業精神

知難而進 奮發圖強

願景

持續創新，
為全球客戶製造「芯」夢想

使命

通過協作、創新和優秀的企業公民性，
為股東、客戶和員工創造價值

核心價值觀

誠信、團隊、進取、革新

公司資料

董事會

執行董事

唐均君(主席)
白鵬(總裁)(於二零二五年一月一日獲委任)
張素心(於二零二四年十二月三十一日辭任)

非執行董事

葉峻
孫國棟
陳博(於二零二五年三月七日獲委任)
熊承艷(於二零二四年三月二十八日獲委任)
周利民(於二零二四年一月十九日獲委任,於二零二五年三月七日辭任)

獨立非執行董事

張祖同
王桂壘, 太平紳士
封松林(於二零二四年三月二十八日獲委任)
葉龍蜚(於二零二四年三月二十八日辭任)

公司秘書

李瑞霞

授權代表

唐均君
李瑞霞

審核委員會

張祖同(主席)
熊承艷(於二零二四年三月二十八日獲委任)
封松林(於二零二四年三月二十八日獲委任)
葉峻(於二零二四年三月二十八日辭任)
葉龍蜚(於二零二四年三月二十八日辭任)

薪酬委員會

王桂壘, 太平紳士(主席)
葉峻(於二零二四年三月二十八日獲委任)
封松林(於二零二四年三月二十八日獲委任)
葉龍蜚(於二零二四年三月二十八日辭任)

提名委員會

唐均君(主席)(於二零二四年十二月三十一日獲委任)
王桂壘, 太平紳士
封松林(於二零二四年三月二十八日獲委任)
張素心(於二零二四年十二月三十一日辭任)
葉龍蜚(於二零二四年三月二十八日辭任)

網址

www.huahonggrace.com

核數師

安永會計師事務所
執業會計師
中國香港
鰂魚涌英皇道979號
太古坊一座27樓

香港法律顧問

史密夫斐爾律師事務所
中國香港
皇后大道中15號
告羅士打大廈23樓

主要往來銀行

中國建設銀行上海市分行
中國上海市
浦東新區
陸家嘴環路900號

國家開發銀行上海分行
中國上海市
浦東新區
浦明路68號

招商銀行股份有限公司上海分行營業部
中國上海市
浦東新區
陸家嘴環路1088號

中國建設銀行股份有限公司香港分行
中國香港中環
干諾道中3號中國建設銀行大廈28樓

交通銀行股份有限公司香港分行
中國香港中環
畢打街20號

國家開發銀行江蘇分行
中國江蘇省南京市
江東中路232號

中國農業銀行無錫新吳支行
中國江蘇省無錫市
新吳區和風路26號

中國建設銀行無錫高新技術產業開發區支行
中國江蘇省無錫市
新吳區和風路26號

中信銀行無錫新區支行
中國江蘇省無錫市
新吳區和風路26號

中國銀行無錫高新技術產業開發區支行
中國江蘇省無錫市
新吳區旺莊路140號

交通銀行股份有限公司無錫分行
中國江蘇省無錫市
濱湖區金融二街8號

公司資料

股份過戶登記處

港股：
卓佳證券登記有限公司
中國香港
夏慤道16號
遠東金融中心17樓

A股：
中國證券登記結算有限責任公司上海分公司
中國上海市
浦東新區
楊高南路188號

註冊辦事處

中國香港中環
夏慤道12號
美國銀行中心2212室

主要營業地點

中國上海市
張江高科技園區
哈雷路288號
郵編：201203

中國江蘇省無錫市
新吳區
新洲路30號
郵編：214028

中國江蘇省無錫市
新吳區
新洲路30-1號
郵編：214028

股份代號

香港聯交所：01347
上交所：688347

董事及高級管理層



唐均君先生，60歲，於二零一九年五月一日起獲委任為本公司總裁兼執行董事，後於二零二四年十二月三十一日起轉任為本公司主席兼執行董事。唐先生亦為華虹宏力、華虹無錫、華虹製造董事長。唐先生擁有豐富的集成電路行業資歷與管理經驗，和極強的協調能力與執行力。在加入本公司之前，唐先生自二零一零年二月至二零一九年三月擔任華力微黨委書記、副總裁及執行副總裁，自二零一六年八月至二零一九年三月兼任上海華力總裁。二零零八年七月至二零一零年二月期間，擔任上海華虹NEC電子有限公司黨委副書記、工會主席兼行政與政府關係總監。此前，唐先生歷任上海儀表電訊工業局副主任科員、上海無線電十七廠技術員、上海半導體器件四廠技術員等職。唐先生於西南交通大學工商管理專業本科畢業，後畢業於中歐國際工商學院，獲工商管理碩士學位；正高級經濟師職稱；全國五一勞動獎章、全國勞模、全國優秀黨務工作者榮譽獲得者。



白鵬博士，62歲，於二零二五年一月一日起獲委任為本公司總裁兼執行董事。白先生亦為華虹宏力、華虹無錫、華虹製造總裁及董事。白先生在集成電路製造領域擁有逾30年經驗。在加入本公司之前，白先生自二零二二年起擔任榮芯半導體有限公司首席執行官。在此之前，他曾先後擔任英特爾公司工藝整合工程師、工藝整合經理、良率工程總監、研發總監兼副總裁以及公司副總裁。白先生曾就讀於北京大學，後於一九八五年畢業與布加勒斯特大學，獲得物理學學士學位，並於一九九一年獲得倫斯勒理工學院物理學博士學位。

董事及高級管理層



葉峻先生，52歲，自二零一二年二月起為本公司非執行董事及華虹宏力董事。葉先生於金融投資領域擁有二十多年經驗。自一九九六年起，葉先生歷任上海聯和投資銀行部經理、業務發展部經理、總經理助理、副總經理及總經理等職位，並於二零二五年三月起擔任上海聯和董事長。葉先生亦為上海銀行的董事，上海兆芯集成電路股份有限公司、上海宣泰醫藥科技股份有限公司及中美聯泰大都會人壽保險有限公司的董事長。葉先生畢業於上海交通大學，獲工業外貿學士及工商管理碩士學位。



孫國棟先生，47歲，自二零二零年十二月十日起獲委任為本公司非執行董事。孫先生亦為華虹無錫、華虹製造董事。孫先生於二零零零年加入國家開發銀行，二零零零年至二零一四年，孫先生在國家開發銀行擔任多項職務，包括人事局系統幹部處副處長、湖北省分行人事處副處長及處長等。二零一四年十二月至二零一六年七月擔任華芯投資管理有限責任公司的人力資源部總經理，二零一六年七月起至今擔任華芯投資管理有限責任公司的總監，二零二四年五月起至今擔任華芯投資管理有限公司上海分公司總經理。孫先生畢業於中國北京理工大學，獲得計算機應用學士學位，並畢業於中國中央財經大學，獲得工商管理碩士學位。

董事及高級管理層



陳博先生，48歲，於二零二五年三月七日獲委任為本公司非執行董事。陳先生亦為華虹宏力、華虹無錫、華虹製造董事。陳先生現任上海華虹(集團)有限公司副總裁、上海華虹虹日電子有限公司董事長。陳先生擁有豐富的高新技術產業戰略發展和固定資產投資經驗。加入本公司之前，陳先生於二零零一年至二零二三年期間曾任上海市發展和改革委員會副主任科員、主任科員、處長助理、副處長、處長、一級調研員等職務。陳先生畢業於復旦大學，獲理學碩士學位。



熊承艷女士，45歲，於二零二四年三月二十八日獲委任為本公司非執行董事。熊女士於金融及會計領域擁有近二十年工作經驗。於加入本公司之前，熊女士曾任上海市國有資產監督管理委員會預算處副主任科員、主任科員，之後於華虹集團旗下公司擔任多個部門副主管及部門主管職位。熊女士現為華虹集團資金財務部總監，並於華虹集團多間子公司擔任董事或監事職務。熊女士畢業於上海財經大學，獲管理學碩士學位。熊女士亦為高級會計師及中國註冊會計師(非執業)。

董事及高級管理層



張素心先生，於二零二四年十二月三十一日辭任本公司主席、執行董事及提名委員會主席。



周利民先生，於二零二五年三月七日辭任本公司非執行董事。

董事及高級管理層



張祖同先生，76歲，為本公司獨立非執行董事及華虹宏力董事。張先生曾為香港執業會計師，並自一九七八年至二零零三年底為香港會計師公會會員，自一九八三年一月起為英格蘭及威爾士特許會計師公會資深會員，在會計、核數及財務管理方面具有豐富經驗。張先生自一九七六年起於安永會計師事務所擔任多個職位，並於一九八九年成為安永會計師事務所管理委員會成員。他積極參與制定和監督公司內部控制和風險管理政策和程序。他亦曾擔任安永審計和諮詢業務服務的主席四年。之後，他被晉升為專業服務部門的管理合夥人。於二零零三年退休前，張先生為安永會計師事務所合夥人暨中國及香港區主席。張先生為上海復旦大學教育發展基金會及復旦大學教育發展基金會(海外)投資委員會成員。張先生亦為中國國際貿易中心股份有限公司(股票代碼：600007.SH)的獨立非執行董事。張先生曾任中國信達資產管理股份有限公司(股票代碼：1359.HK)、嘉里建設有限公司(股票代碼：683.HK)以及中國人壽保險股份有限公司(股票代碼：2628.HK)的獨立非執行董事。張先生畢業於倫敦大學，獲食品科學及化學理學學士學位。



王桂壘先生，73歲，銀紫荊星章、銅紫荊星章獲得者，太平紳士，為本公司獨立非執行董事及華虹宏力董事。王先生曾於兩所國際律師事務所擔任中國主理合夥人達十五年。在此之前，王先生曾任職於香港特區政府的地政總署、律政司及立法會共達十年。王先生於二零一一年至二零一八年間分別獲委任為香港機場管理局、醫院管理局及競爭事務委員會的成員。王先生為前任香港國際仲裁中心主席，香港律師會及環太平洋律師協會前會長，以及香港版權審裁處前主席。王先生現時為香港稅務上訴委員會主席，維達國際控股有限公司(股票代碼：3331.HK)、新創建集團有限公司(股票代碼：659.HK)的獨立非執行董事；王桂壘先生曾任香港按揭證券有限公司董事及中海油田服務股份有限公司的獨立非執行董事；並於香港大學、香港中文大學、香港城市大學、香港浸會大學及香港樹仁大學擔任名譽講師、校外評核委員、諮議委員及教授。王先生持有香港中文大學文學學士學位及倫敦大學法律學士學位。

董事及高級管理層



封松林先生，60歲，自二零二四年三月二十八日起擔任本公司的獨立非執行董事及華虹宏力董事。彼於集成電路及半導體等科學技術領域擁有超過32年的學術研究經驗。彼於一九九二年二月至二零零零年十二月歷任中國科學院半導體研究所副研究員、研究員、副主任、主任、所長助理及所長。二零零一年一月至二零一零年八月，彼歷任中國科學院上海微系統與信息技術研究所研究員、副所長及所長。二零零九年三月至二零一七年五月，彼歷任中國科學院上海高等研究院研究員、籌備工作組組長及院長，其後擔任該院研究員，於二零二四年五月退休。封先生為雲賽智聯股份有限公司（一間於上海證券交易所上市的公司（股票代碼：600602））及上海兆芯集成電路股份有限公司的獨立董事。此外，封先生為上海中研宏領信息科技有限公司、嘉興中科無線傳感網科技有限公司及上海增維安信科技發展有限公司的董事。封先生畢業於武漢大學，獲得半導體物理系學士學位，並在巴黎第七大學獲得碩士及博士學位。



葉龍蜚先生，於二零二四年三月二十八日辭任本公司獨立非執行董事、審核委員會、提名委員會及薪酬委員會成員。

董事及高級管理層



王鼎先生，62歲，於二零一二年二月起獲委任為公司董事會秘書。王先生亦擔任本公司、華虹宏力、華虹無錫及華虹製造的執行副總裁，負責財務、資訊技術、行政與合規、董辦及外籍人事。王先生於二零零一年四月加入上海宏力半導體製造有限公司，並在其成長發展的各個階段起到了核心領導作用。他的職責包括主導合併的籌備與實施，以及本公司成功在香港聯合證券交易所和上海證券交易所科創板上市。在加入上海宏力半導體製造有限公司之前，王先生於一九九五年八月至二零零一年三月在美國加利福尼亞矽谷聖荷西的LSI Logic Corporation擔任寬帶娛樂部的部門總監。於加入LSI Logic Corporation之前，王先生任職於美國Franklin Templeton Investments。王先生畢業於美國加州大學伯克利分校工程學院，獲工業工程及營運研究學士學位；後於美國舊金山大學獲工商管理碩士學位，主修財務及銀行專業。王先生在國際權威財經雜誌Institutional Investor《機構投資者》所發佈的「亞洲(除日本外)執行團隊榜單」中多次榮獲科技／半導體行業最佳首席財務官。

董事及高級管理層

高級管理層

截至本報告日期的高級管理層成員列示如下：

唐均君先生，60歲，為本公司主席兼執行董事。有關唐先生履歷及學術背景的更多資料，請參閱「董事及高級管理層 – 董事會」一節。

白鵬博士，62歲，為本公司總裁兼執行董事。有關白先生履歷及學術背景的更多資料，請參閱「董事及高級管理層 – 董事會」一節。



周衛平先生，57歲，為本公司、華虹宏力、華虹無錫及華虹製造執行副總裁，負責市場銷售，在中國集成電路行業有超過35年的工作經驗。周先生於二零一八年初加入本公司。此前，周先生曾任上海貝嶺股份有限公司執行副總裁；寧波杉杉尤利卡太陽能科技發展有限公司總經理；上海貝嶺微電子製造有限公司總經理；上海先進半導體製造股份有限公司黨委副書記、總裁、首席執行官，黨委書記、副總裁等職務。周先生畢業於華東師範大學，獲固態電子技術專業學士學位；後於復旦大學獲工商管理碩士學位；教授級高級工程師職稱。

董事及高級管理層



王鼎先生，62歲，為本公司、華虹宏力、華虹無錫及華虹製造執行副總裁，負責財務、信息科技、行政與合規、董辦及外籍人事。有關王先生履歷及學術背景的更多資料，請參閱「董事及高級管理層 – 董事會」一節。



華光平先生，57歲，為本公司、華虹宏力、華虹無錫及華虹製造執行副總裁，負責技術研發與設計服務工作。華先生擁有進30年半導體行業經驗。此前，先後效力於清華大學微電子所、新加坡特許半導體製造有限公司、上海先進半導體製造股份有限公司、上海華虹NEC電子有限公司。華先生畢業於清華大學，獲微電子工學碩士學位；助理研究員職稱。

董事及高級管理層

公司秘書



李瑞霞女士，47歲，自二零一九年十一月起擔任本公司公司秘書。李女士目前為君合律師事務所合夥人。彼於一般收購合併及企業融資交易領域上(如協助企業股份於香港聯交所上市、併購、資本重組及香港聯交所上市規則相關合規及監管事務)擁有約16年的經驗。李女士於二零零五年取得香港高等法院律師資格。李女士畢業於香港城市大學，獲法學學士學位，後於英國倫敦大學學院取得法學碩士學位。

企業管治報告

董事會欣然匯報截至二零二四年十二月三十一日止年度的企業管治報告。

企業管治常規

本公司致力於提倡良好企業管治，並已就企業管治制定程序，該等程序符合上市規則附錄C1所載的企業管治守則（「該守則」）。

本公司深諳完善的企業管治常規的重要性，並認識到監管環境的變化多端。因此，從實行守則及評估其常規的有效性到回應監管環境的持續發展，本公司持續監控及更新其企業管治常規。

遵守守則條文

截至二零二四年十二月三十一日止年度，本公司一直遵守該守則。

董事的證券交易

本公司已採納上市規則附錄C3所載的上市發行人董事進行證券交易的標準守則（「標準守則」）作為本公司關於董事進行證券交易的守則。本公司已向所有董事作特定查詢，每位董事均已確認其於截至二零二四年十二月三十一日止年度全年遵守當中所載的必守標準。

董事會

董事會總體上負責本公司的業務及事務管理，並對轉授予主席及管理層負責的本公司日常管理承擔最終責任。

董事會現時共有九名董事，當中包括兩名執行董事唐均君先生（主席）（於二零二四年十二月三十一日獲委任為主席）及白鵬博士（總裁）（於二零二五年一月一日獲委任），四名非執行董事葉峻先生、孫國棟先生、陳博先生（於二零二五年三月七日獲委任）及熊承艷女士（於二零二四年三月二十八日獲委任）以及三名獨立非執行董事張祖同先生、王桂壘先生，太平紳士及封松林先生（於二零二四年三月二十八日獲委任）。張素心先生、周利民先生及葉龍蜚先生分別於二零二四年十二月三十一日、二零二五年三月七日及二零二四年三月二十八日辭任執行董事、非執行董事及獨立非執行董事。有關各董事的更多詳情在本年度報告第158頁披露。本公司已於本公司網頁及香港聯交所網頁刊載經更新的董事名單，列明其角色和職能。

本公司各非執行董事皆以三年的特定任期委任，除非根據相關委任書或董事服務合約上的條款及條件被終止委任，彼等須於股東大會上接受本公司重新提名及重選。

企業管治報告

於本年度，董事會定期舉行會議。全體董事皆有機會提出商討事項列入董事會定期會議議程。全體董事皆可直接接觸公司秘書，確保董事會議事程序及規則及規例均獲得遵守。董事會會議的完整會議記錄由公司秘書保管，並應在獲得合理通知時，公開有關會議記錄以供查閱。如有需要，各董事可尋求獨立專業意見以履行其責任，費用由本公司支付。

董事會負責制定本集團的策略性方向及政策，並監督管理層。董事會保留的部份職能包括(但不限於)監察及批准重大交易、涉及本公司主要股東或董事利益衝突的事宜、批准季度、中期及全年業績、向公眾或監管機構進行其他披露及內部監控系統，另與前述事項相關的決定亦須由董事會決定。董事會並無具體保留、本公司日常運作所需的事宜則轉授予管理層，管理層由相應董事監督並由主席領導。

本公司已實施多項機制，確保董事會可獲得獨立的觀點和意見：

- **董事會的組成：**截至二零二四年十二月三十一日止年度，董事會無論何時均遵守上市規則第3.10及3.10A條。本公司有三名獨立非執行董事，佔董事會成員三分之一以上。至少一名獨立非執行董事具備適當專業資格或具備適當的會計或相關財務管理專長。
- **獨立性評估：**各獨立非執行董事已根據上市規則第3.13條作出年度獨立性確認書。本公司認為，全體獨立非執行董事根據上市規則第3.13條所載指引屬獨立人士。
- **董事會決策：**倘董事於任何交易、合約或安排中擁有重大權益，則其不可就通過相同事宜的任何董事會決議進行表決，亦不應被計入法定人數。倘主要股東或董事於董事會審議的事宜中擁有利益衝突，且董事會已確定該利益衝突屬重大時，應召開董事會會議而非通過書面決議處理該事宜。
- **主席與獨立非執行董事之間的溝通：**董事會主席高度重視與獨立非執行董事之間的溝通，每年至少與其舉行一次沒有其他董事出席的會議。
- **獨立非執行董事的薪酬：**獨立非執行董事就其董事會及董事會委員會成員的職位收取固定費用。不授予獨立非執行董事與業績掛鈎的股權報酬，以避免其決策時出現潛在偏見或損害其客觀性及獨立性。
- **董事會評估：**董事會評估及審議各獨立非執行董事投入的時間以及董事會及董事會委員會會議參與情況，以確保每名獨立非執行董事於董事會投入足夠時間，履行其作為本公司董事的職責。

每年會對上述機制的執行情況及有效性進行審閱。董事會認為，該等機制於截至二零二四年十二月三十一日止年度得到妥善有效執行。

企業管治報告

主席與總裁的角色已予區分。主席負責本公司整體管理及運營，並建議及檢討本公司的企業方向及策略。主席負責制定商業策略，領導董事會，確保董事會有效地運作，包括董事會及時就所有適當事項進行討論。主席確保董事會會議所審議的事項均已向所有董事妥善簡報，而全體董事所收到的資訊亦充分、完備及可靠。董事會主席高度重視與獨立非執行董事的溝通，並在沒有其他董事出席的情況下每年與其舉行至少一次會議。

總裁負責本公司的業務與營運的日常管理並實施本公司的業務策略。

董事和高級人員的責任保險

本公司已為本公司及其子公司的全體董事和高級人員安排適當的保險，以就因本公司的企業行動而可能面對的法律訴訟給予保障。

董事會的運作

截至二零二四年十二月三十一日止年度，董事會曾舉行6次董事會會議。董事會各成員出席董事會會議、審核委員會會議、提名委員會會議及薪酬委員會會議以及股東週年／特別大會的記錄如下：

	董事會會議	審核委員會會議	提名委員會會議	薪酬委員會會議	股東週年大會	股東特別大會
執行董事						
張素心 ^(附註)	6	不適用	3	不適用	1	不適用
唐均君 ^(附註)	6	不適用	0	不適用	1	不適用
白鵬 ^(附註)	—	—	—	—	—	—
非執行董事						
葉峻	6	2	不適用	1	1	不適用
孫國棟	6	不適用	不適用	不適用	1	不適用
周利民 ^(附註)	6	不適用	不適用	不適用	1	不適用
熊承艷 ^(附註)	4	4	不適用	不適用	1	不適用
陳博 ^(附註)	—	—	—	—	—	—
獨立非執行董事						
張祖同	6	6	不適用	不適用	1	不適用
王桂壘，太平紳士	6	不適用	3	3	1	不適用
封松林 ^(附註)	4	4	1	1	1	不適用
葉龍蜚 ^(附註)	2	2	2	2	—	不適用

附註：白鵬於二零二五年一月一日起獲委任為總裁兼執行董事，陳博於二零二五年三月七日起獲委任為非執行董事，熊承艷於二零二四年三月二十八日起獲委任為非執行董事及審核委員會成員，封松林於二零二四年三月二十八日起獲委任為獨立非執行董事、審核委員會成員、提名委員會成員及薪酬委員會成員。白鵬、陳博、熊承艷及封松林均已獲得上市規則第3.09D條所述的法律意見，而彼等各自己已確認彼等了解其作為上市發行人董事的責任。

唐均君於二零二四年十二月三十一日起獲委任為主席兼執行董事及提名委員會成員，張素心於二零二四年十二月三十一日起辭任執行董事、主席及提名委員會主席，周利民於二零二五年三月七日起辭任非執行董事，葉龍蜚於二零二四年三月二十八日起辭任獨立非執行董事、審核委員會成員、提名委員會成員及薪酬委員會成員。

企業管治報告

董事會亦傳閱書面決議案，取得董事會相關成員批准，以代替有形的會議。惟若有主要股東或董事在事項中存有董事會認為重大的利益衝突，有關事項則以舉行董事會會議(而非書面決議案)方式處理，以遵守該守則第C.5.7條。

董事會認為各董事的出席記錄令人滿意，每位董事皆付出足夠時間來履行其董事職責。

持續專業發展

董事應跟進其作為本公司董事的責任，並跟進本公司的行為、業務活動及發展。

根據守則條文第C.1.4條，董事應參與適當的持續專業發展計劃，以建立並更新其知識及技能，確保其對董事會的貢獻是有根據及相關。截至二零二四年十二月三十一日止年度，全體董事獲及時提供有關本公司表現、財務狀況、前景的最新資料以及適用於本集團的法律及法規新的或顯著變化的材料，以便董事會整體及各董事單獨履行其職責。各董事將於下一個財政年度獲安排參與內部舉辦的簡報會，以及在適當時間獲發放相關議題的閱讀資料。本公司鼓勵所有董事參與相關培訓課程，課程費用由本公司負責。

截至二零二四年十二月三十一日止年度及本報告日期，各董事所參與之持續專業發展載列如下：

董事姓名	閱讀有關規則及相關材料及／或出席培訓
唐均君(主席)	✓
白鵬(總裁)	✓
葉峻	✓
孫國棟	✓
陳博	✓
熊承艷	✓
張祖同	✓
王桂壘，太平紳士	✓
封松林	✓
張素心	✓
周利民	✓
葉龍蜚	✓

企業管治報告

薪酬委員會

薪酬委員會現時成員包括三名獨立非執行董事王桂壠先生，太平紳士、封松林先生(於二零二四年三月二十八日獲委任)及一名非執行董事葉峻先生(於二零二四年三月二十八日獲委任)。葉龍蜚先生於二零二四年三月二十八日辭任薪酬委員會成員。薪酬委員會主席為王桂壠先生，太平紳士。各成員在釐定公眾公司行政人員薪酬上經驗豐富，並具備適當之技能。董事會認為，委員會成員於處理委員會事務時均能作出獨立判斷。薪酬委員會的角色及功能包括為所有執行董事及高級管理層制定特定薪酬待遇，包括實物利益、退休金權利及報酬，並就非執行董事的薪酬待遇，向董事會提出建議。薪酬委員會應考慮同類公司支付的薪酬及集團內其他職位的僱用條件等因素，以及與工作表現掛鈎的薪酬安排的可取性。薪酬委員會已在本公司網站及香港聯交所網站上公開其職權範圍。薪酬委員會每年最少須舉行一次會議。

截至二零二四年十二月三十一日止年度，薪酬委員會召開了三次會議，討論了根據本公司購股權計劃已授出的若干購股權的歸屬情況，並決議通過了向董事會提交有關該等購股權的歸屬安排建議，及各位新任董事會成員的薪酬方案。

各董事的薪酬詳情已列於財務報表附註8。

提名委員會

提名委員會現時成員包括一名執行董事唐均君先生(於二零二四年十二月三十一日獲委任)及兩名獨立非執行董事王桂壠先生，太平紳士及封松林先生(於二零二四年三月二十八日獲委任)。張素心先生於二零二四年十二月三十一日，葉龍蜚先生於二零二四年三月二十八日辭任提名委員會成員。提名委員會主席為唐均君先生。各成員在釐定董事會董事提名上經驗豐富，並具備適當之技能。本公司已為提名委員會提供充足資源以履行其職責。提名委員會或會尋求獨立專業意見以履行其職責，費用由本公司承擔。提名委員會的角色及功能包括檢討董事會的架構、人數及組成，並就任何為補足本公司的公司策略而擬對董事會作出的任何建議變動提出建議；並遵從董事會成員多元化政策，物色具備合適資格可擔任董事的人士，並挑選提名董事人選或就此向董事會提供意見；評估獨立非執行董事的獨立性；就董事委任或重新委任以及董事(尤其是主席及總裁)繼任計劃向董事會提出建議，並監察落實董事會成員多元化政策的情況及適當檢討有關政策，以確保政策有效。提名委員會已書面訂明提名委員會的具體職權範圍，清楚說明其職權和責任。提名委員會已在本公司網站及香港聯交所網站上公開其職權範圍。提名委員會每年最少須舉行一次會議。

截至二零二四年十二月三十一日止年度，提名委員會召開了三次會議，向董事會推薦各位新董事委任，討論了本公司的薪酬政策及本公司薪酬水平的競爭力等議題。

根據本公司的細則，任何獲委任為董事以填補董事會臨時空缺的人士應留任至本公司下次股東週年大會為止，屆時將符合資格於相關股東大會上膺選連任，而任何獲委任為現有董事會新增成員的董事則應留任至本公司下屆股東週年大會為止，屆時將符合資格於相關股東大會上膺選連任。各董事最少每三年輪席退任一次，屆時應按細則規定膺選連任。細則亦允許以普通決議案罷免董事。

企業管治報告

審核委員會

審核委員會中，最少一名成員具備上市規則所要求的適當專業資格，或具備適當的會計或相關的財務管理專長。審核委員會並無成員於緊接各自委任日期前一年內擔任本公司現任外聘核數師的前任合夥人。所有成員皆具備適當的能力和經驗去審閱財務報表，以及解決本公司的重大監控及財務問題。董事會期望審核委員會成員能作出獨立判斷，並將企業管治功能的責任轉授予審核委員會，以遵守該守則的要求。

審核委員會現時成員包括一名非執行董事熊承艷女士(於二零二四年三月二十八日獲委任)及兩名獨立非執行董事張祖同先生及封松林先生(於二零二四年三月二十八日獲委任)。葉龍蜚先生於二零二四年三月二十八日辭任審核委員會成員。葉峻先生於二零二四年三月二十八日調任薪酬委員會成員後不再為審核委員會成員。審核委員會主席為張祖同先生。審核委員會的主要職責包括檢討本公司的財務報告系統、審計的性質及範疇，以及內部監控與風險管理系統是否有效。審核委員會同時負責就外聘核數師的委任、重新委任及罷免提供建議，以及檢討及監察外聘核數師是否獨立客觀。另外，審核委員會會就任何因外聘核數師及監管機構所引起的事宜進行討論，以確保適當的建議已予落實。審核委員會已在本公司網站及香港聯交所網站上公開其職權範圍。審核委員會每年最少須舉行兩次會議。

截至二零二四年十二月三十一日止年度，審核委員會已舉行六次會議，成員均出席會議。審核委員會於截至二零二四年十二月三十一日止年度進行的主要工作包括檢討及建議續聘外聘核數師、批准外聘核數師的聘用條款(包括薪酬)及審核計劃、審查未經審核季度業績公告、審查截至二零二四年六月三十日止六個月的未經審核中期報告及中期業績公告、審查截至二零二四年十二月三十一日止年度的經審核財務報表及末期業績公告、檢討本集團審計部門的工作及評估本集團風險管理及內部控制系統的有效性。審核委員會亦與管理層進行討論，以確保本公司會計及財務匯報職能方面之資源、員工資歷及經驗、培訓課程及預算之足夠性。

核數師的薪酬

截至二零二四年十二月三十一日止年度，就向本公司提供的核數服務及與核數無關的服務已付或應付本公司核數師安永會計師事務所的薪酬分別為73萬美元及1萬美元。與核數無關的服務主要包括稅務諮詢和風險管理諮詢服務。

企業管治報告

董事會成員多元化

董事會採納董事會成員多元化政策(該「政策」)，以遵守上市規則第13.92條。

本公司視董事會層面日益多元化為維持其競爭優勢的關鍵元素。本公司在設定董事會成員組合時，將從多個方面考慮董事會成員多元化，包括但不限於天賦、技能、地區及行業經驗、背景、性別、年齡及董事會成員的其他素質，令董事會上各種天賦、技能、經驗及背景維持適當的範疇及平衡。向董事會建議選擇董事候選人時，提名委員會將按照客觀標準考慮候選人的功績，並充分顧及董事會成員在多元化方面的益處。提名委員會就達致董事會成員多元化的可計量目標，作出討論及達成一致，並向董事會作出建議，由董事會採用。在任何特定時間，董事會可在一個或多個方面改善其多元化，並相應檢討其進展。

董事會認為性別多元化屬董事會多元化的重要元素。在王靖女士於二零二三年九月一日呈辭後，本公司當時並無不同性別的董事，因此於截至二零二四年三月二十八日委任熊承艷女士為非執行董事前，本公司未能滿足上市規則第13.92條所載列規定。委任熊承艷女士為非執行董事後，本公司符合上市規則第13.92條的規定。除性別多元化外，於截至二零二四年十二月三十一日止年度，薪酬委員會認為在相當程度上已達致董事會成員多元化的可計量目標。提名委員會專注董事會成員文化及教育背景、專業及技能專長以及本領，並審閱執行董事及獨立非執行董事之組成，以確保董事會內適當之獨立性。

本公司將繼續在適合併有利於本公司發展的董事會多元化範疇保持平衡性。

員工多元化

於二零二四年十二月三十一日，本集團員工(包括本公司高級管理層)的男女性別比例約為74%：26%。本公司以用人唯才及非歧視為原則進行招聘。董事會信納，本公司的員工已滿足性別多元化。

企業管治職能

董事會負責執行該守則內第A.2.1條所列明的職能。

董事會已檢討本公司的企業管治政策及常規、董事及高級管理人員的培訓及持續專業發展、本公司在遵守法律和監管規定方面的政策及常規、遵守標準守則、以及本公司遵守該守則的情況及在企業管治報告內的披露。

企業管治報告

投資者關係

股東通訊政策

本公司已採納股東通訊政策，該政策需每年進行檢討，以確保其執行情況及有效性。該政策旨在確保股東能夠平等及時地獲取有關本公司的資料，以使股東能夠以知情方式行使其權利，同時積極參與本公司事務。

本公司股東通訊政策的概要載列如下。

本公司透過其向香港聯交所及上海證券交易所提交發佈的財務報告（包括季度、中期及年度報告）、通函、公告等披露資料向股東提供資料。

為進一步推動有效之溝通，本公司設有網站www.huahonggrace.com以刊登本公司業務發展及營運的最新資訊、董事名單及其角色與職能、組織章程文件、董事會及其轄下委員會的職權範圍、提名董事候選人的程序、企業管治常規、財務報告、通函、公告，以及其他資訊。

股東大會是董事會與股東之間的主要溝通渠道。本公司鼓勵股東出席及參與股東大會，以確保高問責水平，以及使其保持對本公司的目標及策略的了解。董事會主席、其他董事會成員及各董事會委員會主席（若主席未能出席，則由委員會其他成員出席）將在場為股東解答任何問題。股東會獲提供大會的充分通知，且載有詳細表決程序的通函將連同大會通告一起寄發予股東。

除上述外，本公司亦透過其微信公眾號發佈通訊。股東可訂閱該帳號以獲取本公司最新資訊。

為促進投資者對本公司業務的了解，本公司為投資者組織路演及現場參觀無塵室及展覽廳。本公司亦參加大量投資論壇並通過各種方式與證券分析師、基金管理公司及個人投資者進行多次交流。

為使本公司徵詢及了解股東及利益相關者的意見，股東及利益相關者可透過投資者關係聯繫人（郵箱：IR@hhgrace.com）向本公司提出問詢。

截至二零二四年十二月三十一日止年度，本公司已對其股東通訊政策的執行情況及有效性進行審閱，包括於股東大會採取的行動、對所接收問詢的處理以及現有的多種溝通渠道。本公司認為該項政策具有有效性且已妥善實施。

企業管治報告

公司秘書

公司秘書李瑞霞女士向董事會負責，以確保董事會程序獲得遵守，董事會活動亦獲有效率地進行。她亦負責確保董事會已全面評估與本公司有關的相應法律、法規及企業管治發展，協助董事的入職及專業發展。

公司秘書向董事會主席及總裁匯報，在本公司與其股東的關係中擔當重要角色，協助董事會向股東履行其責任，以遵守上市規則。

截至二零二四年十二月三十一日止年度期間，李瑞霞女士已出席相關專業講座以更新其技能及知識，並遵守上市規則第3.29條的規定。

股東召開股東特別大會的程序

一名或多名持有本公司繳足股本不少於十分之一的股東可請求董事，或根據香港法例第622章公司條例(「公司條例」)第566至568條提出請求的股東(「請求方」)(視情況而定)可提出召開股東特別大會的請求。請求書須列明召開大會的目的，由請求方簽署，並送至本公司的註冊辦事處。股東召開股東特別大會時須遵守公司條例第580至583條所列明的要求及程序。

於股東大會上提出要求及將股東查詢轉達董事會的程序

股東可於任何時間以書面形式向本公司提出其要求、計劃、查詢及想法，信件抬頭請註明董事會主席或公司秘書，其聯絡地址為：

中國上海張江高科技園區哈雷路288號，郵編：201203

電話：(86) 21 38829909

傳真：(86) 21 50809999

電子郵件：IR@hhgrace.com

企業管治報告

以投票方式表決

根據上市規則第13.39(4)條，股東於股東大會上的任何表決均須以投票方式進行。

風險管理和內部監控

風險管理及內部監控目標

風險管理目標

在合規層面上，本公司依據香港聯交所的《公司管治守則》執行，確保適時符合有關規定。

在營運層面上，本公司管理層深知公司未來發展過程中所面臨的風險。因此，本公司的風險管理目標是要識別、評估這些風險，並採取降低、轉移、規避或接受等風險應對策略管理這些風險。本公司持續開展風險監控體系建設，搭建風險管理險監平台，明確風險管理機制，完善風險地圖，實行年度風險評估，形成滿足該守則監管要求的，符合公司實際情況的簡潔、科學、務實、高效的風險管控模式。

內部控制體系目標

本公司內部控制體系充分吸收COSO(反虛假財務報告委員會的發起人組織委員會)的風險管理框架要求和香港會計師公會關於風險管理的指南，兼顧本公司實際情況和業務特點，將公司風險地圖的三級風險細化下沉到流程層面，形成風險導向的內部控制評價體系，目標是評價內部監控系統的有效性和適用性，為確保本公司經營活動的有效性、其財務報告的可靠性和法律法規的遵循性提供合理保證。

企業管治報告

風險管理及內部監控體系

為保障風險管理工作有效開展並形成長效機制，本公司已建立風險管理「三線模型」的監控體系。它包含下列多個不同層面的角色和責任：

第一線	業務部門
	- 建立與維護本部門風險管理的各項機制； - 於日常工作中持續收集風險原始信息； - 持續開展本部門風險監控與預警工作； - 協助落實公司風險管理工作，包括提供必要的資料與樣本，確定與本部門相關的重大風險，並確定重大風險應對措施；
第二線	業務監督管理部門
	提供補充專業性知識，發揮支持和監督作用，幫助持續實施、改善風險管理工作；對風險管理的準確性和有效性進行分析和報告；
第三線	內部審計條線
	- 對各業務部門和風險管理條線的風險管理工作開展情況進行獨立的監督檢查，評價公司風險管理機制是否有效落實； - 開展年度全面風險評估工作，基於風險評估結果，界定重大風險應對責任主體，組織並指導相關部門制定重大風險應對方案，並對方案的實施進行跟蹤； - 對於審計及風險評估過程中的發現點，督促相關部門或機構進行整改，並持續跟蹤整改情況； - 向公司審核委員會匯報各項審計及風險評估結果。

企業管治報告

風險管理及內部監控聲明

董事會負責本公司的風險管理及內部監控系統，以及確保檢討該系統的有效性。董事會已指派內部審計部門執行內部審計職能，並充分保證其權威性及獨立性。內部審計師已根據經批准的檢查範圍及按企業管治守則內守則條文D.2條款規定，每年通過各審計項目對本公司風險管理及內部監控系統的有效程度進行檢查，並無出現重大缺失。

根據內部審計部門的工作成果，本公司董事會認為，本公司的風險管理及內部監控系統充分、令人信任且有效地運作。但我們也必須承認，公司的風險管理和內部監控架構旨在管理、而非完全消除影響本公司達致業務目標能力的風險，僅可對重大錯誤的陳述或損失提供合理而非絕對的保證。

為根據證券及期貨條例識別、處理及傳播內幕消息，本集團已實施若干程序，包括管理層指定人員進行本公司證券交易須獲得事先批准、告知相關董事及僱員常規禁售期及證券交易限制、通過代號識別項目以及按既定目的及按須知基準傳播信息，以防範本集團內部可能出現的內幕消息處理失誤。

一般資料

董事負責編製本公司每個財政期間的財務報表，使這些財務報表能真實和公平地反映本公司的業務狀況，並符合法定要求及適用會計準則。在編製截至二零二四年十二月三十一日止年度的財務報表時，董事已挑選並貫徹地應用適當的會計政策、作出審慎、公平及合理的判斷及估計，並按持續經營基準編製財務報表。

核數師的財政申報責任聲明載於本年度報告中第299至301頁的獨立核數師報告內。

代表董事會
唐均君先生
主席

董事會報告

董事會謹提呈本公司二零二四年度報告和二零二四年一月一日至二零二四年十二月三十一日經審核的財務報表（「財務報表」）。

主要業務

截止二零二四年底，華虹半導體是一家兼具8英寸與12英寸的純晶圓代工企業，長期專注於開發與應用嵌入式／獨立式非易失性存儲器、功率器件、模擬及電源管理和邏輯及射頻等先進「特色IC + Power Discrete」工藝技術，為客戶提供多元化的特色工藝晶圓製造服務。華虹半導體主要子公司的業務說明請參考財務報表附註1（第310至311頁）。

業務回顧

營收分析

華虹半導體二零二四年度銷售收入約為20.04億美元，較上一年度下降12.3%，全年營收呈現價降量升的局面。在AI領域快速發展及部分消費電子市場逐步回暖的驅動下，全球半導體市場保持溫和增長的態勢。但受國內供給端產能釋放影響，晶圓代工市場競爭日趨激烈，價格承壓。儘管如此，基於對市場長期增長和國內半導體市場本土化替代趨勢的判斷與信心，公司「8英寸+12英寸」戰略取得階段性成績，華虹製造項目已順利建成並投產。同時，依託長期的技術積累與積極的銷售策略，公司全年平均產能利用率接近100%，在全球主要晶圓代工企業中保持領先水平。

按服務劃分營業收入						
	二零二四年 千美元	二零二四年 %	二零二三年 千美元	二零二三年 %	同比變化 千美元	同比變化 %
半導體晶圓	1,900,929	94.9%	2,181,591	95.4%	(280,662)	(12.9)%
其他	103,064	5.1%	104,522	4.6%	(1,458)	(1.4)%
合計	2,003,993	100.0%	2,286,113	100.0%	(282,120)	(12.3)%

- 二零二四年，公司94.9%的營業收入來自半導體晶圓的銷售收入。

按客戶類型劃分營業收入						
	二零二四年 千美元	二零二四年 %	二零二三年 千美元	二零二三年 %	同比變化 千美元	同比變化 %
系統公司和無廠晶片設計公司	1,919,000	95.8%	2,109,482	92.3%	(190,482)	(9.0)%
整合器件製造商(IDMs)	84,993	4.2%	176,631	7.7%	(91,638)	(51.9)%
合計	2,003,993	100.0%	2,286,113	100.0%	(282,120)	(12.3)%

- 公司來自系統公司和無廠晶片設計公司客戶類型的營業收入佔比95.8%。

董事會報告

按區域劃分營業收入

	二零二四年 千美元	二零二四年 %	二零二三年 千美元	二零二三年 %	同比變化 千美元	同比變化 %
中國	1,636,528	81.6%	1,774,178	77.6%	(137,650)	(7.8)%
北美區	187,899	9.4%	204,882	9.0%	(16,983)	(8.3)%
亞洲其他區域	103,410	5.2%	149,087	6.5%	(45,677)	(30.6)%
歐洲區	69,528	3.5%	134,760	5.9%	(65,232)	(48.4)%
日本區	6,628	0.3%	23,206	1.0%	(16,578)	(71.4)%
合計	2,003,993	100.0%	2,286,113	100.0%	(282,120)	(12.3)%

- 二零二四年，公司中國區營業收入佔比達到81.6%。

按技術類型劃分營業收入

	二零二四年 千美元	二零二四年 %	二零二三年 千美元	二零二三年 %	同比變化 千美元	同比變化 %
嵌入式非易失性存儲器(eNVM)	526,122	26.3%	703,148	30.8%	(177,026)	(25.2)%
獨立式非易失性存儲器(sNVM)	130,137	6.5%	116,715	5.1%	13,422	11.5 %
功率器件	623,922	31.0%	902,346	39.4%	(278,424)	(30.9)%
邏輯與射頻	272,201	13.6%	202,483	8.9%	69,718	34.4 %
模擬(Analog)與電源管理(PM)	448,100	22.4%	358,333	15.7%	89,767	25.1 %
其他	3,511	0.2%	3,088	0.1%	423	13.7 %
合計	2,003,993	100.0%	2,286,113	100.0%	(282,120)	(12.3)%

- 二零二四年，模擬與電源管理、邏輯與射頻營業收入增長較好，主要由AI相關需求的快速增長及消費電子領域的復甦驅動。

董事會報告

按工藝節點劃分營業收入						
	二零二四年 千美元	二零二四年 %	二零二三年 千美元	二零二三年 %	同比變化 千美元	同比變化 %
55納米及65納米	438,656	21.9%	291,683	12.8%	146,973	50.4 %
90納米及95納米	389,181	19.4%	386,191	16.9%	2,990	0.8 %
0.11微米及0.13微米	278,597	13.9%	405,911	17.8%	(127,314)	(31.4)%
0.15微米及0.18微米	129,645	6.5%	147,338	6.4%	(17,693)	(12.0)%
0.25微米	16,932	0.8%	24,217	1.1%	(7,285)	(30.1)%
≥0.35微米	750,982	37.5%	1,030,773	45.0%	(279,791)	(27.1)%
合計	2,003,993	100.0%	2,286,113	100.0%	(282,120)	(12.3)%

- 二零二四年，55納米及65納米平台營業收入由於模擬與電源管理等平台的需求而保持較強增長。

按終端市場劃分營業收入						
	二零二四年 千美元	二零二四年 %	二零二三年 千美元	二零二三年 %	同比變化 千美元	同比變化 %
消費電子	1,261,705	63.0%	1,294,251	56.6%	(32,546)	(2.5)%
工業和汽車電子	461,256	23.0%	673,395	29.5%	(212,139)	(31.5)%
通信	251,261	12.5%	256,856	11.2%	(5,595)	(2.2)%
計算	29,771	1.5%	61,611	2.7%	(31,840)	(51.7)%
合計	2,003,993	100.0%	2,286,113	100.0%	(282,120)	(12.3)%

- 二零二四年，消費電子市場需求仍相對平穩，該終端營業收入佔比達63.0%。

董事會報告

產能及產能利用率			
晶圓廠(千片晶圓每月)	二零二四年	二零二三年	同比變化
華虹一廠	65	65	—
華虹二廠	60	60	—
華虹三廠	53	53	—
8英寸晶圓月產能合計	178	178	—
華虹七廠(12英寸晶圓產能)	95	95	—
產能利用率(折合8英寸晶圓)	99.5%	94.3%	5.2%

- 二零二四年度折合8英寸晶圓產能利用率上升5.2個百分點。

付運晶圓			
千片晶圓	二零二四年	二零二三年	同比變化
付運晶圓(折合8英寸晶圓)	4,545	4,103	10.8%

- 二零二四年公司付運晶圓同比上升10.8%。

技術研發

華虹半導體堅持致力於差異化技術的研發、創新和優化，主要聚焦於嵌入式／獨立式非易失性存儲器、功率器件、模擬與電源管理、及邏輯與射頻等特色工藝平台，持續為客戶提供滿足市場需求的產品組合和服務。二零二四年，華虹半導體繼續加快12英寸生產與技術平台建設，先進「特色IC + Power Discrete」產品組合因12英寸工藝平台的擴展而變得更加豐富。

非易失性存儲器平台仍然是公司最主要的收入平台之一，嵌入式閃存技術在智能卡與車規級MCU領域保持領先地位。基於「8英寸+12英寸」平台的產品組合優勢，多個工藝節點閃存工藝生產的全系列MCU芯片量產供貨，助力客戶在汽車電子、高端家電、工控等領域進入本土供應鏈第一梯隊，推動本土供應鏈升級。獨立式閃存平台，進一步提升自主NOR閃存技術與傳統ETOX閃存技術產品性能，得到客戶及終端應用認可，並已在汽車電子領域批量供貨。技術上，48nm NOR Flash攻關成功並實現規模量產，進一步拓展存儲器產品競爭力。

董事會報告

模擬與電源管理平台，二零二四年收入顯著增長，主要得益於AI周邊電源應用和手機領域的需求和穩定投片量，協同頭部客戶深耕手機快充、無線充電芯片等消費市場，並加速向汽車電子滲透。技術上，基於傳統BCD工藝開發「BCD+」組合工藝，在多個工藝節點推進工藝集成方案，全力打造多元化特色工藝平台，服務客戶並提供滿足多種市場應用的單芯片解決方案。

邏輯與射頻平台收入同樣增長迅速，55/40nm特色工藝及RF CMOS工藝大規模量產，65nm RF SOI工藝進入量產階段。應用於高端手機主攝的BSI圖像傳感器芯片在55nm實現大規模量產，該平台技術的研發突破助力公司快速導入業界頭部客戶。

功率器件平台受同業產能釋放，及工業、新能源等終端需求相對疲軟的影響，承受了相當的價格壓力。但公司仍積極推動技術創新，並維持產能利用率的平穩。其中，超級結MOSFET深溝槽結構與高壓IGBT平台持續迭代優化及量產，對標國際領先水平，成為本土供應鏈進步的核心支撐。面對價格競爭加劇的挑戰，公司加速導入工業控制與汽車電子領域的高端產品，新品佔比穩步提升，鞏固市場領先地位。

二零二四年，公司重要的階段性成績莫過於華虹製造項目（華虹九廠）的順利投產。在經過一年半左右的廠房建設、主體結構封頂、潔淨室交付、主要設備搬入及調試驗證工作後，截至二零二四年底，華虹製造產線已開始投片及量產，預計於二零二五年將提供包括40nm工藝節點在內的更豐富的工藝平台產品組合，力爭實現產能的穩定爬坡並帶動收入的穩步提升。

董事會報告

展望

展望二零二五年，預計全球半導體市場將繼續溫和回升，AI持續強勁，中國半導體市場同樣充滿韌性。在全體管理層的帶領下，公司將全方位提升管理及營運效能。研發方面，依託無錫新12英寸產線，大力推進關鍵技術平台的提升，補齊短板，重點突破，豐富產品組合，提高公司核心競爭力。產能方面，二零二五年華虹製造項目進入產能爬坡階段，將逐步釋放更多產能，與華虹無錫項目形成柔性產能配置，更好地滿足客戶需求。營運方面，公司也將進一步提升營運效率，加強成本控制。市場方面，圍繞推動國內生態鏈建設，做大做強國內客戶群體，與海外戰略型客戶促成「China for China」策略的落地。最終為華虹半導體的生態夥伴帶來更好的業績表現，為公司及股東創造價值。

董事會報告

管理層討論及分析

財務表現

	二零二四年 千美元	二零二三年 千美元	變動
銷售收入	2,003,993	2,286,113	(12.3)%
銷售成本	(1,798,865)	(1,799,017)	0.0%
毛利	205,128	487,096	(57.9)%
其他收入及收益	149,072	144,370	3.3%
投資物業的公平值(虧損)/收益	(39)	103	(137.9)%
銷售及分銷費用	(9,628)	(10,189)	(5.5)%
管理費用	(351,276)	(322,868)	8.8 %
其他費用	(33,395)	(33,666)	(0.8)%
財務費用	(97,113)	(100,497)	(3.4)%
分佔聯營公司溢利	3,459	9,230	(62.5)%
稅前(虧損)/溢利	(133,792)	173,579	(177.1)%
所得稅開支	(6,593)	(47,154)	(86.0)%
年內(虧損)/溢利	(140,385)	126,425	(211.0)%
下列人士應佔：			
母公司擁有人	58,108	280,034	(79.2)%
非控股權益	(198,493)	(153,609)	29.2%

銷售收入

銷售收入達20.040億美元，較二零二三年下降12.3%，主要由於平均銷售價格下降所致，部分被付運晶圓數量增加所抵銷。

毛利

毛利為2.051億美元，較二零二三年減少57.9%，主要由於平均銷售價格下降及折舊成本增加所致。

管理費用

管理費用為3.513億美元，較二零二三年增加8.8%，主要由於研發費用增加及新晶圓廠啟動成本增加所致。

分佔聯營公司溢利

分佔聯營公司溢利為350萬美元，較二零二三年減少62.5%，乃由於聯營公司實現溢利減少所致。

所得稅開支

所得稅開支為660萬美元，較二零二三年減少86.0%，主要由於應課稅溢利減少所致。

年內(虧損)/溢利

在上述因素的累計影響下，年內虧損為1.404億美元，而二零二三年的年內溢利為1.264億美元。

董事會報告

財務狀況

	二零二四年 十二月三十一日 千美元	二零二三年 十二月三十一日 千美元	變動
非流動資產			
物業、廠房及設備	5,859,117	3,519,292	66.5 %
投資物業	164,153	166,643	(1.5)%
使用權資產	77,761	78,545	(1.0)%
於聯營公司的投資	139,799	139,099	0.5 %
指定按公平值計入其他全面收益的權益工具	289,311	270,506	7.0 %
其他非流動資產	52,464	199,780	(73.7)%
非流動資產總額	6,582,605	4,373,865	50.5 %
流動資產			
存貨	467,060	449,749	3.8 %
貿易應收款項及應收票據	270,461	278,669	(2.9)%
應收關聯方款項	18,324	11,219	63.3 %
其他流動資產	585,902	212,649	175.5 %
已抵押存款	31,624	32,088	(1.4)%
現金及現金等價物	4,459,132	5,585,181	(20.2)%
流動資產總額	5,832,503	6,569,555	(11.2)%
流動負債			
貿易應付款項	298,372	235,410	26.7 %
計息銀行借款	280,704	193,035	45.4 %
應付關聯方款項	9,125	13,876	(34.2)%
政府補助	57,563	35,017	64.4 %
其他流動負債	916,474	495,049	85.1 %
流動負債總額	1,562,238	972,387	60.7 %
流動資產淨額	4,270,265	5,597,168	(23.7)%
非流動負債			
計息銀行借款	1,917,235	1,906,526	0.6 %
其他非流動負債	29,016	49,963	(41.9)%
非流動負債總額	1,946,251	1,956,489	(0.5)%
資產淨額	8,906,619	8,014,544	11.1%

董事會報告

就二零二三年十二月三十一日至二零二四年十二月三十一日同比變動超過10%的項目的闡釋

物業、廠房及設備

物業、廠房及設備由35.193億美元增至58.591億美元，主要是由於新生產線產能擴張所致。

其他非流動資產

其他非流動資產由1.998億美元減少至5,250萬美元，主要是由於設備預付款項減少所致。

應收關聯方款項

應收關聯方款項由1,120萬美元增至1,183萬美元，主要由於應收若干關聯方的款項增加所致。

其他流動資產

其他流動資產由2.126億美元增至5.859億美元，主要由於增值稅留抵稅額增加所致。

現金及現金等價物

現金及現金等價物由55.852億美元減至44.591億美元，主要由於下文現金流量分析所述之原因。

貿易應付款項

貿易應付款項由2.354億美元增至2.984億美元，主要由於材料採購增加所致。

應付關聯方款項

應付關聯方款項由1,390萬美元減至910萬美元，主要由於一項購買技術應付款於年內支付所致。

政府補助

政府補助由3,500萬美元增至5,760萬美元，主要由於收到政府補助資金增加所致。

其他流動負債

其他流動負債由4.950億美元增至9.165億美元，主要由於資本開支的應付款項增加所致。

計息銀行借款

計息銀行借款總額由20.996億美元增至21.979億美元，主要由於提取銀行借款增加所致。

其他非流動負債

其他非流動負債由5,000萬美元減至2,900萬美元，主要由於遞延稅項負債減少所致。

董事會報告

現金流量

	二零二四年 千美元	二零二三年 千美元	變動
經營活動所得現金流量淨額	459,495	641,695	(28.4)%
投資活動所用現金流量淨額	(2,671,532)	(833,312)	220.6%
融資活動所得現金流量淨額	1,150,125	3,781,746	(69.6)%
現金及現金等價物(減少)/增加淨額	(1,061,912)	3,590,129	(129.6)%
年初現金及現金等價物	5,585,181	2,008,765	178.0 %
外匯匯率變動影響，淨額	(64,137)	(13,713)	367.7 %
年末現金及現金等價物	4,459,132	5,585,181	(20.2)%

經營活動所得現金流量淨額

經營活動所得現金流量淨額為4.595億美元，較二零二三年減少28.4%，主要由於來自客戶的收入減少所致。

投資活動所用現金流量淨額

投資活動所用現金流量淨額為26.715億美元，主要由於資本投資27.798億美元及權益工具投資1,760萬美元，被收到(i)利息收入8,200萬美元，(ii)政府補助4,120萬美元，(iii)出售權益工具260萬美元，及(iv)出售物業、廠房及設備項目10萬美元所抵銷。

融資活動所得現金流量淨額

融資活動所得現金流量淨額為11.501億美元，包括(i)非控股權益注資11.818億美元，(ii)銀行借款所得款項2.893億美元，(iii)政府對利息開支的補助540萬美元，及(iv)購股權行使所得360萬美元，被(i)償還銀行借款1.835億美元，(ii)償付利息1.057億美元，(iii)支付股息3,620萬美元，及(iv)支付租賃付款的本金部分460萬美元所抵銷。

現金及現金等價物

在上述因素的累計影響下，現金及現金等價物由截至二零二三年十二月三十一日的55.852億美元減至截至二零二四年十二月三十一日的44.591億美元。

董事會報告

財務風險

利率風險

我們面臨市場利率變動的風險，主要與本集團浮動利率計息銀行借款有關。我們的政策為運用固定及浮動利率債務組合管理利率風險。

於二零二四年十二月三十一日，倘利率增加／減少100基點，而所有其他變量維持不變，年內稅前溢利將減少／增加2,005.3萬美元，乃主要由於浮動利率銀行借款的利息開支增加／減少所致。

外幣風險

我們面臨交易性貨幣風險，該等風險主要產生自我們於中國內地營運的主要子公司以美元而非以該子公司的功能貨幣人民幣進行的買賣。於年內，我們的銷售額中約18%乃以進行銷售的子公司的功能貨幣以外的貨幣計值，與此同時，銷售成本中61%乃以子公司的功能貨幣計值。

此外，我們面臨來自計息銀行借款的外幣風險，該借款由我們在中國內地經營的子公司持有。於二零二四年十二月三十一日，賬面值為15.023億美元的計息銀行借款以美元計值，而非以子公司的功能貨幣人民幣計值。

於二零二四年十二月三十一日，倘美元對人民幣升值或貶值5%，而所有其他變量維持不變，我們的年內稅前溢利將減少或增加約9,960萬美元。

信貸風險

我們僅與獲認可及信譽良好的第三方及關聯方交易。根據我們的政策，所有擬按信用條款交易的客戶均須通過信用核實程序。此外，由於持續對應收款項結餘進行監控，故我們的壞賬風險並不重大。

我們的金融資產中面臨最大信用風險的項目為：綜合財務狀況表內現金及現金等價物、貿易應收款項及應收票據、計入預付款項、其他應收款項及其他資產的金融資產、應收關聯方款項以及已抵押存款的賬面值。我們並無其他存在重大信用風險的金融資產。

流動資金風險

我們的政策為定期監控現時及預期流動資金需要，以確保維持充裕的現金儲備及從主要金融機構獲得足夠的融資承擔額度，以應對短期及長期流動資金需要。

資本管理

我們資本管理的首要目標為維護持續經營能力及維持良好的資本比率，以支持我們的業務及實現股東價值最大化。

我們根據經濟狀況的變動管理及調整資本架構。為此，我們或會調整派付予股東的股息、向股東返還資本或發行新股。我們不受任何外部施加的資本要求規限。年內，管理資本的目標、政策或程序概無任何變動。

董事會報告

資產負債比率

資產負債比率的詳情載於財務報表附註38。

業績

本集團截至二零二四年十二月三十一日止年度的業績及於該日的事務狀況載於本報告第302至305頁的財務報表。

末期股息

考慮到半導體行業的資本密集性質，結合本集團目前的發展及業務模式，本集團必須保留充足資金以滿足其運營需求，並推動其持續擴大產能、研發創新及提高市場份額，這有利於維持本集團的運營穩定性，並促進其長期發展計劃。因此，董事會不建議派付截至二零二四年十二月三十一日止年度的股息(二零二三年：每股0.165港元)，惟須待股東週年大會批准。

股息政策

本公司決定自二零一五年度起，在本集團實現利潤、經營環境趨勢穩定且無重大投資行為的情況下，於本公司股東同意及合乎法例要求下，將對股東派發股息。計劃連續三年所派股息的平均額將不低於該三年平均可分配淨利潤的30%；其餘部份將用於本集團發展與經營。

有關股息政策仍會不時檢討，不保證會在任何指定期間派付任何特定金額的股息。如董事會建議派付股息，股息形式及金額將視乎董事評估不時影響本集團的因素而定。

可供分派儲備

於二零二四年十二月三十一日，本公司擁有276,812,000美元的可供分派儲備可供分派予股東。

董事會報告

銀行貸款

本集團於二零二四年十二月三十一日的銀行貸款的詳情載於財務報表附註26。

於二零二四年十二月三十一日，本集團若干銀行貸款由本集團資產作抵押。有關進一步詳情，請參閱財務報表附註26。

財務摘要

本集團於過往五個財政年度的已公佈業績及資產以及負債摘要載於第412頁。本摘要並不構成經審核財務報表之一部份。

物業、廠房及設備

本集團旗下物業、廠房及設備和投資物業於截至二零二四年十二月三十一日止年度的添置及其他變動詳情載於財務報表附註13和14。

此外，投資物業詳情載列如下：

位置	用途類別	租期	本集團權益	建築樓面面積 (平方米)
中國上海 浦東新區 張江高科技園區 郭守敬路818號 9幢樓宇的一部份	工業用途	按於二零五一年三月八日屆滿的土地使用權持有	100%	91,563.11

報告期後重大事項

截至本報告日期，本公司無報告期後重大事項。

股本

本公司截至二零二四年十二月三十一日止年度的股本變動詳情載於財務報表附註30。由二零一四年三月三日起按新公司條例(第622章)附表11第37條，這些變動包括自動將股份溢價賬的進賬額列入股本中，為過渡至無面值股份制度的一部份。

董事會報告

購股權計劃

購股權計劃(「購股權計劃」)已經於二零一五年九月一日舉行的本公司股東特別大會批准。購股權計劃的概要如下：

購股權計劃的目的：	購股權計劃的目的是吸引、挽留參與者(定義見下文)及對其提供獎勵，以讓其有機會獲得本公司股份及將其利益與本公司的經營業績及股價表現密切相連，旨在提升本公司價值。
參與者：	購股權計劃參與者(「參與者」)包括(1)本集團任何成員公司的現時執行及非執行董事；或(2)對本集團任何成員公司的經營業績及可持續發展有直接影響的高級管理層以及主要管理及技術人員之人士(視乎購股權計劃列明的任何限制及約束而定)，惟不包括任何獨立非執行董事。
各參與者的最高配額：	倘在任何12個月期間內所配發及因授出及將予授出的全部購股權(「購股權」，包括已行權、已註銷及尚未行使的購股權)獲行使而向參與者配發的股份總數超過本公司當時已發行股本的1%，則不得向該參與者進一步授出購股權。經股東於股東大會上批准，可在任何12個月期間內向任何參與者授予超出1%個人限額的購股權。在授出日期(定義見購股權計劃)，任何持有本公司5%以上附有表決權股份的人員，未經股東於股東大會上批准，不得被授予購股權。
購股權可予行使前須持有的最短期間(如有)：	2年(除非購股權授予通知另有規定)。
申請或接納購股權所應付的款項及須予付款或催繳或就此須支付貸款的期間：	1.00港元乃由各被授予人自建議授出日期起計28日內支付，作為授出購股權的代價。
於二零二四年初及末可供授出的購股權計劃數目及購股權計劃的餘下期限：	購股權計劃有效期間為採納日期起計七(7)年。因此其已於二零二二年九月一日屆滿。自該日起，購股權計劃項下將不再授出購股權且概無授出購股權。
於二零二四年十二月三十一日及本報告日期，購股權計劃項下可供發行的股份總數為19,337,302股及12,382,480股，分別佔已發行股份總數的約1.13%及0.72%(佔上市公司已發行所有股份含A股)。	

董事會報告

根據購股權計劃授出的購股權

於二零一五年九月四日，本公司根據購股權計劃向若干個人授出30,250,000份購股權（「二零一五年購股權」），以認購合共30,250,000股本公司普通股。二零一五年購股權的詳情如下：

授出日期：	二零一五年九月四日
所授出購股權的行使價：	6.912港元
所授出購股權的數目：	30,250,000份（佔本公司截至二零二三年十二月三十一日止已發行股份的1.76%）
購股權的有效期間：	自二零一五年九月四日起至二零二二年九月三日（七(7)年）止（包括首尾兩日）
購股權的歸屬期間：	購股權的三分之一應分別於二零一七年九月四日、二零一八年九月四日及二零一九年九月四日歸屬

每股行使價6.912港元較以下較高者溢價0%：(i)於授出日期香港聯交所每日報價表所報每股收市價6.87港元；(ii)於緊接授出日期前五個交易日香港聯交所每日報價表所報平均每股收市價6.912港元；及(iii)於緊接授出日期前一天香港聯交所每日報價表所報每股收市價6.800港元。

於二零一八年十二月二十四日，本公司根據購股權計劃向若干個人授出34,500,000份購股權（「二零一八年購股權」），以認購合共34,500,000股本公司普通股。二零一八年購股權的詳情如下：

授出日期：	二零一八年十二月二十四日
所授出購股權的行使價：	15.056港元
所授出購股權的數目：	34,500,000份（佔本公司截至二零二三年十二月三十一日止已發行股份的2.01%）
購股權的有效期間：	自二零一八年十二月二十四日起至二零二五年十二月二十三日（七(7)年）止（包括首尾兩日）
購股權的歸屬期間：	就本公司副總裁（及董事）或以上級別的僱員而言，二零一八年購股權的四分之一應分別於二零二零年十二月二十四日、二零二一年十二月二十四日、二零二二年十二月二十四日及二零二三年十二月二十四日歸屬；就本公司其他僱員而言，二零一八年購股權的三分之一應分別於二零二零年十二月二十四日、二零二一年十二月二十四日及二零二二年十二月二十四日歸屬

董事會報告

每股行使價15.056港元為以下各項的較高者：(i)於授出日期香港聯交所每日報價表所報每股收市價14.440港元；(ii)於緊接授出日期前五個營業日香港聯交所每日報價表所報平均每股收市價15.056港元；(iii)於緊接授出日期前一天香港聯交所每日報價表所報每股收市價14.380港元；及(iv)股份的面值。

於二零一九年三月二十九日，本公司根據購股權計劃向一人授出500,000份購股權（「二零一九年三月購股權」），以認購合共500,000股本公司普通股。二零一九年三月購股權的詳情如下：

授出日期：	二零一九年三月二十九日
所授出購股權的行使價：	18.400港元
所授出購股權的數目：	500,000份（佔本公司截至二零二三年十二月三十一日止已發行股份的0.03%）
購股權的有效期間：	自二零一九年三月二十九日至二零二六年三月二十八日（七(7)年）止（包括首尾兩日）
購股權的歸屬期間：	購股權的四分之一將分別於二零二一年十二月二十三日、二零二二年八月十二日、二零二三年八月十一日及二零二四年八月九日歸屬

每股行使價18.400港元為以下各項的較高者：(i)於授出日期香港聯交所每日報價表所報每股收市價18.400港元；(ii)於緊接授出日期前五個營業日香港聯交所每日報價表所報平均每股收市價18.176港元；(iii)於緊接授出日期前一天香港聯交所每日報價表所報每股收市價18.220港元；及(iv)股份的面值。

於二零一九年十二月二十三日，本公司根據購股權計劃向若干個人授出2,482,000份購股權（「二零一九年十二月購股權」），以認購合共2,482,000股本公司普通股。二零一九年十二月購股權的詳情如下：

授出日期：	二零一九年十二月二十三日
所授出購股權的行使價：	17.952港元
所授出購股權的數目：	2,482,000份（佔本公司截至二零二三年十二月三十一日止已發行股份的0.14%）
購股權的有效期間：	自二零一九年十二月二十三日至二零二六年十二月二十二日（七(7)年）止（包括首尾兩日）
購股權的歸屬期間：	就華虹無錫副總裁或以上級別的僱員而言，購股權的四分之一將分別於二零二一年十二月二十三日、二零二二年十二月二十三日、二零二三年十二月二十三日及二零二四年十二月二十三日歸屬；就華虹無錫其他僱員而言，購股權的三分之一將分別於二零二一年十二月二十三日、二零二二年十二月二十三日及二零二三年十二月二十三日歸屬

董事會報告

每股行使價17.952港元為以下各項的較高者：(i)於授出日期香港聯交所每日報價表所報每股收市價17.260港元；(ii)於緊接授出日期前五個營業日香港聯交所每日報價表所報平均每股收市價17.952港元；(iii)於緊接授出日期前一天香港聯交所每日報價表所報每股收市價17.200港元；及(iv)股份的面值。

於二零一九年三月購股權中，500,000份購股權已授予本公司董事，惟須待彼等接納。

購股權於截至二零二四年十二月三十一日止年度的變動詳情如下：

參與者姓名或類別							
購股權數目	董事		已離任董事		其他僱員		總數
	唐均君先生						
於二零一五年九月四日授出	-	988,000	-	29,262,000	-	-	30,250,000
於二零一八年十二月二十四日授出	-	-	680,000	-	33,820,000	-	34,500,000
於二零一九年三月二十九日授出	500,000	-	-	-	-	-	500,000
於二零一九年十二月二十三日授出	-	-	-	-	-	2,482,000	2,482,000
於二零一五年註銷／失效	-	-	-	-130,000	-	-	-130,000
於二零一六年註銷／失效	-	-	-	-1,458,000	-	-	-1,458,000
於二零一七年註銷／失效	-	-	-	-1,353,399	-	-	-1,353,399
於二零一八年註銷／失效	-	-	-	-754,595	-	-	-754,595
於二零一九年註銷／失效	-	-	-600,000	-58,000	-1,035,000	-36,000	-1,729,000
於二零二零年註銷／失效	-	-119,000	-80,000	-	-993,904	-84,000	-1,276,904
於二零二一年註銷／失效	-62,500	-	-	-	-5,751,868	-592,993	-6,407,361
於二零二二年註銷／失效	-	-	-	-	-543,728	-73,983	-617,711
於二零二三年註銷／失效	-	-	-	-	-8,168	-6,900	-15,068
期內行使	-	-	-	-	1,740,046	140,075	1,880,121
期內註銷	-	-	-	-	-	-6,900	-6,900
期內失效	-	-	-	-	-87,758	-116,668	-204,426
於二零二四年一月一日 尚未行使	437,500	-	-	-	19,468,101	1,516,248	21,421,849
於二零二四年十二月三十一日 尚未行使	437,500	-	-	-	17,640,297	1,259,505	19,337,302
購股權之歸屬期	二零一九年 三月二十九日 至二零二六年 三月二十八日	二零一五年 九月四日 至二零二二年 九月三日	二零一八年 十二月二十四日 至二零二五年 十二月二十三日	二零一五年 九月四日 至二零二二年 九月三日	二零一八年 十二月二十四日 至二零二五年 十二月二十三日	二零一九年 十二月二十三日 至二零二六年 十二月二十二日	
購股權之行使期	二零二一年 三月二十九日 至二零二六年 三月二十八日	二零一七年 九月四日 至二零二二年 九月三日	二零二零年 十二月二十四日 至二零二五年 十二月二十三日	二零一七年 九月四日 至二零二二年 九月三日	二零二零年 十二月二十四日 至二零二五年 十二月二十三日	二零二一年 十二月二十三日 至二零二六年 十二月二十二日	
購股權之行使價	18.400港元	6.912港元	15.056港元	6.912港元	15.056港元	17.952港元	
股份於緊接購股權獲行使日期 之前的加權平均收市價					20.67港元	22.56港元	

除上文披露者外，本公司於截至二零二四年十二月三十一日止年度並未採納任何其他購股權計劃。

董事會報告

儲備

本集團截至二零二四年十二月三十一日止年度的儲備變動詳情載於本報告第306至307頁之綜合權益變動表。

證券發行與上市

股票及其衍生證券的種類	發行價格	發行數量	上市日期	截至報告期末獲准上市交易數量
普通股	人民幣52.00元	407,750,000股	2023年8月7日	391,440,000股(無限售條件的流通股); 16,310,000股(有限售條件的流通股)

為了提高公司的綜合競爭力，增強公司的持續發展能力，於二零二二年六月二十七日，本公司召開股東特別大會，審議通過向上交所申請首次公開發行人民幣普通股股票(「人民幣股份」)不超過43,373萬股，並於上海證券交易所科創板上市的議案。董事會認為，公司本次發行上市符合國家有關產業政策和公司發展戰略，有助於進一步擴大產能規模，增強研發實力，豐富工藝平台，以更好地滿足市場需求、提升公司在晶圓代工行業的市場地位和核心競爭力。

於二零二三年八月七日，本公司在上海證券交易所科創板掛牌上市，證券簡稱「華虹公司」，證券代碼「688347」。

通過在上海證券交易所科創板進行人民幣股份發行，本公司407,750,000股普通股已被認購，認購人包括符合資格的網下投資者及已於上海證券交易所開立賬戶並符合條件的自然人、法人、其他機構投資者(中國法律、法規及監管文件禁止購買者除外)或符合中國證券監督管理委員會、上海證券交易所相關資格規定的其他目標認購人。

董事會報告

本次發行募集資金總額為人民幣21,203,000,000元，扣除發行費用(包括承銷、保薦費用和其他發行費用)後，募集資金淨額為人民幣20,920,677,000元，每股普通股的發行價為人民幣52.00元(於本公司公告人民幣股份發行條款當天(即二零二三年八月四日)，本公司股份於香港聯交所的收市價為港幣26.35元)。募集資金到賬後，已全部存放於經公司董事會批准開設的募集資金專項賬戶內。截至二零二三年十二月三十一日，所得款項淨額約人民幣1,944,328,349元已動用，因此約人民幣18,976,348,611元結轉至報告期初。募集所得款項是按照先前披露的所得款項計劃用途來使用的，詳情如下：

單位：人民幣元

先前披露的所得款項計劃用途	承諾投資金額	報告期末未動用 所得款項累計	未動用所得款項 預計使用時間
華虹製造(無錫)項目	12,500,000,000.00	160,279,362.29	2025年底前
8英寸廠優化升級項目	2,000,000,000.00	1,736,605,414.57	2025年底前
特色工藝技術創新研發項目	2,500,000,000.00	1,938,773,902.26	2026年底前
補充流動資金	1,000,000,000.00	—	不適用

董事會報告

持續關連交易

本集團已於二零一四年十月三日發佈的招股章程中披露有關與(其中包括)華力微、華虹置業及華錦物業管理之間的持續關連交易。具體交易詳情概要載於下表。本公司已申請並獲香港聯交所豁免(其中包括)就有關交易嚴格遵守公告及獨立股東批准之規定(視情況而定)。本集團持續關連交易以及二零二四年期間執行的其他持續關聯交易詳情載列如下：

交易	交易日期	交易雙方	關連關係	交易	二零二四年 實際交易金額	二零二四年 建議年度上限
(1)	二零二四年一月一日	華虹集團(作為買方) 本公司(作為賣方)	華虹集團為本公司的主要股東。 虹日及華虹摯芯分別由華虹集團擁有51%及93.02%。	本公司根據華虹集團框架協議向華虹集團、其子公司及聯營公司(包括虹日及華虹摯芯)銷售半導體產品。	20,441,000美元	29,320,000美元
(2)	二零二四年一月一日	華虹集團(作為賣方) 本公司(作為買方)	華虹集團為本公司的主要股東。 虹日及華虹摯芯分別由華虹集團擁有51%及93.02%。	本公司根據華虹集團框架協議自華虹集團、其子公司及聯營公司(包括虹日及華虹摯芯)購買晶圓及化學品。	39,531,000美元	40,425,000美元

董事會報告

交易	交易日期	交易雙方	關連關係	交易	二零二四年 實際交易金額	二零二四年 建議年度上限
(3)	二零二四年一月一日	華虹宏力(作為服務提供方) 華虹無錫(作為服務接收方)	華虹無錫為非全資子公司,並由國家集成電路產業基金持有約20.58%。 由於國家集成電路產業基金於2024年6月27日起不再是本公司主要股東,因此,華虹無錫自當天起不再是本公司的關連附屬公司。	華虹宏力(作為服務提供方)與華虹無錫(作為服務接收方)訂立的服務協議,內容有關華虹宏力向華虹無錫提供公司服務。	人民幣69,912,007元 (約9,842,000美元) ⁽¹⁾	人民幣140,000,000元 (約19,620,000美元)
(4)	二零二四年一月一日	華虹宏力(作為服務接收方) 華虹無錫(作為服務提供方)	華虹無錫為非全資子公司,並由國家集成電路產業基金持有約20.58%。由於國家集成電路產業基金於2024年6月27日起不再是本公司主要股東,因此,華虹無錫自當天起不再是本公司的關連附屬公司。	華虹宏力(作為服務接收方)與華虹無錫(作為服務提供方)訂立的服務協議,內容有關提供化學品配售服務。	63,000美元 ⁽¹⁾	2,550,000美元
(5)	二零二四年一月一日	華虹製造(作為服務接收方) 華虹無錫(作為服務提供方)	華虹無錫為非全資子公司,並由國家集成電路產業基金持有約20.58%。由於國家集成電路產業基金於2024年6月27日起不再是本公司主要股東,因此,華虹無錫自當天起不再是本公司的關連附屬公司。	華虹製造(作為服務接收方)與華虹無錫(作為服務提供方)訂立的服務協議,內容有關華虹無錫向華虹製造提供合營內部服務。	人民幣59,974,191元 (約8,443,000美元) ⁽¹⁾	人民幣120,000,000元 (約16,817,000美元)
(6)	二零二四年一月一日	華虹製造(作為服務接收方) 華虹無錫(作為服務提供方)	華虹無錫為非全資子公司,並由國家集成電路產業基金持有約20.58%。由於國家集成電路產業基金於2024年6月27日起不再是本公司主要股東,因此,華虹無錫自當天起不再是本公司的關連附屬公司。	華虹製造(作為服務接收方)與華虹無錫(作為服務提供方)訂立的服務協議,內容有關華虹無錫向華虹製造新員工提供員工委託培養。	人民幣7,100,000元 (約999,000美元) ⁽¹⁾	人民幣7,150,000元 (約1,002,000美元)

董事會報告

交易	交易日期	交易雙方	關連關係	交易	二零二四年 實際交易金額	二零二四年 建議年度上限
(7)	二零一零年二月二十五日(連同日期為二零一一年六月十日及二零一四年七月二十五日的補充協議)	華力微(作為承租人) 本公司(作為出租人)	華力微由本公司主要股東華虹集團擁有53.85%。	華力微(作為承租人)與本公司(作為出租人)訂立的租賃協議,內容有關本公司將位於中國上海浦東新區張江高科技園區13街坊2丘晶圓廠的物業出租予華力微,供其設置300mm晶圓生產線。總出租建築面積為96,048.2平方米。	人民幣98,801,000元 (約13,892,000美元)	人民幣103,000,000元 (約14,435,000美元)
(8)	二零二四年一月一日	華力微(作為承租人) 華虹宏力(作為出租人)	華力微由本公司主要股東華虹集團擁有53.85%。	華力微(作為承租人)與華虹宏力(作為出租人)訂立的租賃協議,內容有關華虹宏力將位於其廠房內的若干清潔室出租予華力微。總出租建築面積為192平方米。	人民幣1,402,000元 (約197,000美元)	人民幣5,316,000元 (約745,000美元)
(9)	二零一三年一月十日(連同日期為二零一四年六月十日的補充協議)	華虹置業(作為出租人) 本公司(作為承租人)	華虹置業為華虹科技發展的全資子公司,華虹科技發展為由本公司主要股東華虹集團持有50%並與其綜合入賬及由本公司全資子公司華虹宏力持有50%的公司。	華虹置業(作為出租人)與本公司(作為承租人)訂立的租賃協議,內容有關本公司向華虹置業租賃位於中國上海浦東新區錦綉東路2777弄華虹創新園的宿舍物業(「宿舍物業」)以用作本公司僱員的員工宿舍。租賃總建築面積為17,412.87平方米。	人民幣11,504,000元 (約1,617,000美元) ⁽²⁾	人民幣12,700,000元 (約1,780,000美元)

董事會報告

交易	交易日期	交易雙方	關連關係	交易	二零二四年 實際交易金額	二零二四年 建議年度上限
(10)	二零二四年一月一日	華錦物業管理(作為物業管理公司) 本公司(作為承租人)	華錦物業管理為華虹科技發展的全資子公司,華虹科技發展為由本公司主要股東華虹集團持有50%並與其綜合入賬及由本公司全資子公司華虹宏力持有50%的公司。	華錦物業管理(作為物業管理公司)與本公司(作為承租人)訂立的物業管理協議,內容有關本集團委聘華錦物業管理就宿舍物業提供物業管理服務。	人民幣3,933,000元 (約553,000美元)	人民幣5,700,000元 (約799,000美元)
(11)	二零二三年一月一日	華虹置業(作為出租人) 華虹宏力(作為承租人)	華虹置業為華虹科技發展的全資子公司,華虹科技發展為由本公司主要股東華虹集團持有50%並與其綜合入賬及由本公司全資子公司華虹宏力持有50%的公司。	華虹置業(作為出租人)與華虹宏力(作為承租人)訂立的租賃協議,內容有關本公司向華虹置業租賃位於中國上海浦東新區錦綉東路2777弄華虹創新園的宿舍物業(「新增宿舍物業」)以用作本公司僱員的員工宿舍。租賃總建築面積為9,977.17平方米。	人民幣6,586,000元 (約927,000美元) ⁽⁹⁾	人民幣7,300,000元 (約1,023,000美元)

董事會報告

附註：

- (1) 由於國家集成電路產業基金於2024年6月27日起不再是本公司主要股東，因此，華虹無錫自當天起不再是本公司的關連附屬公司，本集團與華虹無錫之有關交易自當天起不再是上市規則項下的關連交易，上述有關持續關連交易金額的披露僅包含2024年1月1日至2024年6月27日（含首尾兩天）。
- (2) 本集團在採納香港財務報告準則第16號之前就華虹置業的若干宿舍物業訂立一項為期二十年的租約。因此，本集團毋須重新遵守須予公佈或關連交易規則。本集團根據該項租約應付的租金為每年1,617,000美元。於二零二四年十二月三十一日，該等使用權資產及租賃負債的結餘分別為9,694,000美元及12,237,000美元。
- (3) 本集團就華虹置業的宿舍物業訂立另一項租約。本集團根據該項租約應付的租金為每年927,000美元。於二零二四年十二月三十一日，該等使用權資產及租賃負債的結餘分別為6,341,000美元及6,611,000美元。

如上所述持續關連交易的價格及條款乃根據本公司相關公告所載的定價政策及指引釐定。董事會（包括獨立非執行董事）已審閱以上持續關連交易，並確認所訂立之該等交易實則上於二零二四年持續進行：

- (i) 於本公司日常業務過程中進行；
- (ii) 按照一般商務條款進行，或如可供比較的交易不足以判斷該等交易的條款是否為一般商務條款，對本公司而言，該等交易的條款不遜於獨立第三方可取得或提供（視屬何情況而定）的條款；及
- (iii) 根據有關的協議條款進行，而交易條款公平合理，並且符合本公司股東的整體利益。

本公司核數師已致函董事會，認為就上文所述於二零二四年訂立之持續關連交易：

- (i) 核數師並不知悉任何事項使核數師相信，已披露的持續關連交易尚未得到本公司董事會的批准；
- (ii) 就涉及本集團提供商品或服務的交易而言，核數師並不知悉任何事項使核數師相信，這些交易未能在所有重大方面符合本公司的定價政策；
- (iii) 核數師並不知悉任何事項使核數師相信，這些交易的訂立未能在所有重大方面符合關於這些交易的相關協議的規定；及
- (iv) 就各持續關連交易之總額而言，核數師並不知悉任何事項使核數師相信，對於各項已披露的持續關連交易，其交易金額已超過相關公告所披露的相關年度上限。

董事會報告

關聯方交易

於截至二零二四年十二月三十一日止年度，本集團根據適用會計準則與被視為「關聯方」的人士進行若干交易。本集團於截至二零二四年十二月三十一日止年度訂立的關聯方交易的詳情於財務報表附註35披露。本公司已遵守上市規則第十四A章所載之披露規定。除本年報「持續關連交易及關連交易」一節所披露者外，於附註35披露的其他關聯方交易並不被視為關連交易，或根據上市規則獲豁免申報、公佈及獲股東批准之規定。

重大投資

於二零二四年十二月三十一日，本集團並無持有任何重大投資（價值為本集團總資產5%或以上）。

重大投資及資本資產的未來計劃

除本報告所披露者外，截至二零二四年十二月三十一日，本集團並無重大投資或資本資產的其他具體計劃。

股東週年大會

股東週年大會將於二零二五年五月八日（星期四）舉行。

暫停辦理股份過戶登記手續

為釐定股東出席股東週年大會並於會上投票的資格

交回股份過戶文件以作登記的最後時限

二零二五年四月三十日（星期三）下午四時三十分

暫停辦理股份過戶登記手續

二零二五年五月二日（星期五）至

二零二五年五月八日（星期四）（包括首尾兩日）

記錄日期

二零二五年五月八日

為確保符合資格出席股東週年大會並於會上投票，尚未登記的股份持有人要確保將全部股份過戶文件連同有關股票於上述最後時限前送達本公司的股份過戶登記分處卓佳證券登記有限公司辦理股份過戶登記手續，地址為香港夏慤道16號遠東金融中心17樓。

董事會報告

董事及董事服務合約

年內及截至本報告日期，本公司的董事如下：

執行董事：

唐均君先生(主席)(於二零二四年十二月三十一日獲委任為主席)

白鵬博士(總裁)(於二零二五年一月一日獲委任)

張素心先生(於二零二四年十二月三十一日辭任)

非執行董事：

葉峻先生

孫國棟先生

陳博先生(於二零二五年三月七日獲委任)

熊承艷女士(於二零二四年三月二十八日獲委任)

周利民先生(於二零二四年一月十九日獲委任、二零二五年三月七日辭任)

獨立非執行董事：

張祖同先生

王桂壩先生，太平紳士

封松林先生(於二零二四年三月二十八日獲委任)

葉龍蜚先生(於二零二四年三月二十八日辭任)

本公司各董事以三年特定任期獲委任，並須於股東大會上由本公司再次提名及重選，除非其委任已按照相關委任函或董事服務合約的條款及條件提早終止。

根據細則第117條及118條，葉峻先生、孫國棟先生及張祖同先生將於股東週年大會上輪席退任董事職務。白鵬博士及陳博先生分別於二零二五年一月一日及二零二五年三月七日獲董事會委任為執行董事及非執行董事，將根據細則第122條於股東週年大會上退任。葉峻先生、孫國棟先生、張祖同先生、白鵬博士及陳博先生符合資格並願按照細則膺選連任。

概無擬於股東大會上膺選連任的董事已訂立本集團可於一年內終止而無須補償(法定補償除外)的服務合約。

本公司已接獲現任各獨立非執行董事及葉龍蜚先生按照上市規則第3.13條發出的年度獨立性確認書。本公司認為根據上市規則，所有上述現任及前任獨立非執行董事均為獨立人士。

董事及高級管理層履歷

本公司董事及高級管理層的履歷載於本報告第158至167頁。

董事會報告

最高薪人士及董事及高級管理層的薪酬

董事及5名最高薪人士的薪酬詳情分別載於本年報綜合財務報表附註9。

董事及最高行政人員於本公司股份及相關股份的權益

於二零二四年十二月三十一日，除下文披露者外，概無本公司董事及最高行政人員於本公司或任何相聯法團(定義見證券及期貨條例第XV部)的股份、相關股份或債權證中擁有載入根據證券及期貨條例第352條須予存置的登記冊內的任何權益或淡倉，或須按照上市規則所載上市的標準守則須知會本公司及香港聯交所的任何權益或淡倉。

董事姓名	身份	以好倉持有的 相關股份數目 ⁽¹⁾	概約權益百分比
唐均君先生	實益擁有人	448,500	0.03%

附註：

(1) 彼於(a)按購股權計劃授出的購股權項下437,500股份本公司相關股份及(b)11,000股人民幣股份中持有好倉。

董事於競爭業務的權益

於本年度，概無本集團董事於與本公司或本集團業務直接或間接競爭的業務中擁有任何權益。

董事於重大交易、安排或合約的權益

本公司或其任何子公司或聯營公司並無訂立於截至二零二四年十二月三十一日止年度完結時或年內任何時間仍然生效，且有董事或與董事相關之實體直接或間接擁有重大權益的重大交易、安排或合約。

董事的證券交易

本公司已自行頒佈董事買賣本公司證券的行為守則(「公司守則」)，條款不比標準守則寬鬆。經向全體董事進行具體查詢，董事確認他們於二零二四年整個年度一直遵守公司守則及標準守則。

董事會報告

彌償保證及保險

本公司為董事及高級職員提供D&O保險。D&O保險承保日常管理責任及每年續保。

子公司的董事

於截至二零二四年十二月三十一日止年度或於二零二四年末起至本報告日期期間，在本公司子公司董事會任職的董事姓名如下：

子公司名稱	註冊成立地點	董事姓名
華虹宏力	中國上海	唐均君先生 白鵬博士 葉峻先生 陳博先生 熊承艷女士 張祖同先生 王桂壩先生，太平紳士 封松林先生 張素心先生 ⁽²⁾ 周利民先生 ⁽²⁾ 葉龍蜚先生 ⁽²⁾
華虹無錫	中國無錫	唐均君先生 韋俊先生 白鵬博士 孫國棟先生 吳衛華先生 陳博先生 金新先生 張素心先生 ⁽³⁾ 周利民先生 ⁽³⁾
華虹製造	中國無錫	唐均君先生 韋俊先生 白鵬博士 孫國棟先生 吳衛華先生 陳博先生 金新先生 張素心先生 ⁽⁴⁾ 周利民先生 ⁽⁴⁾
華宏置業(無錫)有限公司	中國無錫	周衛平先生
力鴻科技有限公司	中國香港	王鼎先生 傅城先生
Grace Cayman	開曼群島	張素心先生 葉峻先生
HHGrace Semiconductor USA, Inc.	美國加州	王鼎先生 傅城先生
HHGrace Semiconductor Japan Co., Ltd.	日本東京	中村真紀女士 王鼎先生 傅城先生

董事會報告

附註：

- (1) 白鵬博士、陳博先生、熊承艷女士、封松林先生分別於二零二五年一月、二零二五年三月、二零二四年四月及二零二四年四月獲委任為華虹宏力董事，已在相關市場監督管理部門登記。
- (2) 張素心先生、周利民先生、葉龍蜚先生辭任華虹宏力董事，已在相關市場監督管理部門登記。
- (3) 白鵬博士、陳博先生分別於二零二五年一月及二零二五年三月獲委任為華虹無錫董事。張素心先生、周利民先生辭任華虹無錫董事，相關市場監督管理部門登記正在變更中。
- (4) 白鵬博士、陳博先生分別於二零二五年一月及二零二五年三月獲委任為華虹無錫董事。張素心先生、周利民先生辭任華虹無錫董事，相關市場監督管理部門登記正在變更中。

主要股東及其他人士於本公司股份和相關股份的權益

於二零二四年十二月三十一日，除本公司董事或最高行政人員外，於本集團股份及相關股份中擁有5%或以上權益或淡倉的人士如下：

主要股東	身份及權益性質	持有股份數目	佔已發行股本權益 總額的概約百分比*
上海華虹國際有限公司(「華虹國際」) ⁽²⁾	法定及實益擁有人	347,605,650 ⁽¹⁾	20.23%
華虹集團 ⁽²⁾	受控制法團權益	347,605,650 ⁽¹⁾	20.23%
	法定及實益擁有人	1,198,517 ⁽³⁾	0.07%
Sino-Alliance International, Ltd. (「Sino-Alliance International」)	法定及實益擁有人	160,545,541 ⁽¹⁾⁽⁴⁾	9.34%
Sino-Alliance International	受控制法團權益	28,415,606 ⁽¹⁾	1.65%
上海聯和	受控制法團權益	188,961,147 ⁽¹⁾⁽⁵⁾	10.99%
鑫芯(香港)投資有限公司	法定及實益擁有人	118,495,939 ⁽¹⁾	6.90%
巽鑫(上海)投資有限公司	受控制法團權益	118,495,939 ⁽¹⁾	6.90%
國家集成電路產業基金	受控制法團權益	118,495,939 ⁽¹⁾	6.90%

附註：

- (1) 於本公司股份中的好倉。
- (2) 華虹國際為華虹集團的全資子公司。
- (3) 華虹集團直接持有合共1,198,517股A股股份。
- (4) 包括Sino-Alliance International根據一項託管安排，以託管方式持有的3,084股股份。
- (5) 上海聯和透過兩家全資子公司包括Sino-Alliance International間接持有本公司權益。

* 百分比乃按本公司於二零二四年十二月三十一日已發行的股份總數(即1,718,468,815股股份)計算。

董事會報告

除上文披露者外，就本公司董事及最高行政人員所知，於二零二四年十二月三十一日，概無本公司董事或最高行政人員以外的其他人士或法團於本公司任何股份或相關股份中有任何權益或淡倉並已記入根據證券及期貨條例第336條本公司須予存置的記錄冊內。

購買股份或債權證的安排

於截至二零二四年十二月三十一日止年度任何時間，概無向任何董事或彼等各自之配偶或未成年子女授出任何權利以收購本公司股份或債權證方式得到利益，亦無上述人士曾行使上述權益；再者，本公司或其任何控股公司、子公司或同系子公司亦無訂立任何安排，使董事或彼等各自之配偶或未成年子女可購買任何其他法人團體之上述權利。

主要客戶及供應商

於報告期間，本集團前五名供應商合共應佔的採購額少於本集團總採購額的30%。

於報告期間，本集團最大客戶及前五名客戶合共應佔的銷售收入分別佔本集團總銷售收入的約9.1%及30.1%。

於報告期間，概無董事或其任何緊密聯繫人(定義見上市規則)或任何股東(據董事所深知，擁有本公司已發行股份總數5%以上者)於本集團前五名客戶中擁有重大權益。

薪酬政策

截至二零二四年十二月三十一日，本集團僱用合共7,487名員工。本集團按其優點及發展潛能招聘及擢升人員。本集團僱員的薪酬政策由薪酬委員會按其優點、資質及勝任程度設立。

董事薪酬由薪酬委員會決定，並會考慮到本集團的經營業績及個人表現。董事薪酬按姓名載列於截至二零二四年十二月三十一日止年度的財務報表附註8。

買賣、銷售或贖回證券

截至二零二四年十二月三十一日止年度，本公司或其任何子公司概無買賣、銷售或贖回本公司任何上市證券。

優先購買權

本公司的細則或香港法律概無優先購買權條文，規定本公司須按比例向現有股東提呈新股份發售。

董事會報告

企業管治

本公司致力保持企業管治在高水平，以保障股東權益及提升企業價值及問責性。

本公司所採納的企業管治常規資料載於本年報企業管治報告內。

遵守相關法律法規

據董事會所知，本公司在各重大方面均已遵守對本公司業務及營運具有重大影響的相關法律法規。

環境及社會責任

本公司堅信穩健有效的環境、社會及管治(ESG)管理是企業可持續高品質發展的基礎，公司將ESG理念深刻融入到戰略、管理和長期發展目標中，貫穿企業運營全過程，推動業務不斷發展，並為所有的利益相關方創造和分享價值。

報告期內，公司重新制定了ESG管理目標，以更高的標準促進自身在能源、溫室氣體排放、水資源、廢棄物等方面的管理水平持續提升，順應時代發展，把握市場機遇，堅定了公司在可持續發展道路上持續奮進的決心。公司亦通過了責任商業聯盟(Responsible Business Alliance)的鉑金級(Platinum Award)的審核認證。

遵守不競爭契據及優先購買權契據

華虹集團、上海聯和及上海儀電(集團)有限公司(作為本公司當時的控股股東)訂立日期為二零一四年九月二十三日的不競爭契據(「不競爭契據」)，詳情載於日期為二零一四年十月三日的本公司招股章程(「招股章程」)「與控股股東的關係」一節中「不競爭承諾」一段。另外，華虹集團和上海聯和亦訂立日期為二零一四年六月十日的優先購買權契據(「優先購買權契據」)，詳情載於招股章程「與控股股東的關係」一節中「優先購買權」一段。本公司於截至二零二四年十二月三十一日止年度已覆核上述各控股股東有關他們遵守不競爭契據及優先購買權契據(視情況而定)內承諾的書面聲明。獨立非執行董事已覆核遵守情況，並確認不競爭契據及優先購買權契據(視情況而定)下的全部承諾均獲有關訂約方遵守。

董事會報告

足夠公眾持股量

按本公司可公開取閱的資料，就董事於本報告日期所知，董事信納本公司已維持上市規則下的指定最低公眾持股量。

代表董事會

唐均君

主席

二零二五年三月二十七日

2024年度環境、社會及管治報告

報告編製說明

本報告是華虹半導體有限公司第九份《環境、社會及管治報告》，向各利益相關方披露公司在經營中對於ESG議題所秉持的運營理念、建立的管理辦法、推行的工作與達到的成效。

報告範圍

本報告範圍涵蓋華虹半導體有限公司(簡稱「華虹半導體」或「公司」)。除非特別說明，與華虹半導體(股票代碼：01347.HK/688347.SH)同期合併財務報表範圍一致。

華虹半導體涉及生產製造的工廠包括上海基地及無錫基地，上海基地涵蓋華虹一廠、華虹二廠、華虹三廠；無錫生產基地涵蓋華虹七廠。無錫華虹九廠於2024年12月建成投片，暫不納入本次報告範圍中。

報告期間

本報告期間為2024年1月1日至2024年12月31日。本報告中的數據如無特別說明，均為此期間內數據。

編製依據

本報告依據香港交易所刊發的《上市規則》附錄C2《環境、社會及管治報告指引》(2023年12月31日起生效版)、上海證券交易所刊發的《上海證券交易所上市公司自律監管指引第14號 – 可持續發展報告(試行)》(2024年4月)、上海市國有資產監督管理委員會(「上海市國資委」)印發的《上海市國有控股上市公司環境、社會和治理(ESG)指標體系(1.0版)》進行編製。

數據說明

報告中數據和案例來自公司實際運行的正式記錄。報告中的財務數據均以人民幣為單位。財務數據與公司年度財務報告不符的，以年度財務報告為準。

報告獲取方式

本報告通過電子版形式發佈，發佈平台包括證券交易所指定的信息披露平台，亦可於公司官方網站(<https://www.huahonggrace.com>)在線瀏覽或下載。

聯繫我們

如對報告有建議，可通過以下方式與我們聯繫：

聯繫地址：中國上海市張江高科技園區哈雷路288號

聯繫郵箱：IR@hhgrace.com

2024 年度環境、社會及管治報告

報告編製原則

重要性

公司識別出各利益相關方關注的與經營相關的重要性議題，作為本報告匯報重點。本報告中對重要性議題匯報的同時，關注公司所處行業和經營業務的特點。議題重要性分析過程及結果詳見本報告「議題重要性評估」章節。

準確性

本報告盡可能確保信息準確。其中，定量信息的測算已說明數據口徑、計算依據與假定條件，以保證計算誤差範圍不會對信息使用者造成誤導性影響。定量信息及附註信息詳見本報告「ESG數據表及附註」章節。

平衡性

本報告內容反映客觀、真實的事實，對涉及公司正面、負面的信息均予以不偏不倚的披露。在報告期間內未發現應當披露而未披露的負面事件。

清晰性

本報告以簡體中文、繁體中文和英文發佈。本報告中包含表格、模型圖以及公司遵守的法律法規及相關政策列表等信息，作為本報告中文字內容的輔助，便於利益相關方更好地理解報告中文字內容。為便於利益相關方更快獲取信息，本報告提供目錄及ESG標準的對標索引表。

量化性

本報告披露關鍵定量披露項，並盡可能披露歷史數據。

可比性

本報告對同一定量披露項在不同報告期內的統計及披露方式保持一致；若數據的採集、測量與計算方法有更改，對相關數據進行追溯調整，並在報告附註中說明調整的情況和原因，以便利益相關方進行有意義的分析，評估公司ESG數據水平發展趨勢。

完整性

本報告披露對象範圍與公司合併財務報表範圍保持一致。

時效性

本報告為年度報告，覆蓋時間範圍為2024年1月1日至2024年12月31日。

可驗證性

本報告中案例和數據來自公司實際運行的原始記錄或財務報告。公司所披露數據來源及計算過程均可追溯，可用於支持外部鑑證工作檢查。

2024 年度環境、社會及管治報告

董事會ESG管理聲明

公司秉承「知難而進、奮發圖強」的企業精神，以持續創新，為全球客戶製造「芯」夢想為願景，堅持「8英寸+12英寸」、先進「特色IC + Power Discrete」的發展戰略，為客戶提供多元化的晶圓代工和配套服務，有力支持新能源汽車、綠色能源、物聯網等新興領域應用，以卓越的質量管理體系滿足汽車電子芯片的要求。

公司董事會高度重視環境、社會及管治(ESG)事宜，將其視為公司可持續發展戰略的核心組成部分，指導公司ESG管理方針和發展戰略，指導識別和判定重要ESG議題，董事及高管定期監督審閱公司ESG目標的進展，以確保公司在環境保護、社會責任及公司治理方面持續改進。

報告期內，公司重新制定了ESG管理目標，將以先進標準為引領，系統化提升能源管控、水循環利用、溫室氣體排放和廢棄物等領域的全週期管理效能，積極響應國家「雙碳」戰略導向，通過數據化治理體系構建，並深度融入ESG標準，深挖綠色經濟機遇，在清潔技術應用和產業鏈佈局中展現戰略定力，堅定在可持續發展道路上砥礪前行的決心。

報告期內，公司通過責任商業聯盟(Responsible Business Alliance)鉑金級(Platinum Award)的審核認證，聚焦員工權益、環境責任、健康安全、商業道德和管理體系等關鍵領域，在生產運營中踐行社會責任，確保綠色、健康和可持續發展。本報告中有關ESG議題上的管理實踐與進展，均經本公司董事會會議審議通過。

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1. 議題重要性評估

1.1 雙重重要性分析

公司遵守香港聯合交易所《環境、社會及管治報告指引》、上海證券交易所《上市公司自律監管指引第14號 – 可持續發展報告(試行)》(簡稱「上交所《指引》」)，參考全球可持續發展標準委員會《GRI可持續發展報告標準》等國際可持續信息披露標準，從影響重要性和財務重要性的雙重視角對各ESG議題進行分析和評估，以確定重要性議題。

華虹半導體2024年議題雙重重要性分析流程

流程	具體內容
步驟一 了解公司活動和業務關係背景	- 了解公司的戰略規劃。 - 了解公司所處的外部市場環境。 - 了解產生影響的價值鏈環節及關鍵利益相關方。
步驟二 開展利益相關方溝通、議題識別和盡職調查	- 與關鍵利益相關方進行溝通，結合行業背景和公司實踐，識別並確定與公司相關的議題。 - 通過溝通、調研、訪談等形式，面向各利益相關方開展盡職調查，分析並確定議題影響、風險和機遇。
步驟三 議題重要性評估	- 通過科學有效的評價方式設定關鍵指標及判斷標準。 - 邀請公司高管及財務負責人對議題的財務重要性進行評估，邀請員工、供應商、客戶等利益相關方對議題的影響重要性進行評估，確定議題重要性排序。
步驟四 議題確認與披露	經公司董事會審核確認，就2024年度重要性較高的議題在報告中進行重點披露。

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1.2 利益相關方溝通、盡職調查

根據公司自身業務和運營特點，對標國內外行業的經驗和實踐，華虹半導體將主要利益相關方確定為股東及高級管理層、客戶、員工、政府及監管機構、合作夥伴、社區及公眾，並建立利益相關方溝通機制，通過網站、媒體、會議、報告、活動等渠道和方式，保持與利益相關方的密切溝通，對利益相關方的關切進行及時回應。

華虹半導體利益相關方關注議題及溝通方式

關鍵利益相關方	相關方說明	關注的議題	溝通與回應方式
股東及高級管理層	對公司進行股權、債權投資的國內外投資人及公司高級管理層員工	• 公司治理 • 風險合規管理 • 商業道德 • 產品和服務安全與質量	• 財務報告、業績報告、上證e互動、郵件、路演 • 風險管理體系 • 反腐敗機制 • 全方位審計 • 質量評審
客戶	集成器件製造商及無廠半導體公司	• 信息安全與隱私保護 • 產品和服務安全與質量 • 研發創新與知識產權保護 • 綠色產品 • 清潔技術機遇 • 循環經濟	• 信息安全管理體系(ISMS) • ISO9001等質量管理體系認證 • 客戶滿意度調查 • 技術研討會、行業交流會 • 產品全生命週期管理
員工	公司員工，以及常年服務於公司業務的人員	• 員工權益及福利 • 員工健康與安全 • 員工發展與培訓	• 員工權益保障體系 • 安全風險分級管控與隱患排查治理雙重預防機制 • 覆蓋全層級的員工培訓課程

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關鍵利益相關方	相關方說明	關注的議題	溝通與回應方式
政府及監管機構	稅務、環保、安全等部門，地方政府以及監管機構(如證監會等)	- 合規經營 - 排放物與廢棄物管理 - 能源管理 - 水資源管理 - 氣候變化減緩與適應	- 合規內控體系 - 碳盤查報告 - 工廠運營區域水資源風險評估 - 環境信息公示
合作夥伴	供應商、研究院校、行業協會等	- 研發創新與知識產權保護 - 可持續供應鏈管理 - 循環經濟	- 行業交流 - 責任商業聯盟(RBA)認證 - 本土供應商多元化 - 供應商社會責任審核機制
社區及公眾	運營所在地社區、社會公眾、媒體等	- 社區與公益 - 排放物與廢棄物管理	- 社區活動、志願者活動、公益活動、社會事業支持項目等 - 環境信息公示

公司建立並逐步完善盡職調查機制，委任ESG工作組牽頭，協調各部門開展利益相關方溝通、訪談、調研等盡職調查工作，以分析、識別和確定ESG議題在短期(1年以內)、中期(1年至5年)和長期(5年以上)的影響、風險和機遇，便於針對性開展應對措施。

華虹半導體2024年議題影響、風險和機遇分析

序號	議題	時間範圍	主要風險與機遇類型	價值鏈範圍		
				價值鏈上游	自身運營	價值鏈下游
1	氣候變化減緩與適應	短、中、長期	風險： 隨着全球持續加強氣候和環保政策及碳排放管控措施，可能面臨不斷增加的合規運營成本和低碳技術升級需求 機遇： 公司在氣候友好型技術方面的創新投入，研發更高效、更環保的產品，能夠提升市場競爭力和品牌聲譽	√	√	√

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序號	議題	時間範圍	主要風險與機遇類型	價值鏈範圍		
				價值鏈上游	自身運營	價值鏈下游
2	能源管理	短、中、長期	風險：能源管理體系優化，可能造成額外的成本支出，也可能導致重視能效管理表現的客戶和投資者對公司表現提出質疑 機遇：隨着技術進步，太陽能、風能等可再生能源的發電成本持續下降，長期來看能夠為公司提供穩定且低成本的能源選擇，降低對傳統化石能源的依賴	√	√	√
3	水資源管理	中、長期	風險：若公司生產運營出現水資源短缺，導致生產停水、水質不穩定等問題發生，可能影響產能及產品合格率，造成成本投入和營收損失 機遇：完善的水資源管理體系有助於提高資源使用效率，降低運營成本		√	
4	排放物與廢棄物管理	中、長期	風險：隨着合規排放監管趨嚴，公司可能需要投入資金以確保生產過程和廢棄物管理符合新的法規要求，例如升級處理設施或引入新的排放處理技術 機遇：通過提高廢棄物的回收率，有助於將廢棄物轉化為可再利用的資源，降低原材料採購成本	√	√	
5	環境管理	中、長期	風險：隨着環保相關法規的出台及迭代，公司需持續關注並進行監測，確保其運營符合所有相關環境法律法規，如不合規可能導致罰款、制裁或生產限制 機遇：良好的環境管理實踐可能吸引更多關注ESG風險的投資者和客戶，從而加強公司的資本市場形象和市場聲譽	√	√	√

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序號	議題	時間範圍	主要風險與機遇類型	價值鏈範圍		
				價值鏈上游	自身運營	價值鏈下游
6	綠色產品	短、中、長期	風險：在技術快速發展的環境中，如果公司未能及時更新產品設計和生產工藝，可能會落後於競爭對手，影響市場份額 機遇：通過有效的產品生命週期管理，公司能夠快速響應市場需求和技術進步，推動產品創新和多樣化		√	√
7	循環經濟	中、長期	風險：對原材料和廢棄物的循環利用，如若未形成配套的管理和運營機制，產品質量可能會受到影響 機遇：通過提高資源效率，公司能夠降低原材料採購成本和廢棄物處理費用，進而提高整體運營效率	√	√	√
8	清潔技術機遇	中、長期	風險：清潔技術領域的快速發展，若公司未能及時跟上技術進步，可能會面臨產品競爭力下降的風險 機遇：隨着全球對綠色清潔技術及產品的需求日益增加，通過創新清潔技術有利於拓展市場份額和創造新的營收增長點		√	√
9	員工健康與安全	中、長期	風險：在高強度的生產環境中，事故和傷害的風險始終存在，若未能有效管理安全措施可能導致員工受傷或甚至出現更嚴重的事故 機遇：通過加強職業健康與安全管理，有助於提高安全標準，減少事故發生，降低潛在的法律和財務風險，創造一個更安全的工作環境	√	√	

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				價值鏈上游	自身運營	價值鏈下游
10	員工權益與福利	中、長期	風險： 關鍵員工的離職可能導致公司失去重要的行業和技能知識，影響項目的推進和執行效率 機遇： 規範的員工僱傭政策和良好的工作環境有助於保證人才的穩定性，助力公司運營及業務端的可持續發展		√	
11	員工發展與培訓	中、長期	風險： 若未能開展高質量的培訓，可能導致員工專業知識和管理能力無法符合公司經營的需要，影響產品質量以及人員管理的有效性 機遇： 高質量的培訓有助於培養員工的創新思維和解決問題的能力，使公司能夠更好地適應市場變化和技術進步，提升競爭優勢		√	
12	產品和服務安全與質量	短、中、長期	風險： 產品質量和客戶服務不到位可能會增加售後服務和維護的成本，從而導致額外的人力成本和召回處理的費用，也可能導致客戶流失和營收下降 機遇： 通過完善的產品質量管理體系和客戶關係管理體系，有利於提高公司的產品競爭力，提升客戶滿意度，從而增強客戶忠誠度，進而推動營收增長	√	√	√

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				價值鏈上游	自身運營	價值鏈下游
13	信息安全與隱私保護	中、長期	風險：不斷加強網絡安全基礎設施建設，需要持續投入資金和資源，包括防火牆、入侵檢測系統和數據加密技術等，以降低網絡攻擊的風險 機遇：有效的信息安全管理不僅能吸引更多注重隱私保護的客戶，還能提升公司的品牌形象，提高市場份額，促進銷售增長		√	√
14	可持續供應鏈管理	中、長期	風險：為確保供應鏈的穩定性和可持續性，公司可能需要尋找更多元化的供應商，也可能需要支付更多的成本實施採購，以滿足環境和社會責任的標準，因此可能影響利潤率、降低競爭優勢 機遇：建立可持續供應鏈可以增強公司對環境和社會風險的識別和管理能力，提高整體運營的韌性，降低潛在的業務風險	√	√	
15	研發創新與知識產權保護	短、中、長期	風險：新技術或新產品的市場認可度和接受度可能達不到預期，從而影響銷售額、降低公司的收入和盈利能力 機遇：在技術創新領域取得成功的公司往往更能吸引投資者的關注，研發成就可能為公司帶來更多的融資機會，創造新的業務機遇	√	√	√

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序號	議題	時間範圍	主要風險與機遇類型	價值鏈範圍		
				價值鏈上游	自身運營	價值鏈下游
16	社區與公益	短、中、長期	風險： 如果公司開展公益活動或履行社會責任的表現未滿足公眾期待，可能損害公司的品牌形象和聲譽 機遇： 在特定社區的參與和投資可以幫助公司更好地理解當地市場需求，抓住市場拓展機會，增強競爭優勢		√	
17	公司治理	中、長期	風險： 不合規的公司治理可能引發監管機構的調查和罰款，影響公司的財務健康 機遇： 良好的治理實踐可以吸引更多的投資者，加強風控能力，有助於獲得投資者信任及推動公司高質量發展	√	√	√
18	商業道德	中、長期	風險： 違反商業道德的行為可能引發法律訴訟，導致高額的賠償和罰款，增加公司的財務負擔 機遇： 通過改善治理結構和提升透明度來增強內部控制及風險管控水平，有助於減少違規風險	√	√	√
19	風險合規管理	中、長期	風險： 若未能遵循相關法律法規，可能面臨法律訴訟、罰款或制裁，導致公司聲譽受損，影響市場信任 機遇： 通過優化內部流程和系統來提高運營效率，降低潛在的合規風險，有助於企業長期發展並減少合規成本支出	√	√	√

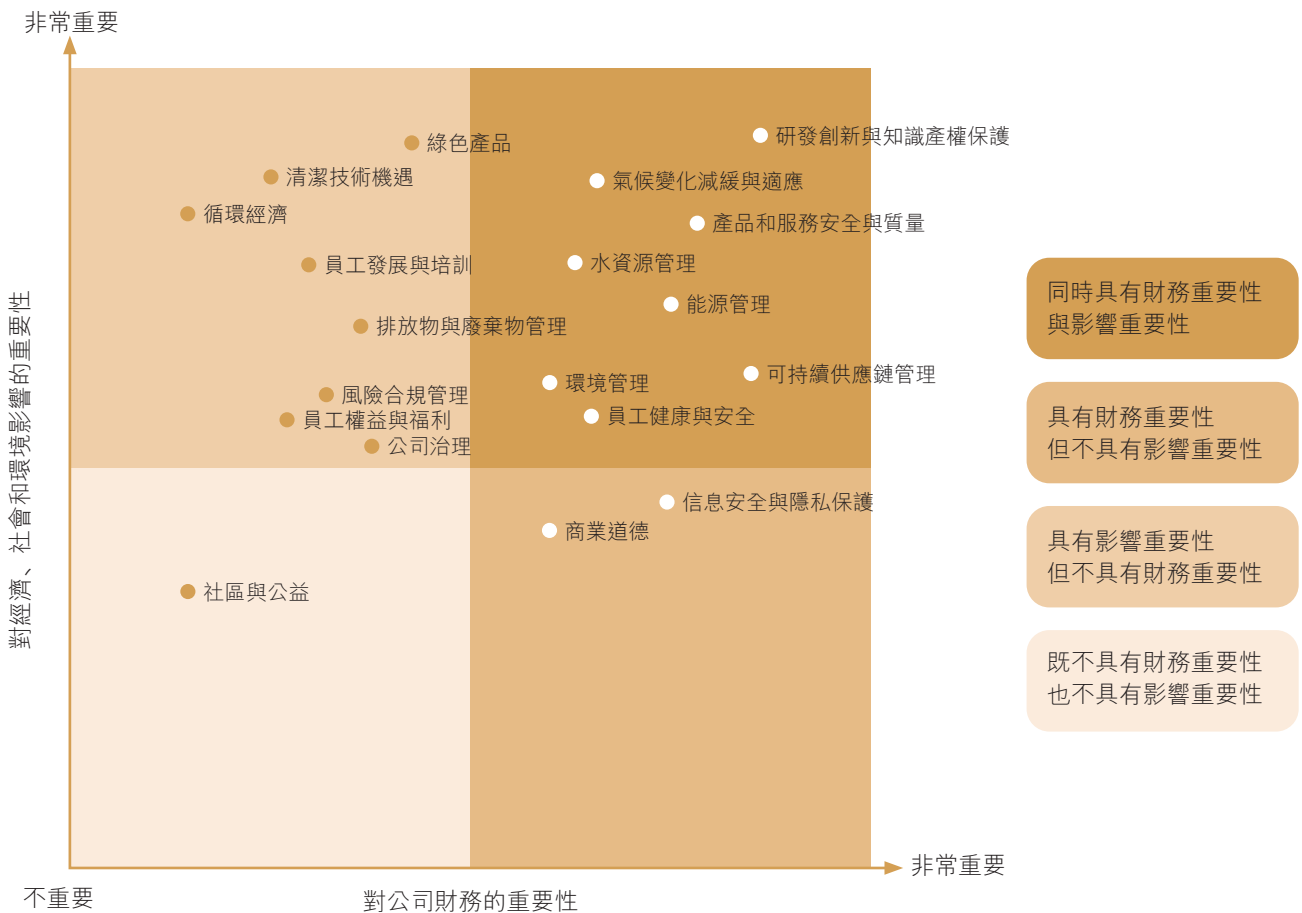
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1.3 議題重要性分析結論

2024年，經過議題的雙重重要性分析，在華虹半導體篩選出的19項議題中，共有7項議題具有雙重重要性，2項議題僅具有財務重要性，9項議題僅具有影響重要性，1項議題既不具有財務重要性、又不具有影響重要性，具體包括：

- 具有雙重重要性的議題：研發創新與知識產權保護、氣候變化減緩與適應、水資源管理、能源管理、環境管理、可持續供應鏈管理、員工健康與安全；
- 僅具有財務重要性的議題：信息安全與隱私保護、商業道德；
- 僅具有影響重要性的議題：綠色產品、清潔技術機遇、循環經濟、員工發展與培訓、產品和服務安全與質量、排放物與廢棄物管理、風險合規管理、員工權益與福利、公司治理；
- 既不具有財務重要性、又不具有影響重要性的議題：社區與公益。

華虹半導體2024年議題重要性矩陣圖



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註：上交所《指引》所設置的21項議題中，公司不涉及「生態系統和生物多樣性保護」「科技倫理」議題；「盡職調查」「利益相關方溝通」作為ESG議題識別、評估與管理的流程，於「議題重要性」評估章節進行響應，不作為ESG議題納入矩陣，其餘《指引》議題均在報告正文或索引表進行響應，具體章節對應及解釋說明請見「對標索引表《上海證券交易所上市公司自律監管指引第14號 – 可持續發展報告（試行）》」。此外，公司自主識別「綠色產品」「清潔技術機遇」「風險合規管理」「公司治理」議題，均於報告正文進行回應。

2. ESG管理體系

2.1 ESG管理架構

公司秉承「持續創新，為全球客戶製造『芯』夢想」的願景，成立了自上而下的環境、社會及管治(ESG)管理架構，並持續完善ESG管理體系，創新驅動發展，培養創新人才，努力降低運營對環境產生的影響，並推進供應鏈多元化，促進企業商業價值和社會價值的共同創造。

董事會是公司ESG管理的最高決策／管理機構，承擔以下職責：

- 指導公司ESG管理方針及策略的制定，確保其與時並進、切合所需，並符合適用的法律及監管要求；
- 指導公司重要ESG議題的識別和重要性程度判定；
- 監督公司ESG目標的制定和實施，包括：制定公司ESG管理績效目標；監督目標實現的進度，並就實現目標所需採取的行動提供建議；
- 審閱並批准公司年度的《環境、社會及管治報告》及其他ESG相關披露信息。

經營管理層根據制定的ESG目標，負責監督總體落實情況；ESG工作組負責識別ESG議題的影響、風險和機遇，制定ESG策略和管理方針，協助各相關部門落實ESG管理工作，並定期向經營管理層及董事會報告ESG關鍵績效指標的進度，推進公司ESG管理目標的實現。

2024 年度環境、社會及管治報告

ESG 管理架構



2024 年度環境、社會及管治報告

2.2 ESG管理策略和目標

公司把ESG管理融入產品、業務運營及企業發展中，形成了「員工責任」「產業責任」「民生責任」「投資人責任」四大維度的ESG管理策略。

ESG管理策略

為員工實現「心」價值

尊重員工價值

關愛員工成長

保障職業健康

員工責任



產業責任



為客戶創造「芯」夢想

品質產品服務

客戶權益保障

繁榮產業經濟

持續創新
為全球客戶
製造「芯」夢想

為社會構建「欣」生態

推動綠色發展

資源高效利用

共促社會和諧



民生責任



投資人責任

為股東創造「新」利潤

創新驅動發展

夯實誠信經營

共享中國發展

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公司根據業務發展情況、自身運營過程中的ESG表現，制定了用水效益、能源使用效益、減少溫室氣體排放、減少污染物、減少廢棄物、衝突礦產盡職調查的ESG管理目標，經營管理層及董事會每年審視公司上一年度ESG績效及ESG管理目標達成情況，並在ESG報告中披露進展，從而推動ESG管理目標的實現。

層面	目標	2024年度進展
水資源管理	2030年單位產品耗水量 ¹ (立方米／8英寸晶圓)較2023年減少5%	單位產品耗水量為2.76立方米／8英寸晶圓，較2023年減少2.49%
能源使用管理	2030年單位產品綜合能源消耗量(兆瓦時／8英寸晶圓)較2023年減少10%	單位產品綜合能源消耗量為0.27兆瓦時／8英寸晶圓，較2023年減少9.08%
溫室氣體排放管理	2030年單位產品溫室氣體排放量(噸二氧化碳當量／8英寸晶圓)較2023年減少10%	2024年單位產品溫室氣體排放量為0.12噸二氧化碳當量／8英寸晶圓，較2023年(0.14)減少9.53%
廢棄物排放管理	2030年單位產品廢棄物產生量(千克／8英寸晶圓數)較2023年下降4%	單位產品廢棄物產生量為8.29千克／8英寸晶圓，較2023年增加8.41%
廢水排放管理	COD廢水污染物排放濃度優於排放標準30%以上	上海基地：COD平均排放濃度為65.70毫克／升，排放標準為500毫克／升，優於排放標準30%以上 無錫基地：COD平均排放濃度為29.90毫克／升，排放標準為50毫克／升，優於排放標準30%以上
廢氣排放管理	VOCs廢氣污染物排放濃度優於排放標準30%以上	上海基地：VOCs平均排放濃度為5.35毫克／立方米，排放標準為50毫克／立方米，優於排放標準30%以上 無錫基地：VOCs平均排放濃度為0.33毫克／立方米，排放標準為100毫克／立方米，優於排放標準30%以上
可持續供應鏈管理	開展供應商衝突礦產盡職調查率達100%，且合規礦產使用率達100%	對「衝突礦產」供應商進行盡職調查，覆蓋率達100%，並完成最新版衝突礦產和擴展礦物調查報告 供應商全部使用合規原物料，合規礦產使用率達100%

1 單位產品耗水量=市政供水的用水量／年產量，不含循環用水等其他用水來源。

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華虹半導體2024年所獲榮譽及認可

序號	榮譽
	全球
1	Responsible Business Alliance Platinum Award
	全國
2	國家科學技術進步獎二等獎
3	全國工人先鋒號
4	全國職工職業道德建設標兵單位
	上海市
5	上海市質量技術進步獎 – 優秀獎
6	第三十五屆上海市優秀發明金獎
7	上海市2024年度(第二批)綠色製造示範名單 – 綠色工廠
8	上海市優秀院士工作站
9	上海市工人先鋒號
10	上海職工勞動和技能競賽優秀集體一等獎
11	上海職工優秀創新成果獎二等獎
12	上海市職工先進操作法優秀成果獎
13	上海市職工合理化建議創新獎
	江蘇省
14	無錫市幸福企業建設示範單位
15	無錫市模範職工之家

3. 節能減排，應對氣候變化

3.1 氣候變化減緩與適應

華虹半導體運營過程中直接溫室氣體排放來源為天然氣、汽油、柴油等能源燃燒及工藝過程的逸散排放，間接溫室氣體排放來源為外購熱力、外購電力。公司參考國際可持續準則理事會(ISSB)《國際財務報告可持續披露準則第2號 – 氣候相關披露》(簡稱「IFRS S2」)，搭建自上而下的氣候治理架構，制定應對氣候變化的發展戰略，提升應對氣候變化的適應性，並逐步減少自身運營對環境的影響。

華虹半導體氣候變化管理體系

治理	- 董事會定期審議氣候相關的風險和機遇，以及氣候變化應對策略和管理目標，並定期檢視目標的完成進展。 - ESG工作組負責制定氣候變化應對策略和管理目標。根據外部監管和市場需求，及時調整管理方針的時效性，監督各工廠執行相關工作，定期向董事會匯報工作進展。 - 各工廠負責執行具體工作，如核查溫室氣體排放情況，通過實際行動減少溫室氣體排放，定期收集和匯總溫室氣體排放數據，自查目標達成情況。

2024 年度環境、社會及管治報告

戰略

- 識別氣候變化相關的風險，包括轉型風險和實體風險。通過情景分析，評估氣候變化風險帶來的財務影響。
 - a) 轉型風險：積極響應排放控制政策的系列措施，通過精益生產、綠色採購、改進生產工藝、更換非必要的高能耗設備等舉措持續降低溫室氣體排放量，詳見「能源管理」章節。
 - b) 市場機遇：擴展產品應用於風能光伏發電、白色家電、汽車電子產業的發展機會，詳見「清潔技術機遇」章節。
 - c) 產品機遇：研發低功耗綠色產品，利用自身工藝優勢減少消費端的溫室氣體排放。通過產品全生命週期管理減少產品碳足跡，詳見「綠色產品」章節。
- 將清潔技術創新作為核心戰略之一，將氣候變化戰略納入公司業務發展戰略中，如資源使用效率、能源來源、產品和服務機遇。

影響、風險和機遇管理

- 將氣候相關風險和機遇的管理融入環境風險管理體系，針對具有重要性的氣候相關風險和機遇，制定應對策略並落實管理舉措。
- 開展ISO14064-1溫室氣體排放核查認證工作，系統性識別溫室氣體排放源，核查溫室氣體排放情況。

指標與目標

- 通過ESG報告每年公開披露溫室氣體排放數據，並匯報管理目標及目標達成情況。
- 溫室氣體管理目標：2030年單位產品溫室氣體排放量(噸二氧化碳當量／8英寸晶圓)較2023年減少10%。
- 目標達成情況：2024年單位產品溫室氣體排放量為0.12噸二氧化碳當量／8英寸晶圓，較2023年減少9.53%。

公司定期識別氣候相關風險和機遇，評估氣候變化對業務發展和商業模式的影響，分析潛在的財務影響，以更好地調整策略和管理方針，不斷完善氣候變化的應對措施。

2024 年度環境、社會及管治報告

華虹半導體氣候相關風險和機遇的潛在財務影響及應對措施

氣候相關風險與機遇識別結果			潛在財務影響	應對措施
風險	轉型風險	聲譽風險 隨着低碳經濟轉型，各利益相關方期望企業在應對氣候行動方面採取積極的管理行動並提升信息披露透明性。如果公司無法很好地回應這些利益相關方的訴求，會對自身的聲譽產生負面影響。	營業收入減少	- 每年公開披露溫室氣體排放情況，匯報單位產品溫室氣體排放量目標進展。 - 依據IFRS S2披露氣候變化減緩與適應工作，與利益相關方匯報工作進展。
		政策法律風險 中國已制定「雙碳」目標，未來對企業碳排放的監管力度也將不斷提升。若公司碳排放量無法滿足監管要求，需要購買碳配額或國家核證自願減排量(CCER)，帶來額外的營運成本；若未按時足額清繳碳排放配額的，將面臨政府部門的限期改正等處罰。		- 每年開展碳核算工作，按時完成相關部委的碳配額排放履約清繳工作。 - 公司年度碳排放量不超過碳配額限值，無需支付額外成本。
		市場風險 客戶以及消費者愈加關注產品的可持續性，對產品碳足跡、產品能耗水平不斷提出更高的要求。如果公司提供的產品與服務無法及時有效地滿足市場需求，將會失去市場優勢。	營業收入減少	- 通過工藝技術升級、生產設備性能提升等措施，減少溫室氣體排放，如採用高清洗效率NF₃替代C₂F₆，減少氟碳化合物的使用，從而每年減少溫室氣體排放。 - 開發更低功耗與更高效能的產品，助力下游產業能效提升，減少價值鏈上的溫室氣體排放。

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氣候相關風險與機遇識別結果		潛在財務影響	應對措施
實體風險	急性實體風險 公司經營位於上海、無錫等沿海地區，可能面臨颱風、暴雨等氣候災害，可能會破壞基礎設施等固定資產，造成經濟損失。	固定資產價值降低	- 制定極端天氣應對應急預案。 - 定期開展自然災害事故應急演練以及培訓。
	慢性實體風險 氣候變化導致的持續性高溫天氣等可能會導致公司業務營運中斷，造成營業收入降低。	營業收入減少	
機遇	資源使用效率 提高資源使用效率，包括能源、水資源等，能夠幫助公司降低運營過程中的營運成本。	營運成本降低	- 華虹七廠(無錫)12英寸生產線獲美國綠色建築委員會(USGBC)認證的LEED「能源與環境設計先鋒」金獎。
	能源來源 在生產活動中提高清潔能源的使用，減少對化石能源的依賴，從長期來看，減少購買市政電力的成本。	營運成本降低	- 制定屋頂光伏建設計劃，使用可再生能源代替不可再生能源，提高綠色電力佔比。
	產品與服務 公司產品廣泛應用於家用電器的能源解決方案、光伏儲能產業從發電到用電各環節，相關產業對於芯片的需求也不斷擴大，為公司帶來營業收入的增長。	營業收入增加	- 公司擁有非易失性存儲器(eNVM)、高性能微控制器(MCU)、單晶片集成工藝(BCD)，在新能源發電產業、家用電器應用領域的製造工藝方面積累了豐富的技術與經驗。

報告期內，公司依據上海市經濟和信息化委員會發佈的《關於開展2023年度工業和通信業重點用能單位碳排放雙控責任評價考核工作(試點)的通知》，完成碳排放雙控責任評價考核自查報告，從管理層面和設備層面減少公司生產運營產生的溫室氣體，逐步實現綠色低碳轉型。

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公司上海基地(華虹一廠、二廠、三廠)是上海市碳排放配額管理單位，每年開展溫室氣體排放報告的第三方核查工作，並於每年年末完成下一年度數據總量控制計劃。報告期內，公司按時完成履約清繳工作，清繳配額量為251,024噸。

3.2 能源管理

華虹半導體致力於打造集綠色技術、綠色生產、綠色建築於一體的綠色企業，實現環境友好和可持續發展。公司的能源使用種類有電力、熱力、天然氣、汽油、柴油，其中電力、熱力、天然氣來自於市政供應，對周邊環境和自然資源不構成重大影響。

治理

公司遵守《中華人民共和國能源法》《中華人民共和國節約能源法》，制定了《資源、能源管理程序》《用水，電，蒸汽，燃氣計量管理制度》等制度。報告期內，公司根據ISO50001完善能源管理體系，梳理並更新能源管理制度，以進一步規範能源管理工作。

公司建立了「董事會 – 管理層 – ESG工作組」的三級能源管理架構。董事會負責審議能源管理策略，監督目標達成情況；管理層負責制定能源管理策略和目標，推動各生產基地和部門執行相關工作，監督目標達成情況並向董事會匯報；ESG工作組牽頭各生產基地的EHS、動力、生產部門負責制定具體行動路徑，執行和實現管理策略。

戰略

公司將節約能源視為重要的戰略發展方向，一方面通過節能技改降低能源消耗總量，積極應對政府監管部門的能耗考核要求，降低政策風險；另一方面統籌建設光伏發電設施，規避因市政能源供應中斷造成的運營風險，及因能源短缺價格上漲帶來的額外運營成本。

公司積極將生產潔淨化、能源低碳化理念貫穿於生產運營過程，並將節能成效作為產品和服務機遇，打造對環境影響小的綠色產品，通過產品生態設計、餘熱利用、節能改造等方式建設綠色工廠。2024年12月，華虹一廠榮獲上海市2024年度(第二批)綠色製造示範名單 – 「綠色工廠」稱號。

影響、風險和機遇管理

為應對能源供應中斷帶來的運營風險，公司制定了《緊急卸載應急預案》《緊急停電應急預案》《供電停止情況時動力部現場處置方案》《供電回路開關跳閘應急預案》等操作規程，針對各項突發停電情景，開展應急處置培訓及演練，提高工作人員能源管理的能力。

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隨着當地政府對於能源消耗量的監管要求趨於嚴格，公司制定高於監管要求的內部管理目標，減緩政策風險帶來的影響。公司響應《上海市工業和通信業節能降碳「百一」行動計劃(2022-2025)》，認真執行「3,000噸標煤的節能項目規劃」，2024年全面完成「十四五」能源審計工作確定的15項節能改造項目，實現節能量3,339噸標煤。

指標與目標
公司制定了整體能源管理目標，並拆分下達給各生產基地執行，日常監控各生產環節用能情況，定期檢視目標達成進展。

華虹半導體2024年能源管理指標與目標

指標	單位	2023年績效	2024年績效	2030年目標	2024年目標完成進展
單位產品綜合能源消耗量	兆瓦時／8英寸晶圓	0.30	0.28	較2023年減少10%	較2023年減少5.91%－目標過程中
榮譽與獎項	• 榮獲上海市2024年度綠色製造示範名單－綠色工廠				

為有效提升設備能效管理方面，公司依據上海市經濟和信息化委員會發佈的《關於開展工業和通信業企業重點用能設備能效對標及更新改造的通知》，完成主要用能設備的能耗統計，制定設備能效升級和更新改造工作計劃。

華虹半導體2024年節能舉措及成果

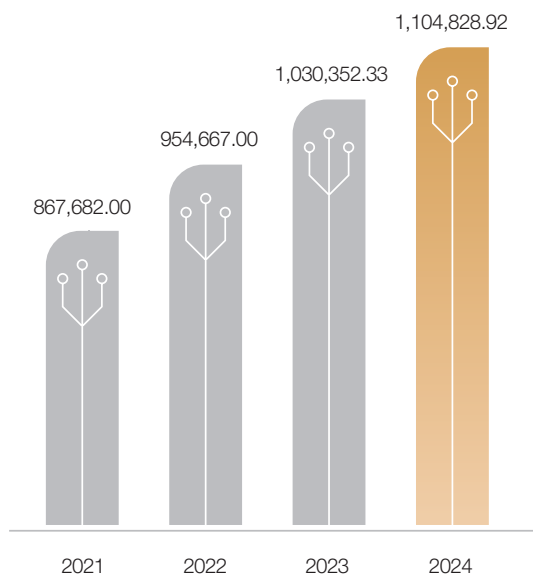
主體	具體措施	成果
上海基地	純水系統RO高壓泵變頻改造	• 年度節能28.23噸標煤
	eFlash平台減少工藝流程步驟3%，縮短製造週期4%	• 年度節電96萬千瓦時
	建設智慧能源管理平台 打造高效冷凍機房	• 年度節電320萬千瓦時
	冷凍機冷卻水熱能回收改造	• 年度節約天然氣18.8萬立方米

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報告期內，公司主要能源消耗情況如下：

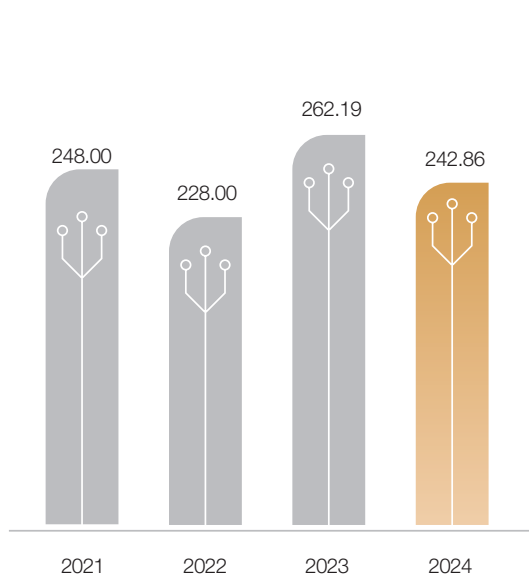
電力消耗總量

單位：兆瓦時



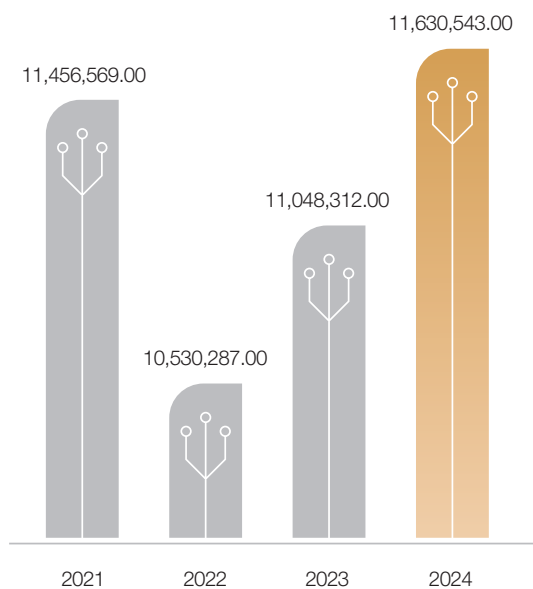
電力消耗強度

單位：千瓦時／8英寸晶圓



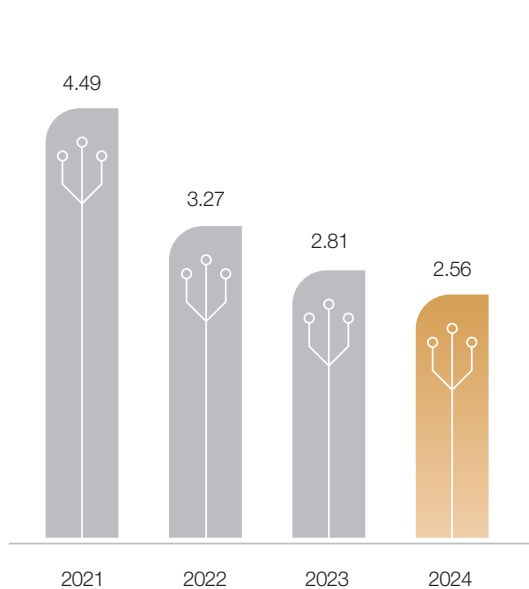
天然氣消耗總量

單位：立方米



天然氣消耗強度

單位：立方米／8英寸晶圓



註：2023年無錫生產基地擴產項目投產，並於2024年擴大產能，電力及天然氣消耗的總量有所增加，但2024年能源消耗強度指標均有所降低。

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3.3 清潔技術機遇

華虹半導體積極響應「雙碳」經濟號召，紮實推進「8英寸+12英寸」及先進「特色IC + Power Discrete」雙核引擎戰略，全力支持全產業鏈生態建設。華虹技術不斷研發創新，拓展特色工藝優勢，圍繞智能終端、通信、物聯網、汽車電子等領域，不僅覆蓋高端消費類從IPM模塊到周邊控制與電源管理，還覆蓋電力產業鏈從發電端到用電端，同時還覆蓋汽車電子五大芯片系統等。

公司將清潔技術創新作為核心戰略之一，持續推進新生態鏈、新型應用的發展機會，嵌入式非易失性存儲器、電源管理技術、功率器件技術、閃存技術，助力客戶進一步深化汽車電子、高端家電、光伏和風力儲能相關的新能源領域佈局，把握清潔技術帶來的市場機遇，為未來的業務發展起到積極貢獻。

支援清潔能源發展產品

功率器件

功率分立器件是新能源發電與新型能源應用領域的重要設備零部件。如光伏及風能發電設備、電動汽車、電動兩輪車，需要大量使用絕緣柵雙極型晶體管(IGBT)、金屬-氧化物半導體場效應晶體管(MOSFET)等器件。

公司在該領域積累了大量客戶，並長期保持領域內頭部企業的良好合作關係，與深度的共同開發合作。至今，功率分立器件營收規模已經成為公司佔比最大的部分。

非易失性存儲器

非易失性存儲器工藝被大量使用在如微處理器(MCU)、專用集成電路(ASIC)等芯片應用中，同時這些芯片種類被大量應用於新能源發電設備中。

根據IC Insights統計，全球MCU消耗市場中，車用市場佔比超過30%。華虹所有製造工廠均通過IATF 16949汽車行業質量體系認證，為支持本土製造車用半導體作出重要貢獻。

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參與開發的新能源零部件及應用領域

產品	應用領域	營收佔比
功率器件	光伏及風能發電設備、電動汽車、電動兩輪車等	31.0%
嵌入式非易失性存儲器	新能源發電設備、電動汽車等	26.3%

助力新能源轉型技術開發進展

汽車電子	工業新能源	高端消費電子
- 通過供應鏈協同，助力客戶產品加速進入相關模組廠與整機企業。 - 與國內主流車企建立直接合作關係，從成熟晶片替代到重點難點專案合力攻關，共建可持續發展生態體系等多維度合作。推薦成熟晶片種類涉及汽車的動力系統、車身控制、座艙、底盤和安全、遠端控制及通信、ADAS、充電樁等各個領域，實現批量供貨。 - 建立了公司級汽車電子資料庫並不斷完善。	功率器件重點產品均實現了批量供貨，並顯著提升市場份額，未來隨著國家對雙碳經濟的佈局和大力扶持，新能源市場的未來增長可期。	- 與國內知名家電品牌公司合作，提升國產替代率，持續推動高端消費電子業務拓展。 - 國內知名家電品牌公司採用公司工藝平台生產的IGBT、顯示觸摸控制晶片、指紋鎖晶片、電機控制等產品，已逐步切入空調、冰箱等大家電市場。

公司將進一步推動能夠實現更高能效的硅基功率器件的開發，並啟動具備高功率密度、低能耗等特性的化合物半導體功率器件的開發工作，為變頻家電、新能源汽車等清潔能源運用領域產品提供不斷優化的解決方案，進一步提升能源使用效率。

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4. 精益生產，引領綠色未來

4.1 環境管理

華虹半導體涉及生產製造的工廠包括上海基地及無錫基地，華虹一廠、二廠、三廠、七廠為水環境和環境風險重點監控單位，華虹三廠和華虹七廠為大氣環境重點監控單位，每年依法公開披露環境信息。

公司嚴格遵守國家《中華人民共和國環境保護法》及地方政府的環境管理規定，制定《工業用水供水系統標準作業程序》《污染物內控標準》《工業廢棄物管理作業規範》等內部制度。

治理

ESG工作組負責制定環境管理策略和管理目標，及時跟進所在地政府、行業標準監管要求，識別公司環境管理風險，監督各工廠在日常工作中環保合規，就重點事項向經管層匯報。

EHS部門負責統籌公司環境管理體系的建設事宜，涵蓋對能源與資源使用、排放物管理等方面的管理制度制定、績效分析及評估，協助外部機構對公司的環境管理體系開展的審核及檢測工作。

戰略

在廢水、廢氣污染物管理方面，公司持續提升環境治理水平為首要管理目標，將達標排放作為重要工作目標，避免因不合規排放給公司造成運營風險。公司周邊有寫字樓、小區等人群聚集場所，因此公司保障廢氣處理設施的正常運行，避免有害物質擴散至周邊環境，對社區居民呼吸系統及生態系統產生潛在暴露風險。

公司識別污染物從產生、收集、處理、排放過程中的風險，並通過定期監測和巡檢，確保環保設施正常運行以及廢氣、廢水處理達標。公司每年制定環境管理投入預算，開展環保技改項目，用於光刻膠使用設備改造、廢水回用等項目，減少原材料用量，延長化學品使用壽命，減少廢水廢氣排放量等，以減少運營生產環節對環境的影響。

公司重視工作人員應對突發環境事件的處置能力，避免因管理不當造成化學品洩露、火災、污染物直排等環境風險事件。公司定期更新所有工廠的突發環境事件應急預案備案，每年制定應急演練年度計劃，開展突發環境事件應急演練，華虹一廠開展排氣處理系統意外停機現場處置演練、華虹二廠開展廢液洩漏現場處置演練、華虹三廠開展SiF₄鋼瓶洩漏演練、華虹七廠開展化學品洩漏演練。

此外，公司制定綠色辦公策略，通過文化輸入、日常行為習慣規範、新員工宣貫及倡導等方式，加強員工的環保意識，推動綠色辦公的落實。

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華虹半導體綠色文化實踐

節約辦公用紙	- 推行信息化辦公，減少紙張使用。 - 大力提倡使用再生紙張，包括打印員工名片等，以支持循環再造。
節約用電	- 定期召開環境管理分享會，提高員工節約使用辦公資源和能源的意識。 - 下班或長時間離開時關閉電源。 - 合理設置空調溫度，夏季不低於26℃，冬季不高於20℃。
節約用水	培養員工的節約意識，張貼節約用水標識。
廢棄物處置	- 生活垃圾分類，根據營運所在地要求進行垃圾分類和清運工作。 - 積極宣傳垃圾分類，提高員工的環保意識。
員工出行	- 鼓勵員工使用公共交通上下班。 - 公司班車使用新能源汽車。

影響、風險和機遇管理

公司所在地區、所在行業的污染物排放標準不斷更新，公司為提前適應政策風險，內部採取更嚴格、高於監管要求的污染物排放標準。2024年，上海市更新《半導體行業污染物排放標準》，公司四家工廠分別制定《污染物內控標準》，提前應對日趨嚴格的環保監管要求。

公司定期識別、評估生產基地的環境風險點，完善環境管理體系，四家工廠均通過ISO14001: 2015體系認證。報告期內，公司未發生違反環境保護相關法律法規的事件。報告期內，公司足額繳納環境保護相關稅費。

華虹半導體環境管理體系認證情況

主體	認證名稱	認證有效期
上海基地	ISO 14001: 2015環境管理體系	2027年4月18日
無錫基地	ISO 14001: 2015環境管理體系	2027年4月18日

公司運用安全管理審核追蹤系統，對在日常管理中發現的不符合環保規定的事項進行分析整理、列出清單，並通過系統定時提醒的方式，進行後續整改並跟蹤記錄。

指標與目標

公司設立了環境管理方面的整體目標，並由EHS部門牽頭定期的監測和評估，以檢視目標達成進展及管控措施的實際成效。2024年，公司投入11,256萬元，開展安全環保與技術改造項目，持續完善環境管理設施。

2024年度環境、社會及管治報告

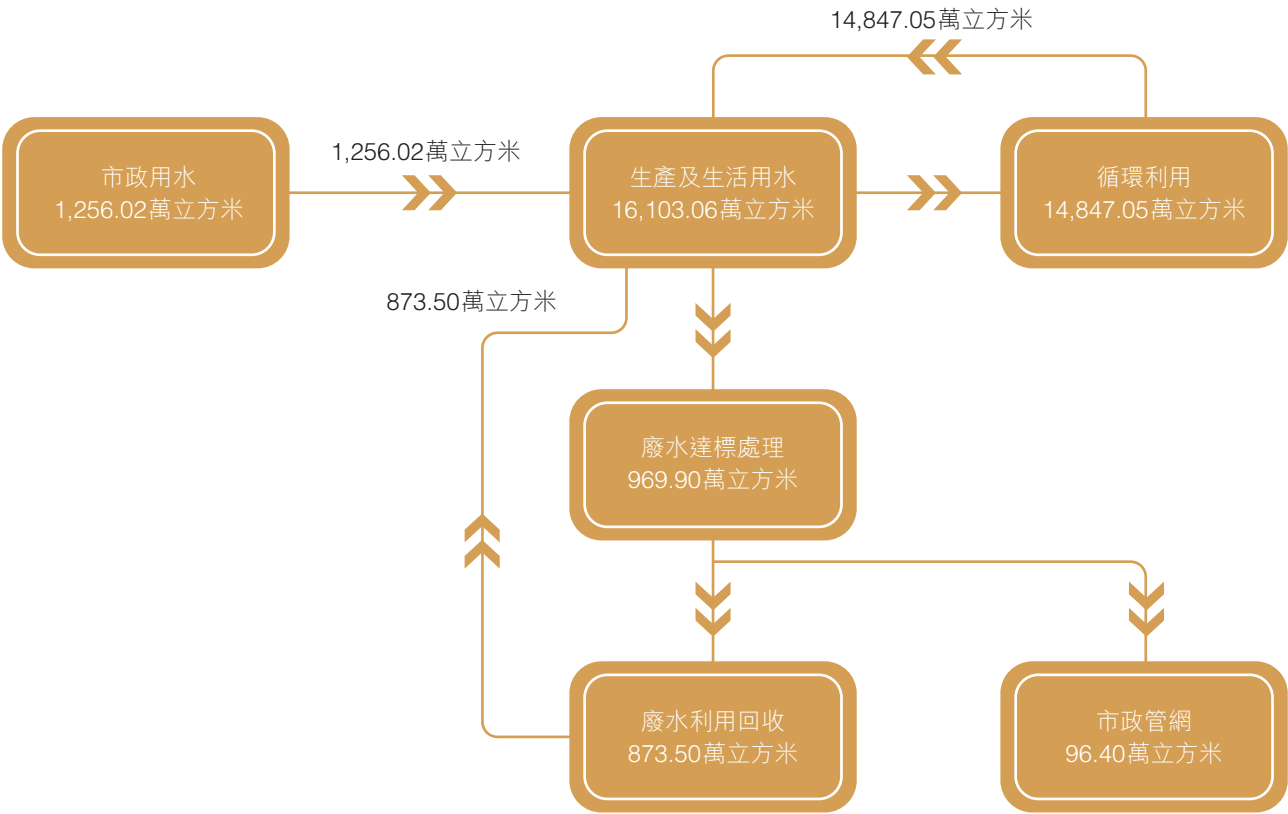
華虹半導體2024年環境管理指標與目標

指標	單位	2024年績效	2024年目標
環境違規事件數量	件	0	0
ISO14001生產基地覆蓋率	%	100	100
總環保支出	元	95,057,129	—

4.2 水資源管理

公司主要用水來源是市政供水，少部分來自於純水製造過程中的回收用水和空調冷凝水。公司嚴格遵守《中華人民共和國水法》《上海市節約用水管理辦法》《江蘇省節約用水條例》等法律法規及相關規定，制定《工業用水供水系統標準作業程序》《自來水異常處置流程》等管理制度，檢測運營區域水資源供給及質量現狀，開展節水技改、生產廢水回用措施，並組織節水宣貫活動，從意識和行動上減少水資源浪費。

華虹半導體2024年生產運營用水概覽



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治理

公司搭建了「廠長 – 節水領導小組 – 節水管理小組」三級節水管理體系，節水領導小組由公司廠長任組長，確立工廠的水資源管理目標，制定用水管理條例，各部門開展有效措施確保目標和制度落實到位。同時，各廠設置節水管理小組，結合生產工藝、操作流程制定節水路徑，負責執行日常管理，監督用水情況，收集和匯報水資源消耗數據。

戰略

半導體製造對用水潔淨度具有特定要求，在生產過程中需要消耗大量的水資源，公司作為水資源依賴型企業，各個生產環節均涉及水資源的使用，部分涉及純水資源的使用。

公司深知水資源、純水資源的穩定供應對持續生產至關重要，公司提升水資源使用效率，增加回水利用的投資和舉措，減少因水資源價格提升和水資源短缺，而可能出現停水或水質不穩定等問題，確保公司的生產穩定運行及產品的良率。

為減少水資源可能帶來的運營風險，公司定期識別和監測運營過程中的水風險，評估物理風險、政策風險等發生的可能性與影響程度，建立相應的管理方針和應對策略。

影響、風險和機遇管理

公司通過節能減排舉措，不斷提升回水利用效能，減少對外購超純水、市政用水的依賴，通過RO反滲透膜製備超純水，並深度挖掘節水潛力，在多個生產環節回收利用水資源。

公司持續對工廠運營區域水資源現狀開展監測，通過使用外部工具 – 世界資源研究所(World Resources Institute, 簡稱「WRI」)「輸水道水源風險地圖」(Aqueduct Water Risk Atlas)，對工廠生產運營的用水合理性及取水可能造成的影響進行分析，並採取措施降低用水風險。

華虹半導體WRI風險監測結果及應對措施

水風險檢測指標

- **水量風險：**水資源壓力、地下水位下降、年際波動、季度波動、乾旱、河流洪水風險。
- **水質風險：**沿海富營養化風險、未經處理的污水接觸。
- **法律法規及聲譽風險：**監管和聲譽風險、無飲用水風險、衛生風險、ESG聲譽風險。

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上海、無錫檢測結果	水量風險	• 整體水量風險：極高 • 水資源壓力：極高 • 河流洪水風險：高 • 乾旱風險：中 – 高 • 地下水水位下降風險、年度季度波動：低 – 中 • 海岸線洪水風險：低
	水質風險	• 整體水質風險：中 – 高 • 未經處理的污水接觸：高 • 衛生風險：高 • 沿海富營養化風險：低 – 中
	法律法規及聲譽風險	• 整體法律法規和聲譽風險：中 – 高 • 監管和聲譽風險：中 – 高 • 無飲用水風險：低 – 中 • ESG聲譽風險：低 – 中
應對措施		• 建立了用水監測點，定期開展水平衡測試，計算廠內製程用水、回收水、廢水、生活用水。 • 掌握用水流向、流量與回用水平，分析是否存在用水異常，並預估各用水單位之間的水量合理調配。 • 升級或替換耗水較多的設備，提高用水效率。 • 拓展水資源來源，將生產廢水處理達標後回用，循環利用純水製備的濃水和空調冷凝水等。

指標與目標

公司制定了整體水資源管理目標，並拆分下達給各生產基地執行，日常監控各生產環節用水情況，定期檢視目標達成進展。

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華虹半導體2024年水資源管理指標與目標

指標	單位	2023年績效	2024年績效	2030年目標	2024年目標完成進展
單位產品用水量	立方米／8英寸晶圓	2.83	2.76	較2023年減少5%	較2023年減少2.49%－目標過程中
榮譽與獎項	● 榮獲無錫新吳區節能減排先進企業榮譽。				

公司通過節約用水、回收生產廢水用於對水質要求低的工序、對生產廢水處理後回用三種方式，加強水資源利用效率。公司在主要用水環節採取了節水措施，建設綜合廢水回收和處理系統，對生產廢水分類收集、篩選和回用。

華虹半導體2024年節水措施及成果

主體	行動	措施	年度節水成效
上海基地	廢水回用	對反滲透濃水進行濃縮處理後回收利用；對機台淋洗水、儀表水、冷凝水等廢水處理後回收利用。	年度節水25萬噸
無錫基地	廢水回用	對反滲透濃水進行濃縮處理後回收利用；對機台淋洗水、儀表水、冷凝水等廢水處理後回收利用。	年度節水42萬噸
	廢水回收系統改造	對反洗廢水回收系統進行改造，增加回用水量。	年度節水0.25萬噸

4.3 排放與廢棄物管理

廢氣排放管理

公司生產過程中涉及到的大氣污染物包括硫酸霧(H₂SO₄)、氯化氫(HCl)、氮氧化物(NO_x)、氨(NH₃)、揮發性有機物(VOCs)等。

華虹半導體嚴格遵守《中華人民共和國大氣污染防治法》、上海市行業標準《半導體行業污染物排放標準》等法律法規及相關要求。報告期內，四家工廠分別制定《污染物內控標準》，內部採取更嚴格、高於監管要求的污染物排放控制標準。

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華虹半導體廢氣污染物類型及處理方式

類型	處理方式	
廢氣	酸性廢氣	通過預處理和洗滌塔集中處理，去除絕大部分成份後達標排放。
	鹼性廢氣(主要為氨氣)	通過洗滌塔進行淨化。
	有機廢氣	通過活性炭吸附或濃縮後燃燒處理進行淨化。
	粉塵廢氣(主要為二氧化硅的細小顆粒物)	通過除塵裝置去除。

公司每年制定檢測方案，導入在線監測設施，定期檢修廢氣處理設施，維持有效的廢氣處理效率，確保廢氣排放的合規性。公司積極應對監管要求，逐步推廣低VOCs含量清洗劑的使用，減少清洗工序中揮發性有機物帶來的無組織廢氣排放。2024年，公司廢氣檢測結果顯示，各類大氣污染物均實現達標排放。

華虹半導體2024年大氣污染物管理指標與目標

指標	單位	基地	2024年績效	2024年目標	2024年目標完成進展
年均VOCs排放濃度	毫克／立方米	上海基地	5.35	優於排放標準(50) 30%以上，即<35	排放濃度優於排放標準30%以上，達成目標
		無錫基地	0.33	優於排放標準(100) 30%以上，即<70	

華虹半導體2024年大氣污染物減排措施及成果

主體	具體措施	成果
上海基地	通過調研延長SPM tank(H2SO4+H2O2)化學品使用壽命	年度減少化學品硫酸使用57噸
無錫基地	減少清洗站點SPM使用量	年度減少硫酸霧排放0.66噸
	鍋爐低碳燃燒器改造	年度減少氮氧化物排放量0.94噸

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廢水排放管理

公司嚴格遵守《中華人民共和國水污染防治法》《污水綜合排放標準》，上海生產基地遵守《電子工業水污染物排放標準》，無錫生產基地遵守《江蘇省半導體行業排放標準》。公司制定《造排水廢棄物出料操作手冊》《污染物內控標準》等內部管理制度，通過改進廢水處理工藝，拓展廢水回用環節等措施，減少廢水污染物的產生量。

上海基地和無錫基地均安裝廢水污染物在線檢測設備，排放濃度實時上傳至環境監管部門環境信息公開平台公示，環境信息可靠、透明、可追溯。

華虹半導體水污染物類型及處理方式

類型	處理方式
廢水	pH, COD, 氨氮, 氟離子等 經廢水處理系統，混凝沉澱、空氣吹脫、酸洗吸收、好氧生物接觸、酸鹼綜合、MBR等工藝處理，處理達標後排入市政污水管網，再經城鎮污水處理廠處置後排入自然水域

報告期內，公司廢水檢測結果顯示，各類廢水污染物均實現達標排放。

華虹半導體2024年水污染物管理指標與目標

指標	單位	基地	2024年績效	2024年目標	2024年目標完成進展
年度COD排放濃度	毫克／升	上海基地	65.7	優於排放標準(500) 30%以上，即<350	排放濃度優於排放標準30%以上，達成目標
		無錫基地	29.9	優於排放標準(50)30%以上，即<35	

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華虹半導體2024年減少水污染物排放措施及成果

具體措施	成果
回收利用較清潔的清洗廢水，以減少由氫氟酸和去離子水(DHF)溶液清洗產生的廢水排放	減少DHF廢水排放10,000噸／年
55LP eFlash平台完成了到55LP Plus eFlash的切換，減少工藝流程步驟3%，縮短製造週期4%	減少廢水排放3,708噸／年

廢棄物管理
公司遵守《中華人民共和國固體廢物污染環境防治法》《危險廢物貯存污染物控制標準》，制定了《廢棄物管理程序》《工業廢棄物管理作業規範》等管理制度，規範廢棄物產生、暫存、轉移、處置的操作流程，並通過政府統一的環保管理系統對廢棄物處理方式及去向進行登記，確保廢棄物的處置去向有跡可循，由有合法資質的運輸單位和處置單位妥善回收利用或填埋焚燒。

報告期內，根據上海市生態環境局發佈的《關於進一步加強本市危險廢物規範化環境管理有關工作的通知》，公司建立危險廢棄物電子標籤應用管理系統，完成與上海市固廢系統實時對接，並新增《危險廢物電子標籤應用系統管理辦法》，規範危險廢棄物標籤電子化管理。

華虹半導體廢棄物類型及處理方式

類型	處理方式
無害廢棄物	生活垃圾、廚餘垃圾
	交由營運所在地環衛部門定期進行統一清運
	生產原料、辦公類用品
有害廢棄物	廠內循環利用
	污泥等
	填埋、製磚
有害廢棄物	廢酸液、異丙醇、廢磷酸、有機廢液等
	交由適用企業，其他行業再利用，提高再利用率
	廢玻璃瓶、200L化學桶、實驗室廢液等
有害廢棄物	化學處理
	抹布、塑料瓶、廢活性炭、廢樹脂、含砷廢物等
有害廢棄物	焚燒

公司通過對廢棄物進行識別及歸類，採取相應合適的管理和重複利用方式，盡可能提升廢棄物的循環利用率。

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華虹半導體2024年廢棄物管理指標與目標

指標	單位	2023年績效	2024年績效	2030年目標	2024年目標完成進展
單位產品廢棄物產生量	千克／8英寸晶圓數	7.65	8.29	較2023年下降4%	較2023年增加8.41%－目標進程中

4.4 循環經濟

公司生產經營主要原材料類型包括硅片、石英、靶材、化學品等。為規範原材料的使用，公司制定了《原物料有效期管控方針》《關鍵物料的風險識別及應對措施》《關鍵物料風險分析表》等原材料管理制度，確保原材料在有效期內，關鍵物料無質量和安全異常。對於化學品和氣體等生產輔料，公司制定《物料管理科儲存化學品及氣體作業管理規範》，宣導安全的儲存及取用操作流程。

在規範原材料管理的基礎上，公司秉承「源頭減量」及「循環經濟」的理念，遵守《中華人民共和國循環經濟促進法》，盡可能減少原材料的使用，尤其是減少化學品的使用，進一步降低安全風險，並通過改進生產工藝、合理配置資源循環，減少資源浪費。

華虹半導體2024年節約原材料措施及成果

主體	具體措施	成果
上海基地	對光刻膠使用設備進行改造，以減少原材料消耗	年光刻膠減量約1,000升
	改進生產工藝，延長化學品使用壽命	年節省氨水9,100升、雙氧水4,300升
	開展薄膜工藝改造項目	年節省六氟乙烷1,217千克
無錫基地	調整工藝參數，減少清洗頻次	年節省硫酸2,520升
		年節省雙氧水420升

4.5 綠色產品

化學品管控

公司生產製造過程中多道工序需要使用化學品，其中部分危險、有毒有害化學品需要特殊管理。

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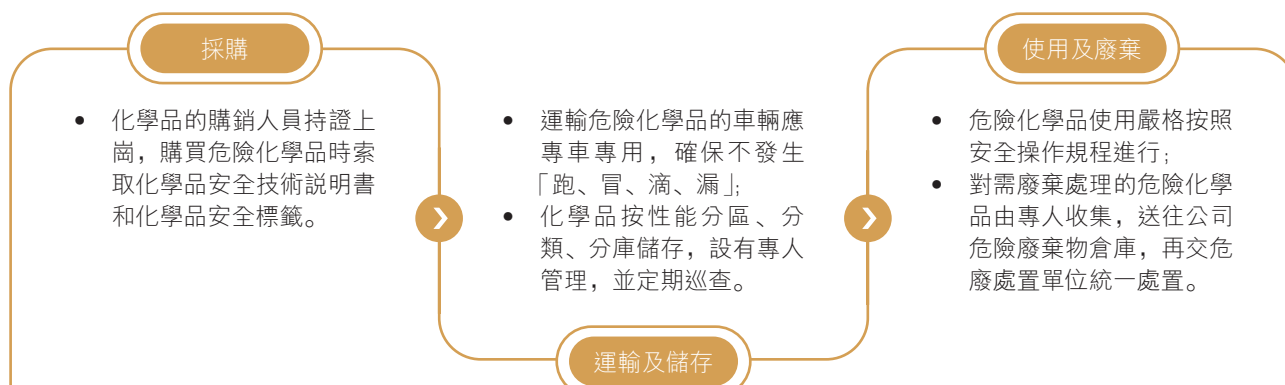
華虹半導體危險化學品類型

類型	名稱
易燃液體	異丙醇、光刻膠、柴油
氧化劑和有機過氧化物	過氧化氫
有毒品	磷化氫、氟
腐蝕品	硫酸、鹽酸、氫氟酸、磷酸、混酸、氨水、氫氧化鈉
壓縮氣體和液化氣體	氫氣、甲烷、硅烷、氮氣、氧氣、氬氣、氦氣、氨、氯

公司建立多項化學品管理制度，如《化學品管理程序》《化學品出入庫核查登記制度》《危險化學品安全管理規定》《危害性化學品管理辦法》，通過規範的標籤管理、出入庫登記管理，減少化學品操作風險。

公司設立了工廠化學品審查委員會，制定《化學物質審查規程》，事前綜合評估化學品供應商環保安全資質與風險防控能力，運用化學物質管理系統實施化學品使用、保管、廢棄的管理，管控化學品最大保管量，對使用消耗情況進行動態監控，確保化學物質的安全使用，消除因化學物質所引起的環境污染等。

華虹半導體危險化學品管理流程



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產品全生命週期管理

公司採取循環經濟理念，減少原材料用量，不斷挖掘廢水、能源、廢棄物的回用環節，減少產品全生命週期對環境的影響。

華虹半導體產品全生命週期環境管理

 原材料入庫	 產品生產	 產品運輸	 終端產品使用	 產品廢棄
- 對原材料進行有害物質審查與系統管控 - 對供應商開展資質和環境合規的審查，並要求供應商簽署《環保承諾書》	- 選擇低能耗高效能的生產設備，減少原材料和能源的使用 - 生產廢水處理達標後，回用於生產，提升廢水回用率 - 優化生產技術及污染處理工藝，減少廢水、廢氣產生	- 盡可能採用環保材質的包裝 - 對包裝材料進行回收與重複利用 - 優化運輸路線，減少重複運輸及空載運輸	- 研發低功耗、高性能的芯片，減少對環境的影響 - 研發面積更小更高效能的新品，減少對環境的污染	- 晶圓均通過有害物質檢測，在廢棄後能減少對環境的影響 - 終端產品由消費者作為電子垃圾投放，經有資質的機構無害化處置，部分零部件或金屬拆解提煉後回收利用

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5. 關愛員工，促進和諧發展

5.1 員工權益與福利

員工僱傭與招聘

公司員工僱傭類型為全職勞動合同工、勞務派遣工和其他用工形式(退休返聘工和實習生)。在員工僱傭與招聘過程中，華虹半導體嚴格遵守《中華人民共和國勞動合同法》《中華人民共和國婦女權益保障法》，堅持公平用工、貫徹同工同酬的原則，確保員工不因其年齡、性別、籍貫、宗教信仰、婚姻狀況或殘疾等非工作因素受到歧視或差別待遇，並嚴禁僱傭童工或強制勞工。

公司制定《僱傭規程》《實習生管理規程》《離職管理規程》等內部制度，嚴格核查員工身份信息，不招聘未滿16周歲的員工。若核查發現有誤招童工的情況，應立即停用並調查整改，針對疏漏環節完善招聘審查流程。報告期內，公司未發生與員工招聘與解僱、工時與假期、晉升與平等機會、反歧視及多元化、僱傭童工及強制勞工相關的違法違規事件，也未有上述事項引起的訴訟案件發生。

為了更好地進行公司人才的儲備與培養，公司開展大學校園暑期實習生計劃，給在校學生提供實習的機會，以幫助其盡早地了解公司的企業文化、運作體系、管理模式等，為將來的就業與擇業做好準備。公司指派資深的專業員工為實習生進行工作、學習、生活上各方面的指導，並提供一定的工作報酬。

華虹半導體員工僱傭規範

招聘與離職

- 招聘：堅持公平、公正、公開的原則；
- 離職：公司與員工依照相關法律法規及《離職管理規程》辦理離職手續。

薪酬

- 為員工提供有競爭力的薪酬，足夠員工和其家庭成員享有體面的生活水平；
- 為全職員工繳納五險一金，並購買法定之外的意外傷害保險、重大疾病保險等商業保險。

工時與 休假制度

- 標準工時制度，部分崗位經人力資源社會保障行政部門批准，實行綜合工時制或不定時工時制；
- 在國家規定節假日的基礎上，為全職員工提供補充年假。

民主參與

- 設立工會、召開職工代表大會等保障員工民主參與公司決策。

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公司堅信多元包容的文化是激發團隊活力、促進公司可持續發展的關鍵因素。公司在招聘過程中積極拓展多元化的招聘渠道，吸引並接納具有不同文化背景、教育經歷和技術專長的優秀人才，提供平等的就業和發展機會。同時，公司關注工作場所的多樣性和平等性，確保所有員工都能在一個尊重和支持差異的環境中貢獻自己的力量。

華虹半導體員工多元化實踐

性別多元化

- 在招聘、僱傭、晉升環節，秉承「性別平等」理念，將員工能力及績效表現等作為僱傭、晉升評定標準。

年齡多元化

- 秉承「年齡平等」理念，為不同年齡層的員工提供工作、晉升機會。

職能多元化

- 為員工提供管理、技術和職能支持等多個崗位序列，員工可基於自身發展規劃選擇。

華虹半導體2024年員工組成情況

性別分佈		
26%		74%
女性		男性
年齡分佈		
43%	55%	2%
<30歲	30-50歲	>50歲
2024年招聘1,700餘人，其中		
49%	35%	9%
生產一線人員	工程技術人員	研發人員

員工關愛

公司為員工打造關懷備至的工作環境，提供辦公、飲食、住宿、出行等方面的福利，為員工營造一個溫暖、有愛且充滿活力的工作氛圍。

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華虹半導體員工關愛體系

辦公	- 所有辦公場所均配置新風系統，同時還增加空氣淨化裝置，改善辦公室空氣質量。 - 對職工休息室冰箱、電視、座椅的軟裝進行更新。 - 在廠內增加綠化，設置噴泉、觀賞魚池等景觀。
飲食	- 全部工廠均設有員工餐廳、咖啡廳。 - 成立食品安全監督小組，建立食材集中採購及合格供應鏈管理模式，邀請員工、部門代表等進行監督。 - 倡導健康飲食，構建健康膳食體系，對餐食進行營養均衡和控油控鹽的科學管理，有效提升員工膳食結構合理性，實現美味與健康的動態平衡。
住宿	- 建立員工宿舍，內含獨立衛生間、24小時熱水和WIFI網絡等。 - 住宿區內設有圖書室、電腦室、桌球室、洗衣房、電視房、快遞櫃等設施。
出行	- 為全體員工發放交通補貼。 - 在園區、地鐵站、員工宿舍區之間提供免費班車服務。
文體	- 開設各類文體協會，包括書畫協會、園藝協會、茶藝協會、健身協會、騎行協會等，全體員工均可報名參與。 - 組織各類比賽活動，包括籃球比賽、足球比賽、游泳比賽、旱地冰壺比賽、網球比賽、羽毛球比賽、乒乓球比賽等，全體員工均可報名參與。
慰問	- 重要節假日慰問，開展節假日慶祝活動。 - 為員工提供節日和生日禮包，讓員工感受到公司的溫暖和關懷。
健康	- 為全體員工提供一年一次的健康體檢，包含多發性癌症項目篩查等項目，並建立員工健康檔案用於系統性追蹤員工健康狀況的變化。 - 建立「健康守護專欄」，開展健康專題講座，發表科普文章倡導健康生活方式。 - 每年為公司員工提供互助保障，提高員工醫療保障水平，減輕員工醫療負擔。

公司遵守《上海市女職工勞動保護辦法》《上海市城鎮生育保險辦法》等法律法規，簽訂《女職工保護集體合同》，保障女職工的合法權益。公司各工廠均建立媽咪小屋，工會每年安排一定資金以支持女性員工發展，每年三八婦女節籌劃節日福利。

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華虹半導體2024年關愛員工行動

行動名稱	行動類型及成效
拓寬服務領域	成立志願者服務總隊，深化各廠區志願者聯建活動，建設安全健康的工作環境等，不斷提升員工幸福感、滿足感和安全感。
開展聚民心工程	上海、無錫基地新建員工宿舍，組織開展「建好生活場所、營造滿意環境」合理化建議活動，結合當代員工需求建好休閒設施

員工溝通

員工溝通是企業可持續發展的重要組成部分。公司致力於建立透明、開放的溝通機制，確保員工能夠充分表達意見並參與公司決策。公司制定了《員工溝通規程》，鼓勵公司與員工之間、主管與下屬之間、員工相互之間的多向溝通。

公司通過定期召開員工代表大會、員工聯席會議、溝通會議等形式，傾聽員工聲音，及時回應他們的關切。此外，公司讓員工充分參與到公司的決策中來，促進管理層與員工之間的溝通，維護員工合法權益，營造和諧工作氛圍。通過開展員工思想動態調研、合理化建議平台以及部門溝通會等多形式多渠道，幫助公司了解員工需求，積極響應合理訴求，提升員工責任感和認同感。

此外，公司不定期展開員工滿意度調查，通過不同形式，廣泛收集各類員工的心聲和需求，包括青年員工座談會、OA在線平台、部門內部溝通等。2024年度員工滿意度調查結果保持在90分左右，反映出員工對公司各項工作的整體認可和滿意度。針對員工提出的具體意見，公司積極響應，並通過「我為群眾辦實事」的實踐，紮實推進滬錫兩地綜合配套項目，解決員工需求，進一步提升員工的歸屬感和幸福感。

5.2 員工健康與安全

公司日常生產經營嚴格遵守《中華人民共和國職業病防治法》《中華人民共和國安全生產法》《工傷保險條例》等法律法規，為加強公司安全生產工作，建立健全的安全生產責任體系，根據ISO45001: 2018職業健康安全管理体系要求，制定了《安全生產委員會安全生產責任制實施辦法》《環境職業健康安全管理体系手冊》《安全生產費用管理程序》《工傷管理辦法》等管理規程，為員工提供良好的工作環境和職業健康保障。

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治理

公司遵循「一崗一責」安全生產主體責任制，健全全員安全生產責任體系。公司設置安全生產委員會，堅持「嚴格落實主體責任、強化部門直接監管、強化廠區屬地監管、強化安全綜合監管」，持續推進安全工作標準化、系統化、智能化建設。

安全生產委員會設立安全生產與職業病防治管理目標，將安全管理目標與安全生產責任制掛鉤，定期審驗目標達成情況。

戰略

公司制定了職業健康與安全管理方針，嚴格遵循安全健康環保法律法規，為員工營造出安全健康舒適的工作環境，不懈追求「零災害」和永續經營的最高目標，成為模範全球企業公民。

公司持續推進安全生產專項整治行動項目，涵蓋危險化學品、建築施工、消防、燃氣、電力以及特種設備等方面。報告期內，公司召開4次安委會會議，部署《安全生產治本攻堅三年行動方案》重點工作。管理評審會每年審查職業健康與安全方針的落實情況，更新法律法規要求，部署實施方案。

影響、風險和機遇管理

公司制定《安全生產費用管理程序》，年初確定預算，減少重點部位、關鍵設施風險隱患，積極開展安全技改項目，每週報告安全技改實施進度。公司常態化識別安全隱患，建立應急響應基礎設施和隊伍，搭載數字化安全管理系統，並明確工傷認定和處置方式，建立了完整的安全生產管理體系。

華虹半導體安全風險識別與管理體系

管理流程	管理措施
隱患識別	網格化隱患檢查： 採取風險分級管控和隱患排查的方式，深入推進網格化隱患排查，2024年共進行督導檢查410次，查改隱患16,139條。 重大項目專項檢查： 強化重大建設項目安全管理，落實隱患排查整治專項行動和危大工程安全專項檢查，堅持一日兩次聯合檢查，順利完成重大建設項目「三同時」階段性工作。
應急響應	消防系統設施： 建立完備的室內外消防栓系統、自動消防滅火系統、自動火災報警系統、防排煙系統、消防應急廣播系統、疏散指示和應急照明系統。

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管理流程	管理措施
	報警監控系統： 潔淨廠房內設有有毒、有害、易燃氣體報警系統、液體洩漏檢測系統以及極早期煙霧報警系統。
	應急隊伍保障： 成立應急搶險隊(ERT)並開展專業技能訓練，制定針對不同災害的應急處置預案。定期組織專項處置演練，對發現的問題及時整改。
數字化管理	數字化系統： 建立特種設備登記系統、設備端紅外檢測記錄系統等安全管理系統，用數據記錄保障整改措施的落實，讓流程得以規範化執行。
工傷處置	根據公司《工傷管理辦法》，當發生工傷事故時，當事部門24小時內將情況通報至安全部門，安全部門組織工傷事件調查，並聯合人事、工會、綜合管理部醫務室召開工傷討論會，並向社會保險行政部門提請工傷認定申請。

此外，為深入開展安全生產文化建設，加強全員安全文化意識，公司開展「人人講安全，個個會應急－暢通生命通道」安全生產月和「全民消防、生命至上」消防宣傳月主題活動，通過各種安全宣傳和展示主題活動，有效提升員工安全意識、安全知識儲備，促進全員履行安全承諾與安全責任。

華虹半導體2024年安全生產文化創建行動

行動名稱	行動內容及成效
深化安全培訓	- 開展各類安全主題和各類重點崗位人員安全教育。2024年共開展420場次安全培訓，共計員工60,458人次、承包商27,789人次。 - 安全教育培訓參訓率達100%、人員持證上崗率達100%。
強化應急能力	- 完成生產安全應急預案的專家評審及備案，建立完善生產基地異常快速應急處置流程等規範性文件，並做到了周周訓練、季季拉練、年年比賽。 - 加強應急搶險隊(ERT)標準化訓練和實戰化演練。2024年共組織各類預案演練442場和ERT隨機演練38次，開展各項技能訓練45,000餘人次。 - 組織開展「消防月」消防知識展板宣傳，全員消防技能訓練和疏散逃生演習，提升全員安全意識和應急響應能力。

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- 安全技改評比
- 實施涵蓋六個維度的優秀安全技改項目評比活動。2024 年共實施安全技改 52 項，評出上年度優秀安全技改 13 項。

公司對安全風險進行定期識別和評估。報告期內，公司發生 3 起工傷事件，已針對性加強防護教育，包括當事部門全員的安全培訓教育、現場工程控制措施等。

華虹半導體職業健康安全管理體系認證情況

主體	認證名稱	認證有效期
上海基地	ISO45001: 2018 職業健康安全管理體系	2027 年 4 月 18 號
無錫基地	ISO45001: 2018 職業健康安全管理體系	2027 年 4 月 18 號

為預防、控制和消除職業危害，保護員工職業健康及權益，公司建立健全職業健康管理體系。在職業病防治方面，公司定期識別和檢測職業病危害因素，在入職時告知員工職業病危害因素，提供個人防護用具的諮詢，制定防護用具配備標準，定期組織職業危害崗位教育培訓，監督防護用具正確使用。公司涉及職業病危害因素的崗位主要包括離子注入、擴散、刻蝕、化學機械研磨、動力氣化等設備作業崗位。

華虹半導體職業病危害防治體系

職業病危害崗位	職業病危害因素	防護措施	職業健康監護
離子注入、擴散、刻蝕、化學機械研磨、動力氣化等設備作業崗位。	氟及其無機化合物、氫氟酸、鹽酸、硝酸、硫酸、磷酸、氨水、過氧化氫、砷及其化合物、磷及其化合物、異丙醇等。	- 潔淨室機台設備為自動化密閉運行，並設有密閉式工藝設備排氣系統； - 為員工配備個人防護用品和應急防護用品，定期檢查器材確保防護用品的有效性。	- 實施年度職業健康監測以及職業危害現狀評價； - 接觸職業病危害崗位員工 100% 嚴格實施崗前、崗中、離崗體檢。

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指標與目標

公司已通過職業健康安全管理体系ISO 45001: 2018認證，員工100%簽訂《安全責任書》、承包商100%簽訂《安全環保承諾書》，做到層層負責、人人有責、各負其責。2024年，安全生產投入共計3,416.23萬元。

華虹半導體2024年職業健康安全指標與目標

指標	單位	2024年表現	2024年目標
ISO 45001認證覆蓋率	%	100	100
《安全責任書》員工簽訂率	%	100	100
《安全環保承諾書》承包商簽訂率	%	100	100
年度工傷死亡事故數	次	0	0
年度職業病發生次數	次	0	0

5.3 員工發展與培訓

員工培訓

公司建立了完善的員工教育培訓體系，並基於戰略發展和員工需求不斷進行調整。2024年，公司更新《教育培訓規程》等人事規章制度，滿足不同崗位員工全方位、多層次的培訓需求。

公司擁有完善的培訓設施，配備專用的培訓教室與培訓設備和學習分享線上平台，包括在線培訓報名管理、培訓教材與崗位題庫，多媒體學習課件等。此外，必要時公司利用外部資源為員工的學習與發展提供了基本保障。

2024年，公司精進新進大學生特訓營經典項目，濃縮更新培訓課程，通過創新形式進一步激發學習主觀能動性，幫助新進大學生迅速融入公司大家庭，以飽滿的熱情迎接未來工作的挑戰。

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華虹半導體員工分級培訓體系

培訓對象	培訓內容	2024年績效
基層管理者	角色認知、自我管理、管理他人、工作管理	• 人均培訓小時數137.30小時 • 員工培訓覆蓋率100%
一線主管	一線班組長管理技能，培養高素質、高業務能力的一線管理隊伍，夯實公司管理基礎	
新進大學生	職業素養、企業文化、專業入門等課程	
一線員工	半導體製造工藝模塊的理論與實訓課程	

公司為新進員工配備成長導師，系統傳授專業知識與實戰經驗，幫助其快速適應工作環境，勝任工作崗位；公司提供涵蓋崗位技能、專業技術、管理能力等豐富多樣的培訓課程，致力於構建知識型、技能型、創新型的員工隊伍，鼓勵員工立足崗位開展科研創新活動，提升公司核心競爭力。

華虹半導體2024年開展的員工技能提升行動

行動名稱	行動及成果
創新工作室	以15個市級和集團職工創新工作室為基礎，多形式多渠道搭建群眾性勞動競賽平台，開展職工科技論文大賽、一線員工技能比賽、節能減排小組等各項勞動競賽，覆蓋至全部門、全崗位。年內收到論文105篇，獎勵專利178件，完成節能減排項目111項。
青年突擊隊	開展「青春擔當520，比學趕超100分」「奮勇擔當芯青年，助力華虹高質量」「青春啟航永向前，助力華虹新徵程」公司級青年突擊隊創建活動，五年來共創建147支公司級青年突擊隊，圍繞工藝開發、柔性生產、成本降低、供應鏈安全等方面創新創效創優。

職業發展

公司致力於構建清晰、透明的員工職業發展路徑，定期進行績效評估並給予反饋。我們根據行業特性設立了管理、技術和職能支持三大職業發展系列，並配套相應的崗位培訓，既支持員工在單一序列內深入發展，也鼓勵從技術領域向管理崗位的轉換，以滿足個人特長和職業願望。

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為了確保高質量的人才儲備，公司通過專場培訓、技術交流會和專題講座等多種形式提升員工的綜合能力，持續優化人才培養機制。公司制定《學歷教育補貼辦法》，資助員工參加在職繼續教育，豐富專業知識，提高公司綜合競爭力。

5.4 社區與公益

公司積極投身社會公益事業，致力於在社區、教育和鄉村振興等多個領域貢獻力量，傳遞愛心與溫暖，樹立有責任感的企業典範。

華虹半導體2024年社區公益主要行動及成果

行動名稱	行動及成果
志願服務	員工志願者連續19年走進美馨養老院開展志願服務，組織唱歌、跳舞、做手工等活動，在春節為敬老院張貼春聯、傳統節日送粽子月餅、夏天送防暑降溫用品等。
社區共建	- 員工義務獻血166人次。 - 在「以光育光•探索『童』行」張江科學會堂科普季活動中開展共計5場集成電路科普活動。 - 通過科普「點砂成金」的趣味課程，向逾500個孩子科普芯片製造過程及芯片在日常生活中的應用。 - 連續七年在總部社區舉辦《意外急救課程》，內容涵蓋急救基礎知識和心肺復甦術操作，幫助居民掌握應對突發事件的技能。
結對幫扶	- 與雲南漾濞彝族自治縣結對扶貧，購買當地核桃、茶葉等農產品，共計約120萬元消費扶貧費用。 - 與上海市崇明區油橋村結對幫扶，捐贈金額5萬元。

6. 創新驅動，保障質量安全

6.1 研發創新與知識產權保護

研發創新

公司依托「8英寸+12英寸」的佈局優勢，致力於特色工藝技術的持續創新，圍繞嵌入式／獨立式非易失性存儲器、功率器件、模擬與電源管理、邏輯與射頻等特色工藝平台打造核心競爭力，堅持先進「特色IC + Power Discrete」雙引擎戰略，高速滲透通信、新能源、物聯網、汽車電子等新興市場。

公司秉持「持續創新，為全球客戶製造『芯』夢想」的願景，嚴格遵守《中華人民共和國科學技術進步法》等法律法規及相關要求，致力於特色技術工藝，推動公司研發創新水平不斷提升。

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治理

公司構建由「董事會 – 管理層 – 研發部門」組成的治理架構。董事會和管理層負責公司的整體研發戰略，確保研發方向與公司長遠目標一致。管理層則負責執行董事會的決策，制定具體的研發計劃和技術路線圖，協調各項資源以推動創新進程。研發部門是核心執行團隊，負責日常的技術研究、產品開發和創新工作，確保新技術和新產品的不斷突破與提升。

戰略

公司深知持續加強研發創新對製造工藝精進的重要性，持續為全球客戶提供卓越的產品和服務。公司在制定研發創新方面的戰略決策時，充分評估研發創新對產品推廣所帶來的影響、風險和機遇，如當前的數字化趨勢正在逐漸推進汽車整車廠與芯片設計廠商在供應鏈中的聯動關係與話語權發展。同時，公司通過感知市場趨勢、提升資源利用效率等措施，提高公司應對風險的韌性。

影響、風險和機遇管理

華虹半導體研發創新管理體系

管理流程	管理措施
識別與評估	- 持續跟蹤市場變化和技術發展趨勢，確保技術平台能夠適應不斷變化的需求。 - 定期審查內部資源和技術能力，確保可以支持新產品的研發和生產。 - 識別潛在的風險點，如技術障礙、市場接受度、法規變動等，並評估發生的可能性及財務影響。
管理與優化	- 通過改進工藝、增加研發投入等方式降低風險水平。 - 加大對潛力芯片技術領域的投資力度，促進相關技術研發。 - 建立靈活高效的決策流程，確保能夠迅速響應市場變化和技術進步帶來的機遇。

公司在多個關鍵技術平台上建立了廣泛的產品線，終端應用覆蓋多樣化的產品需求，包括消費電子、工業控制、汽車電子、物聯網、通信和計算機以及電源管理等。

報告期內，公司積極推進產業終端生態合作戰略，與合作夥伴共同推進芯片產業的可持續發展。公司秉承「開放、創新、合作」的發展理念，與產業鏈上下游企業積極聯動。在汽車電子領域，憑藉公司20多年成功量產汽車電子芯片的經驗，幫助車規產品通過AEC-Q100 Grade0驗證，並完善了汽車電子零缺陷管理模式，為汽車電子應用系統提供了全面的優質的芯片加工服務。

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華虹半導體2024年研發創新指標與目標

指標	單位	2023年表現	2024年表現
研發投入	萬元	147,858	164,322
研發投入佔營業收入比例	%	9.11	11.13
研發人員數量	人	1,285	1,427
研發人員佔員工總人數比例	%	18.72	19.06
榮譽與獎項	- 國家科學技術進步獎二等獎 2024第三十五屆上海市優秀發明金獎、銀獎 2024年度上海市優秀院士專家工作站 - 上海市職工優秀創新成果獎		

知識產權保護
公司嚴格遵守《中華人民共和國專利法》《中華人民共和國著作權法》《中華人民共和國商標法》等法律法規及相關要求，制定《知識產權管理制度》等內部管理制度，致力於構建一個全面且高效的知識產權保護體系，以促進技術創新發展的同時，規範知識產權管理。

公司持續優化和完善知識產權管理機制，力求在每一個業務環節中融入知識產權保護的理念。公司每年確立專利申請工作目標，積極保護自身知識產權，承諾尊重並保護所有單位及個人的知識產權，同時對上下游合作夥伴的產品和技術信息實施嚴格保護。

為防範知識產權侵權風險，公司規範並加強對客戶的信譽和潛在法律風險的評估。此外，公司持續與多家關鍵技術提供商建立了技術授權合作關係，確保產品和服務均建立在合法合規的基礎上。

華虹半導體2024年知識產權保護指標與目標

指標	單位	2023年表現	2024年表現
累計專利申請數	個	8,969	9,649
累計專利授權數	個	4,427	4,644
完成專利申請數	個	672	680
已獲批專利數	個	270	230

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6.2 產品和服務安全與質量

產品質量與安全

公司在產品質量方面始終秉持高標準，堅持「零缺陷」理念，致力於為客戶提供卓越產品和服務。

治理

公司遵循ISO9001、IATF16949質量管理體系及相關要求，制定《質量手冊》《質量目標管理實施規程》《不合格品控制規程》《供應商管理規程》等內部管理制度，明確品質及可靠性保證部在產品質量與安全方面的職責，要求其定期向管理層及董事會匯報質量工作，推動質量管理的統籌規劃及執行。

戰略

公司注重質量管理對產品及業務發展的深遠影響，將質量視為企業戰略的核心要素，建立嚴格的質量管理體系以幫助識別和減輕可能影響產品質量的風險因素，增強公司對外部環境變化的適應能力。

影響、風險和機遇管理

公司依據《不合格品控制規程》，建立覆蓋產品全週期的不合格品管理規則，明確各環節處理規範和適用情形，包括進料、生產、測試、檢驗、客戶反饋和搬運存儲等。對於確定的不合格產品，根據規程相關規定進行處置，防止不合格品的非預期使用。

華虹半導體2024年質量管理體系認證情況

主體	名稱	有效期限
上海基地	ISO 9001質量管理體系	2027年5月17日
	IECQ QC 080000有害物質過程管理體系	2026年12月11日
	IATF 16949汽車行業質量管理體系	2027年5月17日
無錫基地	ISO 9001質量管理體系	2025年11月11日
	IECQ QC 080000有害物質過程管理體系	2026年12月11日
	IATF 16949汽車行業質量管理體系	2026年5月7日

報告期內，公司圍繞推動質量改善、強化質量評審、規範供應商管理、開展質量培訓等方面多措並舉，旨在全面提升產品質量和客戶滿意度。

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華虹半導體2024年產品質量管理舉措及成果

方面	具體舉措及成果
推動質量改善	- 針對研發、生產、製造、測試、服務等五大模塊開展調查和評估，並制定改善方案。 - 針對車規工藝相關質量問題，各模塊提出改善方案並分享經驗。
強化質量評審	- 制定公司年度質量目標(Company Quality Objective, CQO)，並開展評審工作。 - 開展質量改進報告評選(8D報告, Eight Disciplines Report)和高質量項目評審等活動。
規範供應商管理	- 設定供應商管理相關績效指標，包括供應商投訴率、供應商原材料質量引起的報廢率等。 - 建立供應商分析證書電子管理系統(Electronic Certificate of Analysis, ECOA)，並對其關鍵原物料參數進行統計過程控制管理(Statistical Process Control, SPC)。
開展質量培訓	- 上海和無錫基地同步開展質量管理和零缺陷質量意識培訓，覆蓋全體員工，共計6,826人次。 - 每年舉辦質量月活動，開展質量大講堂、質量辯論賽、供應商交流會、信息安全周、質量微文和書法比賽等活動，提升質量文化宣貫，促進全員質量意識提升。

華虹半導體2024年產品質量管理指標及成果

指標	單位	2023年表現	2024年表現	目標
產品召回次數	次	0	0	0
CQO	%	93	84	80
通過汽車客戶審核數	個	14	33	—
榮譽與獎項	- 上海市質量技術進步獎 – 優秀獎:「0.11微米eflash與BCD車載工藝平台的融合研發」 2024年「『特色工藝零缺陷，華虹發展高質量』主題活動」獲得上海市質量協會頒發的卓越質量管理模式(組織)優秀級			

有害物質管控

公司高度重視產品中有害物質的管控，遵循REACH，WEEE，RoHS等國際標準及相關要求，制定《有害物質管理規程》等內部管理制度，建立全面的有害物質管理體系，促進產品質量和安全的保障。報告期內，公司開展針對全氟和多氟烷基物質(Per- and Polyfluoroalkyl Substances, PFAS)物質使用情況的內部調研，對於部分使用PFAS物質的原材料，配合客戶進行原材料替換的評價，確保符合海外地區的法規要求。

報告期內，公司從源頭管控、原料檢測、產品認證三大維度開展舉措，推動產品中有害物質使用的合規性與安全性。

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華虹半導體2024年有害物質管控舉措

方面	具體內容
源頭管控	將產品有害物質管控理念納入產品研發環節，在源頭降低有害物質使用風險。
原料檢測	- 要求供應商提供產品有害物質檢測報告，並簽署《產品環保承諾書》。 - 供應商審核中包含有害物質的合規性條款，並定期開展抽樣檢測，確保原料的安全性。
產品認證	委託第三方機構根據《關於限制在電子電器設備中使用某些有害成份的指令》(RoHS)、《關於化學品註冊、評估、許可和限制規定》(REACH)開展產品檢測與認證，確保產品符合相關認證標準要求。

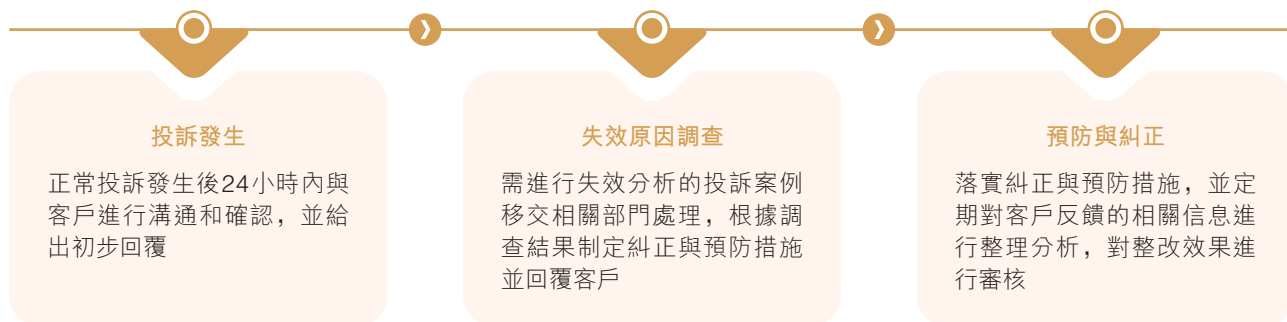
客戶關係管理

公司圍繞「為客戶提供更加便捷安全的服務」理念，完善「客戶交流 – 客戶投訴 – 客戶滿意度調查」的客戶服務管理體系，遵循《中華人民共和國消費者權益保護法》等法律法規及相關要求，制定《客戶投訴管理規程》《客戶返品確認規程》等內部管理制度，不斷提升客戶服務水平，旨在提升客戶滿意度。

為及時響應客戶意見和心聲，公司依據《客戶投訴管理規程》詳細規定處理客戶投訴的標準流程和應對策略，建立多元化客戶投訴渠道，如電子郵件、電話熱線、信函、傳真等，24小時內確認接受客戶投訴、48小時內提供3D報告(問題防堵措施報告)，14個自然日內提供普通產品的8D報告(問題解決報告)，保證客戶投訴響應的及時性。截至報告期末，公司累計收到2起來自客戶的投訴，投訴處理率為100%。

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華虹半導體客戶投訴處理流程



公司持續進行客戶滿意度調查工作，報告期內，公司根據《客戶滿意評價及改進規程》，通過開展客戶滿意度調查，不斷推進產品和服務的品質改善，持續提升客戶滿意度。公司管理層審核每年度客戶滿意度調查工作，針對滿意度調查結果組織分析診斷工作，並實施整改計劃，持續跟蹤落實效果並回覆給客戶。

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華虹半導體客戶滿意度調查結果

2023 年	2024 年	分數變動情況
8.97 分	8.89 分	↓ 0.08 分

6.3 信息安全與隱私保護

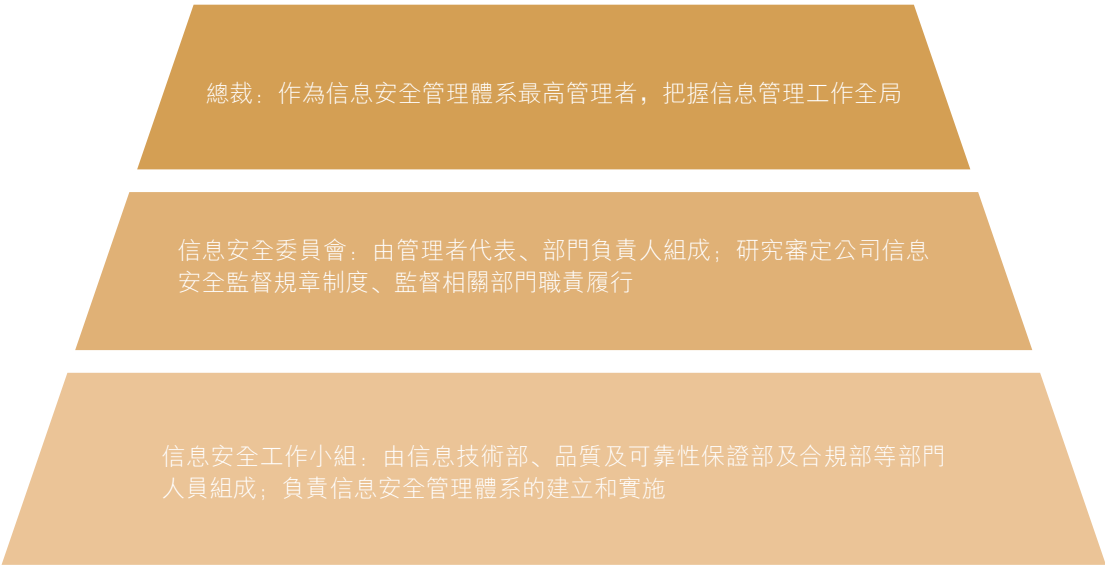
公司不斷強化信息安全與隱私保護，遵守《中華人民共和國網絡安全法》《中華人民共和國數據安全法》《網絡安全管理條例》《商用密碼管理條例》等法律法規等相關要求。報告期內，公司根據外部管理條例變化，更新《數據管理規程》《個人信息管理規程》等管理制度，以保障客戶知識產權、用戶隱私和個人信息安全。

治理

公司持續優化信息安全管理體系(ISMS)，完善「總裁 – 信息安全委員會 – 信息安全工作小組」的管理架構，以確保信息安全策略的有效實施和高效運作。公司已通過ISO/IEC 27001:2022信息安全管理體系認證(有效期至2025年2月)。報告期內，公司未發生侵犯客戶隱私及遺失客戶資料的投訴事件。

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華虹半導體信息安全管理架構



戰略

公司深刻認識到信息安全與隱私保護的重要性，在面對更嚴格的監管要求和技術快速變革的雙重挑戰下，將信息安全納入整體發展規劃，通過積極投入資源，構建系統化的管理機制，以實現潛在風險的預先識別和有效控制，同時挖掘信息安全相關領域的戰略機遇。

影響、風險和機遇管理

報告期內，公司從個人信息訪問管理、風險評估和自查、開展攻防演練等方面，進一步強化信息安全與隱私保護的整體能力，致力於構建更全面、高效、可持續的信息安全管理體系。

華虹半導體2024年信息安全與隱私保護管理體系

管理流程	管理措施
信息訪問	- 完善個人信息處理各階段的保護措施，升級訪客登記系統。 - 更新《個人信息管理規程》，落實隱私保護要求。
風險評估	強化信息安全管理體系，更新《信息安全風險評估管理規程》，落實數據分類分級相關的要求。
風險自查	推進企業網絡安全專項工作，通過工業和信息化部的定級，被評為「二級聯網工業企業」。
實戰演練	落實網絡安全防護加固工程，參與上海市經濟和信息化委員會主辦的「工賦礪網」實戰攻防演練，榮獲「優秀藍方企業」。

2024 年度環境、社會及管治報告

指標與目標

公司每季度開展信息安全及隱私保護培訓，統計培訓覆蓋人數，回顧培訓效果，培訓內容包括體系認證、信息保密、商業秘密保護、防範網絡攻擊等培訓課程。

華虹半導體2024年信息安全與隱私保護培訓情況

培訓主題	覆蓋範圍	2023年參與人數(人)	2024年參與人數(人)
信息安全管理體系培訓 – 第一季度	上海基地和無錫基地	8,233	6,683
信息安全管理體系培訓 – 第二季度		6,554	6,117
ISO 27001新版體系標準介紹及信息安全意識培訓 – 第三季度		6,476	7,346
ISO 27001新版體系標準介紹及信息安全意識培訓 – 第四季度		6,919	7,491
保密、信息安全合規性培訓		6,802	7,314
攻防演練專項培訓		–	7,525
ISO 27001標準及審核技巧培訓		–	99

6.4 可持續供應鏈管理

可持續供應鏈管理

公司主要的供應商類型為硅片、化學品、氣體的供應商。公司積極遵循責任商業聯盟(RBA)等行業標準及規範，報告期內，公司獲得RBA「Platinum Award」認證。

治理

公司構建由各基地工程部門、品質及可靠性保證部以及採購部組成的供應鏈工作小組，明確由經管層制定戰略方向並監督執行，並定期向董事會匯報，確保供應鏈政策與公司目標一致。供應鏈工作小組負責供應商的評估、選擇和定期審核，建立供應商績效管理體系和合規審查機制，確保質量、環境和社會責任要求的全面落實。

公司制定《供應商風險識別策劃控制管理程序》《社會責任管理手冊》等管理制度，以明確供應鏈管理的責任和要求，確保供應商篩選、准入及管理流程的科學與嚴謹。

戰略

公司通過建立系統化的供應鏈管理流程，將供應鏈相關的多維度風險和機遇納入整體戰略，推動綠色供應鏈發展。公司通過定期識別和評估供應鏈中的關鍵影響因素，確保管理策略能夠有效應對外部環境衝擊和市場變化。

2024年度環境、社會及管治報告

同時，公司將供應鏈管理與戰略目標深度融合，不僅通過風險控制以保障業務連續性，還積極挖掘供應鏈在成本優化、技術合作和本地化發展中的潛力，從而實現供應鏈管理與公司發展的協同推進。

《華虹半導體供應商社會責任要求》概覽

 勞工	• 禁止強迫勞動 • 不錄用未成年的員工	• 工作時間 • 工資和福利	• 人道待遇 • 不歧視／不騷擾 • 結社自由與集體談判
 環境職業與健康	• 職業安全 • 應急準備 • 工傷與疾病	• 工業衛生 • 強體力型工作 • 機械安全防護	• 公共衛生、飲食和住宿
 環境保護	• 環境許可和報告 • 預防污染和節約資源 • 有害物質	• 固體廢棄物 • 廢氣排放 • 限用物資	• 水源管理 • 能源消耗和溫室氣體排放
 商業道德	• 商業誠信 • 無不正當利益 • 信息披露	• 知識產權 • 公平交易、廣告宣傳和競爭 • 身份保護和禁止報復	• 負責任的礦產採購 • 隱私
 管理體系	• 管理職責和責任 • 法律和客戶要求 • 風險評估和風險管理	• 改進目標 • 培訓 • 溝通	• 審核與評估 • 矯正措施

影響、風險和機遇管理

公司遵循責任商業聯盟(Responsible Business Alliance, RBA)電子行業社會責任審核標準，明確供應商在質量、供應穩定、勞工管理、環境保護、商業道德等方面的基本要求，建立供應商准入前初審、年度評估、定期宣導的管理體系，與表現優良的供應商維持穩定合作關係。

2024 年度環境、社會及管治報告

華虹半導體可持續供應鏈影響、風險和機遇管理體系

管理流程	管理措施
供應商准入	在供應商准入階段，進行品質要求、穩定供應、勞工管理、環境保護、商業道德等方面表現的初步審核，篩除有負面信息或不滿足要求的供應商，關鍵供應商須經過初審後方可登記進入合格供應商清單(Approved Supplier List, ASL)清單，以降低供應鏈起始階段的風險。
供應商審核	每年開展全面的風險評估，根據《供應商風險識別策劃控制管理程序》，通過第三方稽核或審核問卷，識別供應商潛在的風險點，對潛在風險提出整改方案；如供應商無法有效整改，或發生重大違規行為，則取消合作關係，確保供應鏈穩定合規。
績效評估	- 嚴格控制原材料質量、有害物質含量合規性等關鍵表現。 - 每年開展供應商績效評估，並評選出傑出供應商等獎項，激勵表現優異的供應商。
供應商宣導	定期開展覆蓋多類別供應商的宣導和培訓，與供應商同步環境、道德及質量標準要求，為供應商提供技術支持，共同挖掘供應鏈優化和提升的潛在機遇。

公司對供應商實施嚴格的反賄賂和反腐敗政策，要求所有供應商簽署商業道德承諾書，並通過定期審核和績效評估，確保其業務實踐符合公司的誠信與合規標準。

半導體硅片製造過程對水資源需求量大，同時伴隨較高的污染排放風險。如果生產過程中未能妥善解決污染排放和廢水處理問題，將對水資源再生造成更大壓力。為此，公司針對硅片供應商實施水資源管理行動及績效調查，包括節水目標、耗水量、節水措施等，旨在降低其生產運營對水資源的影響。公司設定「對主要硅片供應商水資源調查覆蓋達100%」的目標，報告期內，該目標已達成。

報告期內，公司共調研相關企業270次，與上百家國內供應商建立聯繫，進一步優化供應鏈管理體系，確保供應鏈的穩定性和高效性，為業務發展提供強有力的支持。

2024 年度環境、社會及管治報告

華虹半導體2024年可持續供應鏈管理指標與目標

指標	2023年表現	2024年表現
關鍵供應商社會責任審核覆蓋率	100%	100%
關鍵供應商培訓宣導的次數	20	20
新引入國產供應商(家)	28	18
「8英寸+12英寸」原材料供應商多元化率	65.4%	76%
「8英寸」原材料供應商多元化率	72%	84%
「8英寸」靶材和硅片供應商多元化率	> 90%	98%
「12英寸」原材料供應商多元化率	55%	65%

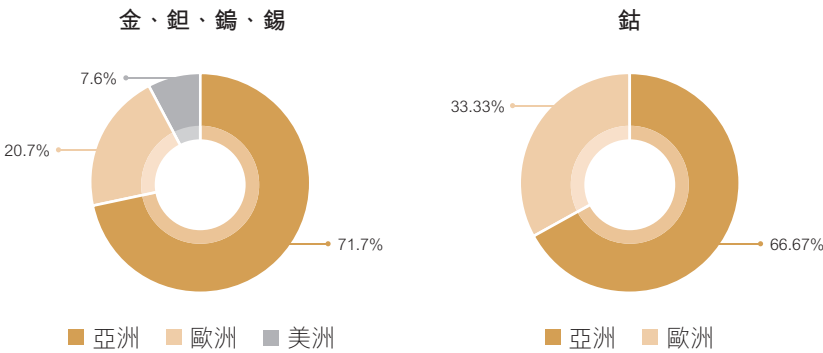
負責任礦產管理

「衝突礦產」指在衝突地區開採通過非法貿易資助武裝團體的礦產，通過暴力脅迫勞工、使用童工、破壞環境生態等手段進行開採礦產，這些礦產的交易往往導致人權侵犯、環境破壞和社會不穩定。根據《多德 – 弗蘭克華爾街金融改革與消費者保護法》以及國際非政府組織的研究，衝突礦產可能進入信息、通信和技術(ICT)產業，應用於收集、計算機等電子電氣產品。

在公司的生產過程中，涉及使用金(Au)、鉭(Ta)、鎢(W)、錫(Sn)、鈷(Co)等礦產資源。為防止採購和資助具有社會和環境負面影響的礦產來源，公司制定《衝突礦產管理政策》，確保採購的礦產不來源於衝突區域。

公司生產過程中使用的金、錫、鉭和鎢超過71%來自亞洲，超過20%來自歐洲，其餘來自美洲。使用的鈷三分之二來自亞洲，三分之一來自歐洲。截至報告期末，公司所使用的金、鉭、鎢、錫均不來自武裝衝突地區。

華虹半導體礦產使用類型及來源



2024 年度環境、社會及管治報告

此外，公司遵循負責任礦產倡議(RMI)、經濟合作與發展組織(OECD)發佈的《受衝突影響和高風險地區礦產供應鏈盡職調查指南》等國際標準，對供應商進行追溯和盡職調查，要求所有供應商承諾不從受衝突影響或高風險地區採購衝突礦產，以確保供應鏈的礦產來源符合合規與道德要求。

《華虹半導體衝突礦產管理政策》

1、要求原物料中含有金(Au)、鉭(Ta)、鎢(W)、錫(Sn)的供應商遵循負責任礦物政策採購，要求原物料含鈷(Co)的供應商披露鈷的來源冶煉廠

將全球社會環境責任作為公司的目標，踐行綠色採購原則，承諾在金屬供應鏈中承擔社會及環境責任

2、要求供貨商提供金(Au)、鉭(Ta)、鎢(W)、錫(Sn)、鈷(Co)金屬不使用「衝突礦產」的聲明，向供應商發出衝突礦產調查問卷(CMRT)和擴展礦物調查問卷(EMRT)

報告期內，公司針對金屬靶材供應商開展問卷調查，覆蓋率達100%，包括導入的新供應商及存量供應商。公司追溯產品所用礦產原材料的來源，確保每一批次礦產的產地信息清晰可追溯，追溯範圍涵蓋礦山、冶煉廠及整個供應鏈環節。報告期內，追溯結果顯示，公司不使用衝突礦產的供應商比例為100%。

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7. 穩健治理，恪守商業道德

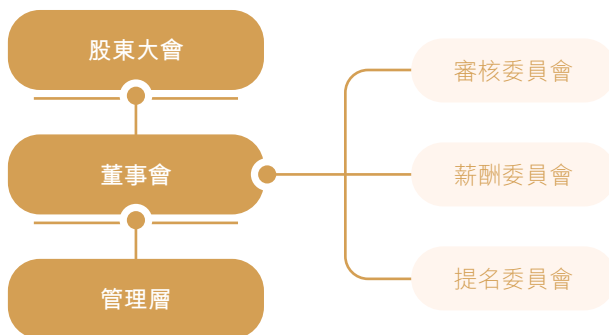
7.1 公司治理

公司治理

作為香港交易所主板和上海證券交易所科創板上市公司，公司嚴格遵守香港《公司條例》《聯交所上市規則》《中華人民共和國證券法》以及上海證券交易所《科創板上市規則》等註冊地、境外上市地、中國境內適用法律法規，制定《組織章程細則》《股東大會議事規則》《董事會議事規則》等規章制度，構建了股東大會、董事會及其專門委員會相互配合的公司治理結構和運作機制，推動公司治理體系的科學決策、規範運作及經營管理水平進一步提升。

公司董事會下設審核委員會、薪酬委員會、提名委員會等專門委員會，各專門委員會各司其職，監督董事會職責履行並助力其科學決策。公司設置3位獨立非執行董事，參與決策和監督，增強董事會決策的客觀性、科學性。

華虹半導體公司治理架構



2024年度環境、社會及管治報告

截至報告期末，公司董事會有9名成員，其中女性董事有1名。報告期內，公司召開董事會會議16次，審計議案58項。

信息披露

公司嚴格遵循中國證券監督管理委員會《上市公司信息披露管理辦法》等適用法律法規及相關要求，制定《信息披露管理制度》等相關文件，致力於確保信息披露的真實性、準確性、及時性、公平性和完整性，滿足利益相關方的信息需求。報告期內，公司嚴格遵守信息披露的相關規定，及時報告重要事項，並持續優化信息披露的質量和合規性。

公司通過披露董事及高級管理人員的持股計劃，規範董事及高管的持股行為。2023年8月，公司發佈《關於部分高級管理人員增持公司A股股份計劃的公告》，明確提及執行董事及高管的股份增持計劃，並於2024年1月4日實施完畢。公司高管通過集中競價方式累計增持公司A股53,618股，總金額達230.94萬元，增持後合計持股比例升至0.0275%。

投資者權益保障

公司高度重視股東權益保障，通過制定合理的利潤分配政策和分紅方案，積極回饋股東，致力於為投資者創造穩定的長期回報。公司設立投資者關係管理部門，與利益相關方保持積極溝通，主動回應投資者關注的重點問題，確保投資者的合理訴求得到妥善處理。

公司秉持「平等對待所有投資者」的原則，遵循「合規信息披露」的要求，以「誠信守則、互動溝通」為指引，通過多種渠道向資本市場傳遞公司經營、財務、產品技術及重大事項等信息，如股東大會、定期報告、投資者直線電話、上證e互動、投資人專用郵箱、線上線下交流會議、公司官網、微信公眾號等。

報告期內，公司共召開1次股東大會，共審計13項決議案。所有會議均面向全體股東開放，包括中小投資者，切實保障其參與權和知情權。此外，公司組織了4次業績交流會，與投資者進行深入溝通，增強透明度和信任度。

7.2 風險合規管理

公司重視風險合規管理，嚴格遵守運營所在地所適用的法律法規，密切監控法律法規頒佈變更、修訂情況，識別與公司運營生產相關條例，及時完善內部管理制度與外部法規的一致性，以確保符合法律法規要求。

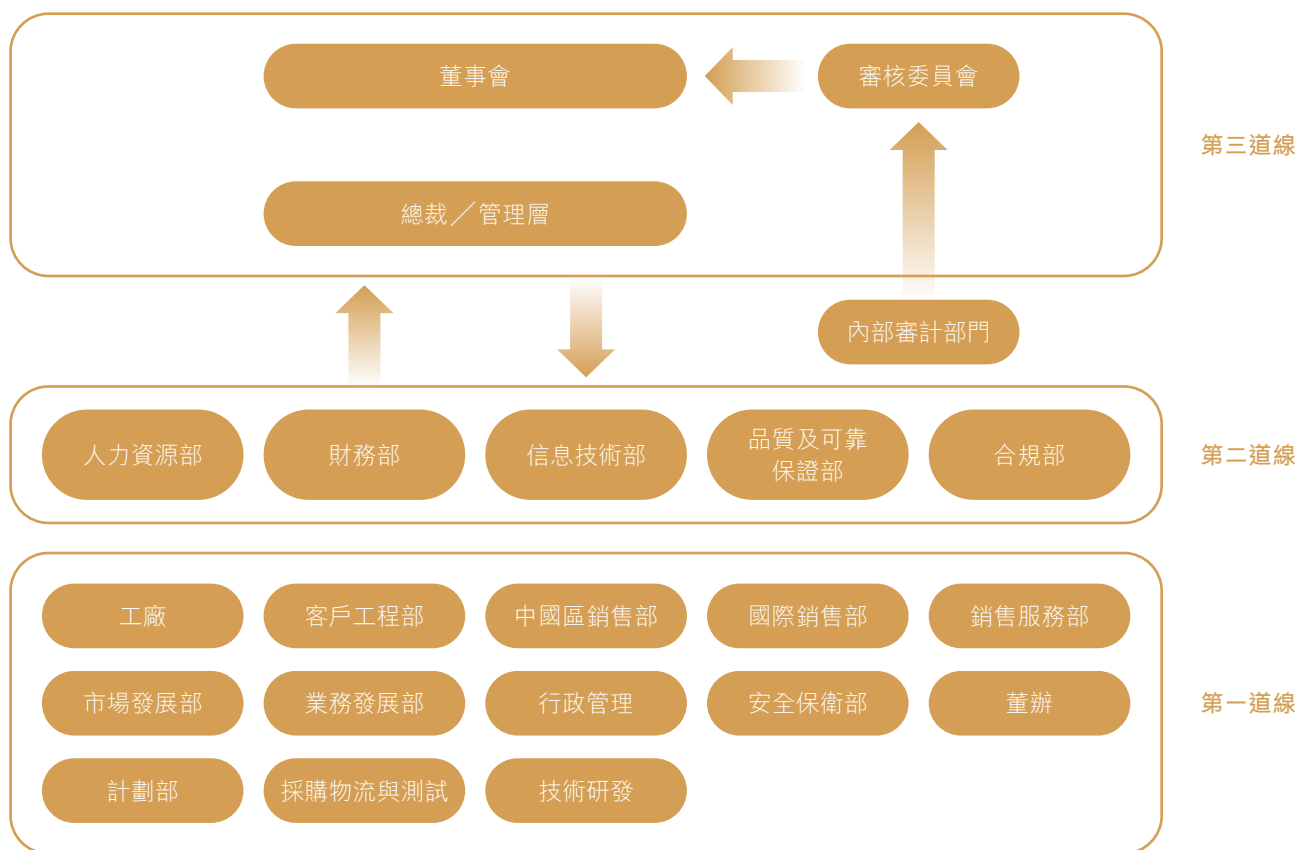
公司制定覆蓋全業務流程的《全面風險管理制度》，通過定期識別和分析風險清單，建立長效管理機制，分層次、分業務線開展風險防範，針對重點領域實施有效的風險管控措施。

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公司借鑒國際內審協會(IIA)「三線模型」，在審核委員會和管理層的授權下，搭建符合公司特色的風險管理體系，明確重大風險的分管領導、牽頭部門及職責分工。

華虹半導體經濟領域風險管理三道防線

組織治理機構(對利益相關方負責、承擔監督職責)



第一道線職能：為客戶提供產品／服務，管理風險；

第二道線職能：為風險相關的事務提供專業知識、支持、監督並提出合理質疑；

第三道線職能：對所有與實現目標相關的事務提供獨立和客觀的確認和建議。

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基於風險管理「三線模型」，公司堅持全面性與重要性相結合的原則，持續優化風險地圖，將部分同類風險因素整合歸類，修改並補充部分風險舉例，並辨析出公司59個主要風險因素，實現對公司內外部風險的全面防範與有效監督。

報告期內，公司在上海和無錫基地開展年度風險評估，設計風險調查問卷，通過一對一訪談、多部門座談、實地調研抽樣等多種方式，系統樹立並識別關鍵風險領域。

華虹半導體風險管理體系

管理流程	管理措施
風險評估	通過發放問卷、一對一訪談、多部門座談會等方式識別和樹立風險領域，對風險領域進行打分，形成年度風險管理報告。
風險上報	實行季度風險溝通上報機制，各業務條線每季度或不定期搜集並上報條線內風險事件。
溝通與培訓	不定期召開風險條線管理會議，開展風險培訓，溝通各業務條線及公司層面風險問題。

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華虹半導體風險應對機制

風險類別	風險內容	策略
運營	研究與開發	持續完善研發項目管理體系，對研發的立項、執行、後評估全方位監控，不斷提升項目經理能力，及時開發有商業價值的新技術、新產品
	產品結構	持續推動技術產品升級迭代，增加柔性產能，促進各工廠工藝互通，優化產品結構
	人才儲備及發展	建立人才簡歷數據庫、開展人才庫存、不斷探索招聘渠道、優化薪酬結構、完善配套福利政策，全面提升企業的吸引力和員工滿意度
	供應鏈	持續開發多元化供應渠道，確保供應鏈的穩定；針對各生產物料設置安全庫存值，定期審閱安全庫存值的合理性，高風險物料及時隨市場變化進行調整
	信息安全	建立信息安全框架和管理方針，每年度執行信息安全風險評估程序，同時通過DLP數據保護系統對各項關鍵信息進行持續監控，確保公司、股東、客戶、供貨商及公司員工的最佳利益得以保障
財務	匯率管控	公司秉承匯率風險中性的理念，通過幣種轉換、利率互換以及採用匯率風險管理產品等方式降低存量美元債務的匯率風險
環境及安全	安全檢查	持續並定期開展以隱患排查和設備故障診斷為主的安全檢查
	職業健康	公司根據安全健康環境管理體系目標指標及方案管理程序，制定環境職業健康安全目標、指標及方案管理表
	環境	公司根據環境因素識別、評價和控制策劃管理程序，列出重大環境因素清單

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7.3 商業道德

反商業賄賂及反貪污

公司始終致力於培養清廉、誠信、公平的企業文化，嚴格遵守《中華人民共和國刑法》《關於禁止商業賄賂行為的暫行規定》等法律法規及相關要求，制定《社會責任管理手冊》《反腐倡廉廉潔從業承諾制度》《廉潔從業談話辦法》等內部管理制度，確保在合作與日常經營中遵循高標準的廉潔原則。

公司將商業道德的戰略納入公司整體治理框架，管理層負責監督戰略的執行與落地，合規部、人力資源部和採購部等職能部門具體負責商業道德的管理與監督工作。

華虹半導體反貪污與反賄賂機制

要求全體員工(包括兼職員工)、高級管理人員、董事成員均遵守法律法規，廉潔奉公，勤勉自律，禁止任何形式的貪污與賄賂行為，包括：

- 制止商業賄賂行為，維護公平競爭秩序；
- 絕不利用職務和工作上的影響力謀取不正當利益；
- 絕不違反財務管理和使用規定，不假公濟私、不化公為私；
- 不弄虛作假，不損害公司合法權益和良好商譽；
- 不接受可能影響工作的禮品、禮金、有價證券和財務等。

公司在商業道德方面建立系統化的管理體系，以確保公司各項運營活動始終符合高標準的商業道德要求。公司定期對商業道德和反腐敗工作進行全面評估，覆蓋所有業務運營點。公司不僅評估反腐敗機制運行的有效性，同時還識別潛在的廉潔風險點，並提出改進措施。此外，公司還設立了商業道德的定期核查機制，確保道德政策與業務發展和行業規範保持一致。

公司致力於創造清廉的商業道德氛圍，在新入職員工中開展責任商業聯盟(RBA)行為準則培訓，強調廉潔經營等商業道德行為；組織反腐敗及商業道德培訓，覆蓋所有關鍵崗位的員工，推動廉潔文化的深入開展，塑造健康的工作環境。報告期內，公司在上海和無錫兩地舉行了廉潔從業責任書簽訂儀式，簽約對象為公司各部門的負責人及以上層級人員，旨在強化廉潔從業的責任落實，進一步優化公司風清氣正的企業氛圍。

公司鼓勵員工積極參與監督和舉報，以維護清正的工作環境，並提供郵件、電話及信箱等多個舉報渠道，員工可選擇實名或匿名舉報。公司始終保持開放態度，確保及時處理舉報信息，做到迅速發現和解決問題，防控風險。

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為保障舉報的公平性和透明度，公司已建立健全商業道德監督和舉報處理機制。所有舉報案件都會經過詳細調查，並在審議後向舉報人反饋處理結果。在保護舉報人方面，公司確保其信息嚴格保密，防止舉報人因採取合法途徑進行舉報而遭受解僱、降職、停職或任何形式的報復。

華虹半導體商業道德監督及舉報處理程序



截至報告期末，公司未發生商業賄賂或貪污相關事件以及訴訟案件。

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華虹半導體2024年商業道德指標與目標

2024 年目標	2024 年目標達成情況
所有供應商簽訂《反商業賄賂承諾書》	100%
全體關鍵崗位員工簽署《廉潔從業承諾書》	100%

反不正當競爭

華虹半導體嚴格遵守《中華人民共和國反不正當競爭法》等法律法規及相關要求，嚴厲禁止虛假宣傳、商業秘密侵犯、濫用市場優勢等不正當競爭行為，建立較完善的治理結構和內部監督管理程序，實施風險評估與合規審查流程，確保及時發現和糾正不正當競爭行為。同時，公司對員工進行了定期的培訓，強化法律合規意識，確保不正當競爭行為的預防和處置。

公司明確規定各部門的職責，確保對不正當競爭風險的有效識別和應對。同時，通過加強對市場和競爭環境的分析，定期評估可能的風險和機遇，並制定相應的策略進行調整。

截至報告期末，公司未發生不正當競爭訴訟或行政處罰的情況，也未在產品標籤使用和宣傳內容方面未出現任何違法或違規情況。

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8. 附錄

8.1 ESG數據表及附註

環境¹

績效指標	單位	2022 年	2023 年	2024 年
排放物				
廢氣排放總量	萬立方米	2,391,024	2,747,929	2,478,838
氮氧化物(NO _x)排放量	千克	32,650	33,719	35,333
二氧化硫(SO ₂)排放量	千克	3,546	5,252	4,013
廢水排放總量	萬立方米	832	898	970
有害廢棄物產生量 ²	噸	20,385	20,797	27,601
單位產品有害廢棄物產生量	千克／8英寸晶圓	4.88	5.29	6.07
無害廢棄物產生量 ²	噸	9,864	9,269	10,134
單位產品無害廢棄物產生量	千克／8英寸晶圓	2.36	2.36	2.23
資源使用				
綜合能源消耗量 ³	兆瓦時	1,065,002	1,168,170	1,272,331
單位產品綜合能源消耗量	兆瓦時／8英寸晶圓	0.25	0.30	0.28
其中，外購電力 ¹	兆瓦時	954,667	1,030,352	1,104,829
天然氣用量 ¹	立方米	10,530,287	11,048,312	11,630,543
汽油用量 ¹	升	—	43,949	43,923
柴油用量 ¹	升	—	15,911	21,244
外購熱力 ¹	吉焦	—	134,940	141,125
用水總量 ⁴	立方米	18,010,226	19,076,734	21,295,153
其中，來源於市政供水的水量	立方米	10,284,063	11,127,266	12,560,168
廢水回用	立方米	7,726,163	7,949,468	8,734,985
單位產品用水量 ⁵	立方米／8英寸晶圓	2.46	2.83	2.76
循環／再利用水量	立方米	107,163,560	126,544,660	148,470,458
成品出貨所用包裝材料的總量	噸	313.32	336.92	420.32
單位成品出貨所用包裝材料	千克／8英寸晶圓	0.07	0.09	0.09
成品出貨所用包裝材料的回收量	噸	54.90	66.33	84.71
溫室氣體排放				
溫室氣體排放量 ⁶	噸二氧化碳當量	497,938	537,070	562,487
其中，直接溫室氣體排放量	噸二氧化碳當量	24,877	22,881	25,331
間接溫室氣體排放量 ⁷	噸二氧化碳當量	473,060	514,189	537,156
單位產品溫室氣體排放量	噸二氧化碳當量／8英寸晶圓	0.12	0.14	0.12

註：

- 2023年無錫生產基地擴產項目投產，並於2024年擴大產能，因此2024年綜合能源消耗量、廢水排放總量、廢棄物產生量有所增加，但大部分單位產品的強度型績效指標有所減少。
- 有害廢棄物主要為廢異丙醇、廢酸、廢油、廢包裝物等。有害廢棄物主要為廢污泥、生活垃圾等。
- 綜合能耗涵蓋外購電力、天然氣、汽油、柴油、外購熱力。
- 用水總量=市政供水的用水量+廢水回用量。

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- 5 單位產品用水量的統計口徑僅包含市政供水。
- 6 溫室氣體排放所採取的統計口徑及核算依據遵循國家標準委《GB/T 32150工業企業溫室氣體排放核算和報告通則》及《GB/T 32151溫室氣體排放核算與報告要求》。
- 7 間接溫室氣體排放量上海、無錫廠區分別依據《上海市生態環境局關於調整本市溫室氣體排放核算指南相關排放因子數值的通知》及中國生態環境部《關於發佈2022年電力二氧化碳排放因子的公告》(2024年12月)計算。2024年，上海廠區採用電力排放因子缺省值0.42 tCO₂/MWh，無錫廠區採用全國平均電網排放因子0.5366 tCO₂/MWh進行計算。

僱傭與勞務實踐

績效指標	單位	2022年	2023年	2024年
員工僱傭				
全職員工總數	人	6,760	6,863	7,487
按性別劃分				
男性員工	人	4,932	5,039	5,525
女性員工	人	1,828	1,824	1,962
按僱傭類型劃分				
勞動合同制員工	人	6,760	6,863	7,487
勞務派遣制員工(不計入全職員工總數)	人	81	53	49
兼職員工	人	0	0	0
按年齡劃分				
小於30歲員工	人	2,983	2,894	3,228
30-50歲員工	人	3,624	3,811	4,091
大於50歲員工	人	153	158	168
按級別劃分				
基層員工	人	—	—	7,361
管理層員工	人	—	—	126
按學歷劃分				
擁有研究生及以上學歷的員工	人	—	—	1,987
擁有本科學歷的員工	人	—	—	2,662
擁有本科以下學歷的員工	人	—	—	2,838
按地區劃分				
在中國大陸工作的員工	人	6,751	6,855	7,479
在港澳台及海外工作的員工	人	9	8	8
員工流失率 ¹	%	12.0	10.0	11.2
按性別劃分				
女性員工	%	9.7	7.1	6.3
男性員工	%	12.8	11.3	12.5
按年齡劃分				
小於30歲員工	%	18.3	14.0	17.2
30-50歲員工	%	7.2	7.5	6.3
大於50歲員工	%	0.7	1.9	1.2
按地區劃分				
在中國大陸工作的員工	%	12.0	10.0	11.2
在港澳台及海外工作的員工	%	0.0	9.7	0.0

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績效指標	單位	2022 年	2023 年	2024 年
健康與安全²				
員工職業病發病率	%	0	0	0
參加職業病體檢的員工覆蓋率	%	100	100	100
因公亡故的人數	人	0	0	0
因公亡故的比例	%	0	0	0
因工傷損失工作天數	天	83	61	126
員工培訓				
全職員工人均接受培訓時長 ³	小時	122.2	133.7	137.3
按級別劃分	基層員工人均培訓時長	123.7	135.6	139.1
	管理層員工人均培訓時長	26.5	31.6	29.3
按性別劃分	女性員工人均培訓時長	124.3	125.1	119.6
	男性員工人均培訓時長	121.4	136.8	143.6
全職員工受訓覆蓋率 ⁴	%	100	100	100
按級別劃分	基層員工受訓覆蓋率	100	100	100
	管理層員工受訓覆蓋率	100	100	100
按性別劃分	女性員工受訓覆蓋率	100	100	100
	男性員工受訓覆蓋率	100	100	100
員工培訓總支出	萬元人民幣	—	—	195
員工權益				
	員工勞動合同簽訂率	%	100	100
	員工社會保險覆蓋率	%	100	100
	員工歧視事件發生數	件	0	0
	員工工傷保險投入金額	萬元人民幣	—	963
	員工工傷保險覆蓋率	%	100	100

註：

- 1 各類別員工流失率=年內該類別員工流失人數／年末該類別員工人數。
- 2 參加職業病體檢的員工覆蓋率統計口徑為報告期末職業風險崗位的員工。報告期內，公司發生3起工傷事件，已針對性加強防護教育，包括當事部門全員的安全培訓教育、現場工程控制措施等。
- 3 各類別員工人均接受培訓時長=該類別員工接受培訓的總小時數／年末該類別員工人數。
- 4 各類別員工受訓覆蓋率=接受培訓的該類別員工人數／年末該類別員工人數。

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產品責任與客戶服務

績效指標	單位	2022年	2023年	2024年
產品責任與客戶服務				
報告期內違反產品和服務有關法律法規的事件數	件	0	0	0
產品退貨率	%	0.11	0.087	0.037
已售產品因安全與健康問題回收的比例	%	0	0	0
客戶服務				
接獲關於產品及服務的投訴數目	件	0	4	2
客戶投訴辦結率 ¹	%	–	100	100

註：

1 客戶投訴辦結率=已辦結的客戶投訴數目／接獲關於產品及服務的投訴數目*100%。

信息安全與隱私保護

指標名稱	單位	2022年	2023年	2024年
經證實的洩露、盜竊或丟失客戶資料的事件數	件	0	0	0
數據安全事件涉及的金額	萬元人民幣	0	0	0
客戶隱私洩露事件涉及的金額	萬元人民幣	0	0	0

供應鏈管理

績效指標	單位	2022年	2023年	2024年
供應商總數	家	551	561	581
按區域劃分				
中國大陸供應商總數	家	413	420	436
港澳台及海外供應商總數	家	138	141	145
接受評估的供應商數目 ¹	家	112	114	139
要求整改的供應商數目	家	0	0	0
原輔料供應商簽訂 《環保承諾書》的百分比	%	100	100	100
原材料採購本土化比例 ²	%	31	32	36

註：

1 指公司對其實施了勞工、健康、環境、道德方面的評估的供應商數目。

2 原材料採購包括：硅片、石英、靶材、氣體、化學品等生產原材料。

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反貪污

績效指標	單位	2022 年	2023 年	2024 年
於匯報期內對發行人或其僱員提出並已審結的貪污訴訟案件的數目	件	0	0	0
員工接受反貪污培訓的累計時長	小時	/	2,542	2,245
員工人均接受反貪污培訓的時長 ¹	小時	/	/	1.2

註：

- 1 接受反貪污培訓員工包括所有新進員工及關鍵崗位員工。員工人均接受反貪污培訓的時長=新進員工及關鍵崗位員工接受培訓時長/新進員工及關鍵崗位員工人數。

社區投資

績效指標	單位	2022 年	2023 年	2024 年
員工參與志願服務的人數	人	4,189	1,108	1,100
志願者活動累計時長	小時	6,283	1,364	1,212
社區投入	元	—	50,000	50,000

經濟績效

績效指標	單位	2022 年	2023 年	2024 年
每股社會貢獻值 ¹	元	5.46	3.59	1.87

註：

- 1 每股社會貢獻值=(公司淨利潤+年內為國家創造的稅收+向員工支付的工資+向銀行等債權人給付的借款利息+對外捐贈額等為其他利益相關者創造的價值額 - 因環境污染等造成的其他社會成本)/公司股份總數。

8.2 公司遵守的法律法規列表

領域	法律法規名稱
環境責任	
環境管理	《中華人民共和國環境保護法》《中華人民共和國環境影響評價法》《中華人民共和國清潔生產促進法》《中華人民共和國環境保護稅法》等
排放與廢棄物管理	《中華人民共和國大氣污染防治法》《中華人民共和國水污染防治法》《中華人民共和國固體廢物污染環境防治法》《廢棄電器電子產品回收處理管理條例》《排污許可管理條例》等
能源和資源管理	《中華人民共和國節約能源法》《中華人民共和國能源法》《中華人民共和國可再生能源法》《中華人民共和國循環經濟促進法》《節約用水條例》等
產品質量	《中華人民共和國產品質量法》《中華人民共和國反不正當競爭法》、歐盟《關於化學品註冊、評估、許可和限制》(簡稱「REACH」)、《關於報廢電子電氣設備指令》(簡稱「WEEE」)、關於限制在電子電器設備中使用某些有害成份的指令(簡稱「RoHS」)等

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信息安全與隱私保護	《中華人民共和國網絡安全法》《中華人民共和國數據安全法》《中華人民共和國個人信息保護法》 《中華人民共和國密碼法》《計算機軟件保護條例》《網絡數據安全管理條例》
知識產權保護	《中華人民共和國專利法》《中華人民共和國著作權法》《中華人民共和國商標法》《中華人民共和國專利法實施細則》《國家科學技術獎勵條例》等

員工責任

員工權益	《中華人民共和國勞動法》《中華人民共和國勞動合同法》《中華人民共和國社會保險法》《中華人民共和國婦女權益保障法》《中華人民共和國職業教育法》《禁止使用童工規定》
職業健康與安全	《中華人民共和國職業病防治法》《中華人民共和國安全生產法》《中華人民共和國特種設備安全法》《工傷保險條例》《使用有毒物品作業場所勞動保護條例》《女職工勞動保護特別規定》《生產安全事故應急條例》等

公司治理

公司治理	《中華人民共和國公司法》《中華人民共和國證券法》、香港《公司條例》等

8.3 對標索引表

香港聯合交易所《環境、社會及管治報告指引》(2023年12月31日起生效版)

B部分：強制披露規定

強制披露項	報告章節
管治架構	ESG管理體系
匯報原則	報告編製說明
匯報範圍	報告編製說明

C部分：「不遵守就解釋」條文

層面、一般披露及關鍵績效指標	報告章節
主要範疇A.環境	
層面A1.排放物	
一般披露A1	排放與廢棄物管理
KPI A1.1	排放與廢棄物管理
	ESG數據表及附註
KPI A1.2	ESG數據表及附註

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層面、一般披露及關鍵績效指標	報告章節
KPI A1.3	ESG數據表及附註
KPI A1.4	ESG數據表及附註
KPI A1.5	排放與廢棄物管理
	ESG管理策略與目標
KPI A1.6	排放與廢棄物管理
	ESG管理策略與目標
層面A2.資源使用	
一般披露A2	能源管理
	水資源管理
KPI A2.1	ESG數據表及附註
KPI A2.2	ESG數據表及附註
KPI A2.3	能源管理
	ESG管理策略與目標
KPI A2.4	水資源管理
	ESG管理策略與目標
KPI A2.5	ESG數據表及附註
層面A3.環境及天然資源	
一般披露A3	環境管理
	水資源管理
	循環經濟
KPI A3.1	水資源管理
	循環經濟
層面A4.應對氣候變化	
一般披露A4	氣候變化減緩與適應
KPI A4.1	氣候變化減緩與適應
主要範疇B.社會僱傭及勞工常規	
層面B1.僱傭	
一般披露B1	員工權益與福利
KPI B1.1	ESG數據表及附註
KPI B1.2	ESG數據表及附註
層面B2.健康與安全	
一般披露B2	員工健康與安全
KPI B2.1	ESG數據表及附註
KPI B2.2	ESG數據表及附註
KPI B2.3	員工健康與安全
層面B3.發展及培訓	
一般披露B3	員工發展與培訓
KPI B3.1	ESG數據表及附註

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層面、一般披露及關鍵績效指標	報告章節
KPI B3.2	ESG數據表及附註
層面B4.勞工準則	
一般披露B4	員工權益與福利
KPI B4.1	員工權益與福利
KPI B4.2	員工權益與福利
主要範疇B.社會營運慣例	
層面B5.供應鏈管理	
一般披露B5	可持續供應鏈管理
KPI B5.1	ESG數據表及附註
KPI B5.2	可持續供應鏈管理
KPI B5.3	可持續供應鏈管理
KPI B5.4	可持續供應鏈管理
層面B6.產品責任	
一般披露B6	產品和服務安全與質量
KPI B6.1	產品和服務安全與質量
KPI B6.2	產品和服務安全與質量
	ESG數據表及附註
KPI B6.3	研發創新與知識產權保護
KPI B6.4	產品和服務安全與質量
KPI B6.5	信息安全與隱私保護
層面B7.反貪污	
一般披露B7	商業道德
KPI B7.1	ESG數據表及附註
KPI B7.2	商業道德
KPI B7.3	商業道德
層面B8.社區投資	
一般披露B8	社區與公益
KPI B8.1	社區與公益
KPI B8.2	ESG數據表及附註

《上海證券交易所上市公司自律監管指引第14號 – 可持續發展報告(試行)》(2024年4月)

披露要求	對應的本報告章節
應對氣候變化	氣候變化減緩與適應
污染物排放	排放與廢棄物管理
廢棄物處理	排放與廢棄物管理

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披露要求	對應的本報告章節
生態系統和生物多樣性保護	在生物多樣性保護方面，公司四個工廠均位於工業地塊內，不涉及生態保護紅線、水源地保護區等管控要求。
環境合規管理	環境管理
能源利用	能源管理
水資源利用	水資源管理
循環經濟	循環經濟
鄉村振興	社區與公益
社會貢獻	社區與公益
創新驅動	研發創新與知識產權保護
科技倫理	公司核心業務集中於半導體晶圓的生產製造，不涉及該議題。
供應鏈安全	可持續供應鏈管理
平等對待中小企業	截止2024年底，公司應付賬款(含應付票據)餘額不超過人民幣300億元或佔總資產的比重超過50%。
產品和服務安全與質量	產品和服務安全與質量
數據安全與客戶隱私保護	信息安全與隱私保護
員工	員工權益與福利
	員工健康與安全
	員工發展與培訓
盡職調查	利益相關方溝通、盡職調查
利益相關方溝通	利益相關方溝通、盡職調查
反商業賄賂及反貪污	商業道德
反不正當競爭	商業道德
自主披露的議題	綠色產品
	清潔技術機遇
	風險合規管理
	公司治理

2024年度環境、社會及管治報告

上海市國有控股上市公司環境、社會與治理(ESG)指標體系(1.0版)索引表

關鍵績效指標		報告章節
E環境		
E1環境管理		
E1.1	環境管理目標和制度	ESG管理策略和目標 環境管理
E1.2	通過環境管理體系認證	環境管理
E1.3	綠色產品研發與環保技術使用	綠色產品 清潔技術機遇
E1.4	環保總投入	環境管理
E1.5	環保培訓績效	環境管理
E2能源		
E2.1	能源管理目標和規劃	ESG管理策略和目標 能源管理
E2.2	節約能源舉措	能源管理
E2.3	可再生能源開發與應用	能源管理
E2.4	能源消耗總量	ESG數據表及附註
E3資源		
E3.1	資源管理體系和規劃	水資源管理 循環經濟
E3.2	水資源目標和規劃	水資源管理
E3.3	節約用水舉措	水資源管理
E3.4	年度用水總量	ESG數據表及附註
E3.5	其他資源使用管理	綠色產品
E4污染物		
E4.1	廢水管理目標和規劃	ESG管理策略和目標 排放與廢棄物管理
E4.2	減少廢水排放舉措	排放與廢棄物管理
E4.3	廢水循環使用量	ESG數據表及附註
E4.4	廢水污染物排放量	ESG數據表及附註
E4.5	廢氣管理目標和規劃	ESG管理策略和目標 排放與廢棄物管理
E4.6	減少廢氣排放舉措	排放與廢棄物管理
E4.7	廢氣污染物排放量	ESG數據表及附註

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關鍵績效指標		報告章節
E4.8	固體廢棄物管理目標和規劃	ESG管理策略和目標 排放與廢棄物管理
E4.9	固體廢棄物處理舉措	排放與廢棄物管理
E4.10	固體廢棄物排放量	ESG數據表及附註
E4.11	固體廢棄物回收、利用、處置量	ESG數據表及附註
E4.12	其他污染物管理	公司採取建築隔音、設備加裝減震裝置等噪聲防控措施。
E5氣候變化		
E5.1	識別氣候變化風險，以及建立應對氣候變化的目標、戰略	ESG管理策略和目標 氣候變化減緩與適應
E5.2	助力「雙碳」目標的舉措	氣候變化減緩與適應
E5.3	碳核查／盤查舉措	氣候變化減緩與適應
E5.4	溫室氣體排放量	ESG數據表及附註
E6生物多樣性		
E6.1	生物多樣性保護制度	在生物多樣性保護方面，公司四個工廠均位於工業地塊內，不涉及生態保護紅線、水源地保護區等管控要求。
E6.2	生物多樣性保護舉措	
S社會		
S1產品和服務		
S1.1	產品安全與質量管理制度	產品和服務安全與質量
S1.2	通過產品質量管理體系認證	產品和服務安全與質量
S1.3	產品研發創新	研發創新與知識產權保護
S1.4	知識產權保護	研發創新與知識產權保護
S1.5	客戶信息保護和隱私	信息安全與隱私保護
S1.6	客戶服務管理制度	產品和服務安全與質量
S1.7	負責任宣傳	產品和服務安全與質量
S1.8	客戶投訴量／投訴解決率	產品和服務安全與質量
S1.9	客戶滿意度	產品和服務安全與質量

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關鍵績效指標		報告章節
S2員工責任		
S2.1	員工僱傭和員工組成	員工權益與福利
S2.2	員工流失率	ESG數據表及附註
S2.3	員工民主管理	員工權益與福利
S2.4	薪酬與福利體系	員工權益與福利
S2.5	員工關愛	員工權益與福利
S2.6	員工滿意度	員工權益與福利
S2.7	員工職業健康安全管理	員工健康與安全
S2.8	通過職業健康安全管理體系認證	員工健康與安全
S2.9	安全应急管理舉措	員工健康與安全
S2.10	安全生產投入總額	員工健康與安全
S2.11	安全生產培訓績效	員工健康與安全
S2.12	因工受傷和死亡	ESG數據表及附註
S2.13	員工體檢覆蓋率	ESG數據表及附註
S2.14	員工職業發展制度	員工發展與培訓
S2.15	員工培訓和實踐舉措	員工發展與培訓
S2.16	員工發展的成效	員工發展與培訓
S3供應鏈責任		
S3.1	供應商管理制度	可持續供應鏈管理
S3.2	供應商ESG審查	可持續供應鏈管理
S4社區責任		
S4.1	開展公益慈善活動	社區與公益
S4.2	公益慈善投入	ESG數據表及附註
S4.3	志願服務績效	ESG數據表及附註
S5企業責任		
S5.1	服務國家或上海市戰略	研發創新與知識產權保護 清潔技術機遇 社區與公益
S5.2	應對公共危機	氣候變化減緩與適應
S5.3	信息安全	信息安全與隱私保護
S5.4	公共服務	社區與公益
S5.5	稅務貢獻	《華虹半導體有限公司2024年年度報告》 (A股)財務報告章節

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關鍵績效指標		報告章節
G 治理		
G1 公司治理		
G1.1	黨的領導	《華虹半導體有限公司2024年年度報告》 (A股)環境、社會責任和其他公司治理章 節
G1.2	董事長／總經理分設	董事長與總經理分設
G1.3	董事佔比	公司治理
G1.4	合規管理體系	風險合規管理
G1.5	風險管理體系	風險合規管理
G1.6	審計制度	商業道德
G1.7	避免違反商業道德的舉措	商業道德
G1.8	反壟斷與公平競爭	商業道德
G2 ESG 治理		
G2.1	董事會參與ESG管理	董事會ESG管理聲明 ESG管理架構
G2.2	ESG工作組織架構	ESG管理架構
G2.3	ESG戰略／目標	ESG管理策略和目標
G2.4	ESG利益相關方識別	利益相關方溝通、盡職調查
G2.5	實質性議題識別	雙重重要性分析
G2.6	ESG相關制度	ESG管理架構
G2.7	開展利益相關方溝通活動	利益相關方溝通、盡職調查
G2.8	管理層薪酬同ESG績效掛鉤	環境、安全、研發等目標與管理層薪酬掛 鉤
G2.9	具體業務考慮ESG要素	氣候變化減緩與適應 清潔技術機遇
G3 數據治理		
G3.1	基礎平台建設	員工健康與安全 研發創新與知識產權保護
G3.2	數據匯聚互通	生產、環境、採購數據在公司內網中保 持，因商業秘密原因設置訪問權限，與外 網形成物理隔離。
G3.3	數據治理體系	不涉及

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To the members of Hua Hong Semiconductor Limited
(Incorporated in Hong Kong with limited liability)

致華虹半導體有限公司列位股東
(於香港註冊成立之有限公司)

Opinion

We have audited the consolidated financial statements of Hua Hong Semiconductor Limited (the "Company") and its subsidiaries (the "Group") set out on pages 302 to 411 which comprise the consolidated statement of financial position as at 31 December 2024, and the consolidated statement of profit or loss, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including material accounting policy information.

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2024, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards ("HKFRSs") issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA") and have been properly prepared in compliance with the Hong Kong Companies Ordinance.

意見

吾等已審核華虹半導體有限公司(「貴公司」)及其子公司(「貴集團」)載於第302至411頁的綜合財務報表，當中包括於二零二四年十二月三十一日的綜合財務狀況表，以及截至該日止年度的綜合損益表、綜合全面收益表、綜合權益變動表及綜合現金流量表，以及綜合財務報表附註(包括重大會計政策資料)。

吾等認為，該等綜合財務報表已根據香港會計師公會(「香港會計師公會」)頒佈的香港財務報告準則(「香港財務報告準則」)真實而公平地反映貴集團於二零二四年十二月三十一日的綜合財務狀況，及其截至該日止年度的綜合財務表現及綜合現金流量，並已按照香港公司條例妥為編製。

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Basis for opinion

We conducted our audit in accordance with Hong Kong Standards on Auditing (“HKSA”) issued by the HKICPA. Our responsibilities under those standards are further described in the *Auditor’s responsibilities for the audit of the consolidated financial statements* section of our report. We are independent of the Group in accordance with the HKICPA’s *Code of Ethics for Professional Accountants* (the “Code”), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

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

We have fulfilled the responsibilities described in the *Auditor’s responsibilities for the audit of the consolidated financial statements* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

意見的基礎

吾等已根據香港會計師公會頒佈的香港審計準則(「香港審計準則」)進行審計。根據該等準則，吾等的責任於本報告核數師就審計綜合財務報表承擔的責任一節進一步闡述。根據香港會計師公會專業會計師道德守則(「守則」)，吾等獨立於貴集團，並已遵循守則履行其他道德責任。吾等相信，吾等所獲得的審計憑證能充足和適當地為吾等的意見提供基礎。

關鍵審計事項

關鍵審計事項是根據吾等的專業判斷，認為對本期綜合財務報表的審計最為重要的事項。這些事項是在對綜合財務報表整體進行審計並形成意見的背景下進行處理的，吾等不對這些事項提供單獨的意見。吾等對下述每一事項在審計中是如何應對的描述也以此為背景。

吾等已經履行本報告核數師就審計綜合財務報表承擔的責任一節所述的責任，包括有關該等事項的責任。因此，吾等的審計包括執行為應對綜合財務報表重大錯誤陳述風險的評估而設計的程序。吾等執行審計程序的結果，包括應對以下事項所執行的程序，為吾等就隨附的綜合財務報表的審計意見提供基礎。

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Key audit matters (continued)

Key audit matter	How our audit addressed the key audit matter

Impairment of long-term assets

As at 31 December 2024, management made a judgement that a certain cash-generating unit ("CGU") with a carrying amount of US\$2,464 million, representing a significant proportion of the Group's total assets, had indicators of impairment and engages an external expert to perform an impairment test using the discounted cash flow method to estimate its recoverable amount. This matter was significant to our audit because the carrying amount of long-lived assets was material to the consolidated financial statements and the impairment test process was complex and involved significant judgements.

The Group's disclosures about the impairment of long-lived assets are included in notes 3 and 13 to the financial statements.

Our audit procedures included, among others, evaluating the competence, capabilities and objectivity of the independent external valuer engaged by the Group and involving our internal specialists to assist us in evaluating the methodology of the impairment test and key assumptions such as the discounted rate, evaluating the other key assumptions, in particular, the projection period length, revenue growth rate, gross profit margin and net profit margin, and reviewing relevant disclosures in the consolidated financial statements.

關鍵審計事項(續)

關鍵審計事項	關鍵審計事項在審計中是如何應對的

長期資產減值

於二零二四年十二月三十一日，管理層判斷賬面值為2,464百萬美元的若干現金產生單位（「現金產生單位」）（相當於貴集團大部分資產總值）存在減值跡象，並委聘外部專家採用貼現現金流量法進行減值測試，估計其可收回金額。該事項對吾等的審計而言屬重大，原因是長期資產的賬面值對綜合財務報表而言屬重要，且減值測試過程複雜並涉及重大判斷。

貴集團有關長期資產減值的披露載於財務報表附註3及13。

吾等的審計程序包括（其中包括）評估貴集團所委聘的獨立外部估值師的資質、能力及客觀性，邀請內部專家協助吾等評估減值測試的方法及貼現率等關鍵假設；評估其他關鍵假設，特別是預測期長度、收入增長率、毛利率及淨利率；以及審查綜合財務報表中的相關披露。

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Key audit matters (continued)

Key audit matter	How our audit addressed the key audit matter

Fair value of an unlisted equity investment

The Group's equity investments designated at fair value through other comprehensive income as at 31 December 2024 included an unlisted equity investment amounting to US\$269 million. The Group measures the unlisted equity investment at fair value at the end of each reporting period and engages an external expert to assess its fair value. During the year, this matter was significant to our audit because the carrying amount of the unlisted equity investment was material to the consolidated financial statements and the valuation process was complex and involved significant judgements.

The Group's disclosures about the valuation of the unlisted equity investment are included in notes 3, 18 and 37 to the financial statements, which explain the key assumptions that management used in the valuation.

Our audit procedures included, among others, assessing the competence, capabilities and objectivity of the independent external valuer engaged by the Group and involving our internal specialists to assist us in evaluating the methodology of the valuation and the key assumptions used in the valuation such as the determination of comparable public companies (peers), selection of the price multiple and estimation of the discount for illiquidity.

關鍵審計事項(續)

關鍵審計事項	關鍵審計事項在審計中是如何應對的

未上市股權投資之公平值

於二零二四年十二月三十一日，貴集團指定按公平值計入其他全面收益的股權投資包括未上市股權投資269百萬美元。貴集團於各報告期末按公平值對該未上市股權投資進行計量並聘請外部專家評估其公平值。於年內，該事項對吾等的審計而言屬重大，乃由於未上市股權投資的賬面值對綜合財務報表而言屬重要，且估值過程複雜，並涉及重大判斷。

貴集團關於評估未上市股權投資的披露載於財務報表附註3、18及37，其中說明管理層於評估時使用的關鍵假設。

吾等的審計程序包括(其中包括)評估貴集團所委聘的獨立外部估值師的資質、能力及客觀性及在內部專家的協助下，評估於評估時使用的估值方法及關鍵假設，如確定比較上市公司(同業)、選擇價格倍數及缺乏流通性的折讓價之估計。

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Key audit matters (continued)

Key audit matter	How our audit addressed the key audit matter

Fair value of an investment property

The Group recognised an investment property amounting to US\$164 million as at 31 December 2024. The Group measures its investment property at fair value at the end of each reporting period and engages external experts to assess its fair value. During the year, this matter was significant to our audit because the carrying amount of the investment property was material to the consolidated financial statements and the valuation process was complex and involved significant judgements.

The Group's disclosures about the valuation of the investment property are included in notes 3 and 14 to the financial statements, which explain the key assumptions that management used in the valuation.

Our audit procedures included, among others, assessing the competence, capabilities and objectivity of the independent external valuers engaged by the Group, comparing property-related data used for the valuation with the underlying documentation and involving our internal specialists to assist us in evaluating the methodology of the valuation and the key assumptions used in the valuation such as the estimated rental value, term yield, reversionary yield and long-term vacancy rate, and reviewing relevant disclosures in the consolidated financial statements.

關鍵審計事項(續)

關鍵審計事項	關鍵審計事項在審計中是如何應對的

一項投資物業的公平值

於二零二四年十二月三十一日，貴集團確認的投資物業金額為164百萬美元。貴集團於各報告期末按公平值計量其投資物業，並委聘外部專家評估其公平值。於年內，該事項對吾等的審計而言屬重大，因為投資物業的賬面值對綜合財務報表而言屬重要，且估值過程複雜並涉及重大判斷。

貴集團對投資物業估值的披露載於財務報表附註3及14，其中解釋管理層於估值中使用的關鍵假設。

吾等的審計程序包括(其中包括)評估貴集團所委聘的獨立外部估值師的資質、能力及客觀性，將估值所用的物業相關資料與相關文件進行比較，並邀請內部專家協助吾等評估估值方法及於估值中使用的關鍵假設，如估計租賃價值、年期回報率、復歸回報率及長期空置率並審閱綜合財務報表的相關披露。

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Other information included in the Annual Report

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

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

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the directors for the consolidated financial statements

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

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

The directors of the Company are assisted by the Audit Committee in discharging their responsibilities for overseeing the Group's financial reporting process.

年報所載的其他資料

貴公司董事須對其他資料負責。其他資料包括年報所載資料(綜合財務報表及吾等就此發出的核數師報告除外)。

吾等對綜合財務報表的意見並不涵蓋其他資料，吾等亦不會就其發表任何形式的鑒證結論。

就審計綜合財務報表而言，吾等的責任是閱讀其他資料，及在此過程中，考慮其他資料是否與綜合財務報表或吾等在審計過程中所了解的情況有重大不符，或者似乎有重大錯誤陳述。倘吾等基於已進行的工作認為其他資料出現重大錯誤陳述，吾等須報告有關事實。就此，吾等並無報告事項。

董事對綜合財務報表須承擔的責任

貴公司董事須負責根據香港會計師公會頒佈的香港財務報告準則和香港公司條例編製綜合財務報表以作出真實而公平的反映，並落實董事認為必須之內部控制，以使綜合財務報表之編製不存在由於欺詐或錯誤而導致的重大錯誤陳述。

在編製綜合財務報表時，貴公司董事負責評估貴集團持續經營的能力，並在適用情況下披露與持續經營有關的事項，以及使用持續經營為會計基礎，除非貴公司董事有意將貴集團清盤或停止經營，或別無其他實際的替代方案。

審核委員會協助貴公司董事履行監督貴集團財務報告過程的責任。

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獨立核數師報告

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Our report is made solely to you, as a body, in accordance with section 405 of the Hong Kong Companies Ordinance, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSA's will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with HKSA's, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

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

核數師就審計綜合財務報表承擔的責任

吾等的目標，是對綜合財務報表整體是否不存在由於欺詐或錯誤而導致的重大錯誤陳述取得合理保證，並出具包括吾等意見的核數師報告。吾等按照香港公司條例第405條僅向整體股東報告，除此之外本報告別無其他目的。吾等不會就本報告的內容向任何其他人士負上或承擔責任。

合理保證是高水平的保證，但不能保證按照香港審計準則進行的審計總能發現存在的重大錯誤陳述。錯誤陳述可以由欺詐或錯誤引起，如果合理預期它們單獨或匯總起來可能影響綜合財務報表使用者依賴綜合財務報表所作出的經濟決定，則有關的錯誤陳述可被視作重大。

吾等根據香港審計準則進行審計的工作之一，是運用專業判斷，在整個審計過程中保持專業懷疑態度。吾等亦：

- 識別及評估綜合財務報表由於欺詐或錯誤而導致的重大錯誤陳述風險，因應該等風險設計及執行審計程序，以及獲得充足及適當的審計憑證為吾等的意見提供基礎。由於欺詐涉及合謀串通、偽造、故意遺漏、誤導性陳述或凌駕於內部控制之上，因此未能發現由此造成的重大錯誤陳述風險比未能發現由於錯誤而導致的重大錯誤陳述風險更高。
- 了解與審計有關的內部控制，以設計恰當的審計程序，但並非旨在對貴集團內部控制的有效性發表意見。
- 評估所用會計政策的恰當性，以及董事所作出的會計估算和相關披露的合理性。

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獨立核數師報告

Auditor's responsibilities for the audit of the consolidated financial statements (continued)

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

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

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

核數師就審計綜合財務報表承擔的責任(續)

- 總結董事採用以持續經營為基礎的會計法的恰當性，並根據已獲取的審計憑證，總結是否有可能對貴集團持續經營能力構成重大疑問的事件或情況等重大不確定因素。倘若吾等總結認為有重大不確定因素，吾等需要在核數師報告中提請注意綜合財務報表內的相關披露，或如果相關披露不足，則修訂吾等的意見。吾等的結論是基於截至核數師報告日期所獲得的審計憑證。然而，未來事件或情況可能導致貴集團不再具有持續經營的能力。
- 評估綜合財務報表(包括披露)的整體列報、架構和內容，以及綜合財務報表是否中肯反映相關交易及事項。
- 計劃及進行集團審計，以就貴集團內實體或業務單位的財務資料獲取充足、適當的審計憑證，作為對綜合財務報表發表意見的基礎。吾等負責指導、監督和審閱為集團審計而執行的審計工作。我們為審計意見承擔全部責任。

吾等就(其中包括)審計工作的計劃範圍和時間以及重大審計發現(包括吾等在審計過程中發現的任何內部控制的重大缺失)與審核委員會進行溝通。

吾等亦向審核委員會提交聲明，確認吾等已遵守有關獨立性的道德要求，並就所有被合理認為可能影響吾等獨立性的關係和其他事宜以及為消除威脅而採取的行動或應用的保障措施(如適用)，與審核委員會進行溝通。

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獨立核數師報告

Auditor's responsibilities for the audit of the consolidated financial statements (continued)

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

The engagement partner on the audit resulting in this independent auditor's report is Lawrence K.W. Lau.

Ernst & Young
Certified Public Accountants
Hong Kong
27 March 2025

核數師就審計綜合財務報表承擔的責任(續)

吾等通過與審核委員會溝通，確定哪些是本期綜合財務報表審計工作的最重要事項，即關鍵審計事項。除非法律或法規不容許公開披露此等事項或在極罕有的情況下，吾等認為披露此等事項可合理預期的不良後果將超過公眾知悉此等事項的利益而不應在報告中予以披露，否則吾等會在核數師報告中描述此等事項。

出具本獨立核數師報告的審計項目合夥人為劉國華。

安永會計師事務所
執業會計師
香港
二零二五年三月二十七日

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

綜合損益表

Year ended 31 December 2024
截至二零二四年十二月三十一日止年度

		Notes 附註	2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Revenue	銷售收入	5	2,003,993	2,286,113
Cost of sales	銷售成本		(1,798,865)	(1,799,017)
Gross profit	毛利		205,128	487,096
Other income and gains	其他收入及收益 投資物業的公平值	5	149,072	144,370
Fair value (loss)/gain on an investment property	(虧損)/收益		(39)	103
Selling and distribution expenses	銷售及分銷費用		(9,628)	(10,189)
Administrative expenses	管理費用		(351,276)	(322,868)
Other expenses	其他費用	5	(33,395)	(33,666)
Finance costs	財務費用	7	(97,113)	(100,497)
Share of profits of associates	分佔聯營公司溢利		3,459	9,230
(LOSS)/PROFIT BEFORE TAX	稅前(虧損)/溢利	6	(133,792)	173,579
Income tax expense	所得稅開支	10	(6,593)	(47,154)
(LOSS)/PROFIT FOR THE YEAR	年內(虧損)/溢利		(140,385)	126,425
Attributable to:	下列人士應佔:			
Owners of the parent	母公司擁有人		58,108	280,034
Non-controlling interests	非控股權益		(198,493)	(153,609)
			(140,385)	126,425
EARNINGS PER SHARE ATTRIBUTABLE TO ORDINARY EQUITY HOLDERS OF THE PARENT	母公司普通股權持有人 應佔每股盈利:	12		
Basic	基本			
– For profit for the year	– 年內溢利		US\$0.034 0.034美元	US\$0.189 0.189美元
Diluted	攤薄			
– For profit for the year	– 年內溢利		US\$0.034 0.034美元	US\$0.188 0.188美元

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

綜合全面收益表

Year ended 31 December 2024
截至二零二四年十二月三十一日止年度

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
(LOSS)/PROFIT FOR THE YEAR	年內(虧損)/溢利	(140,385)	126,425
OTHER COMPREHENSIVE (LOSS)/INCOME	其他全面(虧損)/收益		
Other comprehensive loss that may be reclassified to profit or loss in subsequent periods:	於其後期間可能重新分類至損益的其他全面虧損:		
Exchange differences on translation of foreign operations	換算海外業務產生的外匯差額	(123,017)	(56,005)
Net other comprehensive loss that may be reclassified to profit or loss in subsequent periods	於其後期間可能重新分類至損益的其他全面虧損淨額	(123,017)	(56,005)
Other comprehensive income that will not be reclassified to profit or loss in subsequent periods:	於其後期間不會重新分類至損益的其他全面收益:		
Equity investments designated at fair value through other comprehensive income:	指定按公平值計入其他全面收益的股權投資:		
Changes in fair value	公平值變動	7,991	95,310
Income tax effect	所得稅影響	(1,199)	(14,628)
		6,792	80,682
Share of other comprehensive (loss)/income of associates	分佔聯營公司的其他全面(虧損)/收益	(663)	1,352
Net other comprehensive income that will not be reclassified to profit or loss in subsequent periods	於其後期間不會重新分類至損益的其他全面收益淨額	6,129	82,034
OTHER COMPREHENSIVE (LOSS)/INCOME FOR THE YEAR, NET OF TAX	年內其他全面(虧損)/收益，扣除稅項	(116,888)	26,029
TOTAL COMPREHENSIVE (LOSS)/INCOME FOR THE YEAR	年內全面(虧損)/收益總額	(257,273)	152,454
Attributable to:	下列人士應佔:		
Owners of the parent	母公司擁有人	(21,431)	331,980
Non-controlling interests	非控股權益	(235,842)	(179,526)
		(257,273)	152,454

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

綜合財務狀況表

31 December 2024
二零二四年十二月三十一日

			31 December 2024 二零二四年 十二月三十一日 US\$'000 千美元	31 December 2023 二零二三年 十二月三十一日 US\$'000 千美元
	Notes 附註			
NON-CURRENT ASSETS		非流動資產		
Property, plant and equipment	13	物業、廠房及設備	5,859,117	3,519,292
Investment property	14	投資物業	164,153	166,643
Right-of-use assets	15	使用權資產	77,761	78,545
Intangible assets	16	無形資產	31,456	49,827
Investments in associates	17	於聯營公司的投資	139,799	139,099
Equity investments designated at fair value through other comprehensive income	18	指定按公平值計入其他全面收益的權益投資	289,311	270,506
Long-term prepayments to third parties		應付第三方之長期預付款項	21,008	149,953
Total non-current assets		非流動資產總額	6,582,605	4,373,865
CURRENT ASSETS		流動資產		
Properties under development	19	開發中物業	221,905	178,828
Inventories	20	存貨	467,060	449,749
Trade and notes receivables	21	貿易應收款項及應收票據	270,461	278,669
Prepayments, other receivables and other assets	22	預付款項、其他應收款項及其他資產	363,997	33,821
Due from related parties	35(c)	應收關聯方款項	18,324	11,219
Pledged deposits	23	已抵押存款	31,624	32,088
Cash and cash equivalents	23	現金及現金等價物	4,459,132	5,585,181
Total current assets		流動資產總額	5,832,503	6,569,555
CURRENT LIABILITIES		流動負債		
Trade payables	24	貿易應付款項	298,372	235,410
Other payables and accruals	25	其他應付款項及暫估費用	880,447	430,478
Interest-bearing bank borrowings	26	計息銀行借款	280,704	193,035
Lease liabilities	27	租賃負債	4,912	3,076
Government grants	29	政府補助	57,563	35,017
Due to related parties	35(c)	應付關聯方款項	9,125	13,876
Income tax payable		應付所得稅	31,115	61,495
Total current liabilities		流動負債總額	1,562,238	972,387
NET CURRENT ASSETS		流動資產淨額	4,270,265	5,597,168
TOTAL ASSETS LESS CURRENT LIABILITIES		資產總值減流動負債	10,852,870	9,971,033

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CONSOLIDATED STATEMENT OF FINANCIAL POSITION

31 December 2024
二零二四年十二月三十一日

綜合財務狀況表

			31 December 2024 二零二四年 十二月三十一日 US\$'000 千美元	31 December 2023 二零二三年 十二月三十一日 US\$'000 千美元
	Notes 附註			
NON-CURRENT LIABILITIES		非流動負債		
Interest-bearing bank borrowings	26	計息銀行借款	1,917,235	1,906,526
Lease liabilities	27	租賃負債	18,068	19,129
Deferred tax liabilities	28	遞延稅項負債	10,948	30,834
Total non-current liabilities		非流動負債總額	1,946,251	1,956,489
Net assets		資產淨額	8,906,619	8,014,544
EQUITY		權益		
Share capital	30	股本	4,938,457	4,933,559
Reserves	32	儲備	1,308,569	1,367,436
Total equity attributable to owners of the parent		母公司擁有人應佔權益總額	6,247,026	6,300,995
Non-controlling interests	40	非控股權益	2,659,593	1,713,549
Total equity		權益總額	8,906,619	8,014,544

Junjun Tang
唐均君
Director
董事

Jun Ye
葉峻
Director
董事

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

綜合權益變動表

Year ended 31 December 2024

截至二零二四年十二月三十一日止年度

		Attributable to owners of the parent 母公司擁有人應佔												
		Fair value reserve of financial assets at fair value through other comprehensive income												
		Share capital	Merger reserve	Share option reserve	Other capital reserve and contributed surplus	Share of other comprehensive income of associates	comprehensive income	Revaluation surplus#	Statutory reserve funds	Exchange fluctuation reserve	Retained profits	Total	Non-controlling interests	Total equity
		按公平值計入其他全面的收益的金融資產之公平值儲備												
Notes		股本	合併儲備	購股權儲備	其他資本儲備及供款盈餘	分佔聯營公司的其他全面收益	其他全面收益	重估盈餘*	儲備基金	外匯波動儲備	留存溢利	總計	非控股權益	權益總額
附註		US\$' 000 千美元 (note 30) (附註30)	US\$' 000 千美元	US\$' 000 千美元 (note 31) (附註32)	US\$' 000 千美元	US\$' 000 千美元	US\$' 000 千美元	US\$' 000 千美元	US\$' 000 千美元 (note 32) (附註31)	US\$' 000 千美元	US\$' 000 千美元	US\$' 000 千美元	US\$' 000 千美元 (note 40) (附註40)	US\$' 000 千美元
At 1 January 2024	於二零二四年一月一日	4,933,559	645,494	12,794	35,685	1,352	58,435	99,257	233,042	(60,233)	341,610	6,300,995	1,713,549	8,014,544
Profit/(loss) for the year	年內溢利／(虧損)	-	-	-	-	-	-	-	-	-	58,108	58,108	(198,483)	(140,385)
Other comprehensive income for the year:	年內其他全面收益:													
Change in fair value of equity investments at fair value through other comprehensive income, net of tax	按公平值計入其他全面收益的股權投資的公平值變動，扣除稅項	-	-	-	-	-	6,792	-	-	-	-	6,792	-	6,792
Share of other comprehensive income of associates	分佔聯營公司的其他全面收益	-	-	-	-	(663)	-	-	-	-	-	(663)	-	(663)
Exchange differences related to foreign operations	有關海外業務的外匯差額	-	-	-	-	-	-	-	-	(85,668)	-	(85,668)	(37,349)	(123,017)
Total comprehensive income for the year	年內全面收益總額	-	-	-	-	(663)	6,792	-	-	(85,668)	58,108	(21,431)	(235,842)	(257,273)
Dividend declared	宣派股息	-	-	-	-	-	-	-	-	-	(36,223)	(36,223)	-	(36,223)
Transfer of fair value reserve upon the disposal of equity investments at fair value through other comprehensive income	於出售按公平值計入其他全面收益的股權投資時轉撥公平值儲備	-	-	-	-	-	(592)	-	-	-	592	-	-	-
Issue of shares	發行股份	30	4,898	-	(1,215)	-	-	-	-	-	-	3,683	-	3,683
Equity-settled share option arrangements	以權益結算的購股權安排	31	-	-	12	-	-	-	-	-	-	12	6	18
Capital contribution from non-controlling interests	非控股權益出資	-	-	-	-	-	-	-	-	-	-	-	1,181,880	1,181,880
Transfer from retained profits generated by a subsidiary	轉撥自一間子公司產生的留存溢利	-	-	-	-	-	-	-	23,324	-	(23,324)	-	-	-
At 31 December 2024	於二零二四年十二月三十一日	4,938,457	645,494*	11,591*	35,685*	689*	64,635*	99,257*	256,366*	(145,901)*	340,753*	6,247,026	2,659,593	8,906,619

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CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

Year ended 31 December 2024
截至二零二四年十二月三十一日止年度

綜合權益變動表

		Attributable to owners of the parent 母公司擁有人應佔													Non-controlling interests	Total equity
		Share capital	Merger reserve	Share option reserve	Other capital reserve and contributed surplus	Share of other comprehensive income of associates	Fair value reserve of financial assets at fair value through other comprehensive income	Revaluation surplus#	Statutory reserve funds	Exchange fluctuation reserve	Retained profits	Total				
							按公平值計入其他全面收益的									
		股本	合併儲備	購股權儲備	其他資本儲備及供款盈餘	分佔聯營公司的其他全面收益	金融資產之公平值儲備	重估盈餘*	法定儲備基金	外匯波動儲備	(累計虧損)/留存溢利	總計	非控股權益	權益總額		
Notes		US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
附註		千美元	千美元	千美元	千美元	千美元	千美元	千美元	千美元	千美元	千美元	千美元	千美元	千美元	千美元	千美元
		(note 30)		(note 31)					(note 32)				(note 40)			
		(附註30)		(附註32)					(附註31)				(附註40)			
At 1 January 2023	於二零二三年一月一日	1,994,462	645,494	13,346	35,685	-	(22,247)	99,257	191,125	(30,145)	103,493	3,030,470	1,104,998	4,135,468		
Profit/(loss) for the year	年內溢利/(虧損)	-	-	-	-	-	-	-	-	-	280,034	280,034	(153,609)	126,425		
Other comprehensive income for the year:	年內其他全面收益:															
Change in fair value of equity investments designated at fair value through other comprehensive income, net of tax	指定按公平值計入其他全面收益的股權投資的公平值變動，扣除稅項	-	-	-	-	-	80,682	-	-	-	-	80,682	-	80,682		
Share of other comprehensive income of associates	分佔聯營公司的其他全面收益	-	-	-	-	1,352	-	-	-	-	-	1,352	-	1,352		
Exchange differences related to foreign operations	有關海外業務的外匯差額	-	-	-	-	-	-	-	-	(30,088)	-	(30,088)	(25,917)	(56,005)		
Total comprehensive income for the year	年內全面收益總額	-	-	-	-	1,352	80,682	-	-	(30,088)	280,034	331,980	(179,526)	152,454		
Issue of shares	發行股份	30	2,939,097	-	(1,248)	-	-	-	-	-	-	2,937,849	-	2,937,849		
Equity-settled share option arrangements	以權益結算的購股權安排	31	-	-	696	-	-	-	-	-	-	696	157	853		
Capital contribution from non-controlling interests	非控股權益出資	-	-	-	-	-	-	-	-	-	-	-	787,920	787,920		
Transfer from retained profits generated by a subsidiary	轉撥自一間子公司的產生的留存溢利	-	-	-	-	-	-	-	41,917	-	(41,917)	-	-	-		
At 31 December 2023	於二零二三年十二月三十一日	4,933,559	645,494*	12,794*	35,685*	1,352*	58,435*	99,257*	233,042*	(60,233)*	341,610*	6,300,995	1,713,549	8,014,544		

Revaluation surplus arose from a change in use from an owner-occupied property to an investment property carried at fair value.

重估盈餘源於按公平值列賬之一項自用物業的用途更改為投資物業。

* These reserve accounts comprise the consolidated reserves of US\$1,308,569,000 (2023: US\$1,367,436,000) in the consolidated statement of financial position.

* 該等儲備賬合計為綜合財務狀況表中的綜合儲備1,308,569,000美元(二零二三年: 1,367,436,000美元)。

CONSOLIDATED STATEMENT OF CASH FLOWS

綜合現金流量表

Year ended 31 December 2024

截至二零二四年十二月三十一日止年度

	Notes 附註	2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
CASH FLOWS FROM OPERATING ACTIVITIES	經營活動所得現金流量		
(Loss)/profit before tax	稅前(虧損)/溢利	(133,792)	173,579
Adjustments for:	就以下各項作出的調整:		
Finance costs	財務費用	7	100,497
Share of profits of associates	分佔聯營公司溢利	(3,459)	(9,230)
Interest income	利息收入	5	(61,345)
Loss on disposal of items of property, plant and equipment	出售物業、廠房及設備項目的虧損	5	206
Depreciation of property, plant and equipment	物業、廠房及設備折舊	13	481,664
Changes in fair value of an investment property	投資物業公平值變動	14	(103)
Depreciation of right-of-use assets	使用權資產折舊	15	6,427
Amortisation of intangible assets	無形資產攤銷	16	12,348
Impairment of trade receivables	貿易應收款項減值	6	1,120
Impairment of items of property, plant and equipment	物業、廠房及設備項目減值	13	2,476
Equity-settled share option expense	以權益結算的購股權開支	31	853
		414,067	821,763
Increase in properties under development	發展中物業增加	(39,145)	(44,105)
Increase in inventories	存貨增加	(17,311)	(97,712)
Decrease in trade and notes receivables	貿易應收款項及應收票據減少	8,148	12,082
Decrease in prepayments, other receivables and other assets	預付款項、其他應收款項及其他資產減少	7,229	11,851
(Increase)/decrease in amounts due from related parties	應收關聯方款項(增加)/減少	(7,105)	1,787
Decrease/(increase) in pledged deposits	已抵押存款減少/(增加)	464	(168)
Increase/(decrease) in trade payables	貿易應付款項增加/(減少)	62,962	(1,589)
Increase/(decrease) in other payables and accruals	其他應付款項及暫估費用增加/(減少)	80,895	(106,503)
Increase/(decrease) in government grants	政府補助增加/(減少)	11,479	(5,257)
(Decrease)/increase in amounts due to related parties	應付關聯方款項(減少)/增加	(4,751)	7,780
Cash generated from operations	經營活動產生的現金	516,932	713,200
Income tax paid	已付所得稅	(57,437)	(71,505)
Net cash flows generated from operating activities	經營活動所得現金流量淨額	459,495	641,695

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CONSOLIDATED STATEMENT OF CASH FLOWS

Year ended 31 December 2024
截至二零二四年十二月三十一日止年度

綜合現金流量表

	Notes 附註	2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
CASH FLOWS FROM INVESTING ACTIVITIES	投資活動所得現金流量		
Interest received	已收利息	82,034	61,551
Purchases of items of property, plant and equipment, prepaid lease payments and intangible assets	購買物業、廠房及設備項目、預付租賃款項及無形資產	(2,779,857)	(906,607)
Purchases of financial assets at fair value through other comprehensive income	購買按公平值計入其他全面收益的金融資產	(17,618)	—
Proceeds from disposal of items of property, plant and equipment	出售物業、廠房及設備項目所得款項	112	52
Receipt of government grants for property, plant and equipment	收到政府對物業、廠房及設備的補助	41,149	11,692
Proceeds from disposal of financial assets at fair value through other comprehensive income	出售按公平值計入其他全面收益的金融資產所得款項	2,648	—
Net cash flows used in investing activities	投資活動所用現金流量淨額	(2,671,532)	(833,312)
CASH FLOWS FROM FINANCING ACTIVITIES	融資活動所得現金流量		
Proceeds from issue of shares	發行股份所得款項	3,642	2,941,945
New bank loans	新增銀行貸款	289,285	615,415
Capital contribution from non-controlling interests	非控股權益出資	1,181,880	787,920
Dividends paid to shareholders	向股東支付股息	(36,247)	—
Interest paid	已付利息	(105,736)	(106,570)
Repayment of bank loans	償還銀行貸款	(183,524)	(422,120)
Principal portion of lease payments	支付租賃本金部份	(4,634)	(4,597)
Receipt of government grants for finance costs	收到政府對財務費用的補助	5,459	2,997
Payment of share issue expenses	支付股份發行開支	—	(2,030)
Placement of pledged time deposits	存放已抵押定期存款	—	(31,214)
Net cash flows generated from financing activities	融資活動所得現金流量淨額	1,150,125	3,781,746
NET (DECREASE)/INCREASE IN CASH AND CASH EQUIVALENTS	現金及現金等價物 (減少)/增加淨額	(1,061,912)	3,590,129
Cash and cash equivalents at beginning of year	年初現金及現金等價物	5,585,181	2,008,765
Effect of foreign exchange rate changes, net	外匯匯率變動影響，淨額	(64,137)	(13,713)
CASH AND CASH EQUIVALENTS AT END OF YEAR	年末現金及現金等價物	4,459,132	5,585,181
ANALYSIS OF BALANCES OF CASH AND CASH EQUIVALENTS	現金及現金等價物結餘分析		
Cash and bank balances	現金及銀行結餘	2,749,279	4,638,292
Non-pledged time deposits with original maturity of less than three months when acquired	於獲得時原到期日少於三個月的非抵押定期存款	1,709,853	946,889
Cash and cash equivalents as stated in the statement of financial position and in the statement of cash flows	財務狀況表及現金流量表中所列現金及現金等價物	4,459,132	5,585,181

NOTES TO FINANCIAL STATEMENTS

財務報表附註

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二零二四年十二月三十一日

1. CORPORATE AND GROUP INFORMATION

Hua Hong Semiconductor Limited (the “Company”) is a limited liability company incorporated in Hong Kong on 21 January 2005. The registered office of the Company is located at Room 2212, Bank of America Tower, 12 Harcourt Road, Central, Hong Kong. The principal place of business is located at No. 288, Halei Road, Zhangjiang Hi-Tech Park, Shanghai.

The principal activity of the Company is investment holding. During the year, the Company’s subsidiaries were principally engaged in the manufacture and sale of semiconductor products and real estate development.

In the opinion of the directors, the parent of the Company is Shanghai Huahong (Group) Co., Ltd. (“Huahong Group”), which is a state-owned company established in the People’s Republic of China (“PRC”) and supervised by the Shanghai State-owned Assets Supervision and Administration Commission (“Shanghai SASAC”). The ultimate parent of the Company is Shanghai SASAC.

Information about subsidiaries

Particulars of the Company’s subsidiaries are as follows:

Name	Place of incorporation/ registration and business 註冊成立/ 登記地點及業務	Issued ordinary/ registered share capital ('000) 已發行普通/ 註冊股本(千元)	Percentage of equity attributable to the Company 本公司應佔權益百分比		Principal activities
			Direct 直接	Indirect 間接	
Grace Semiconductor Manufacturing Corporation (“Grace Cayman”) Grace Semiconductor Manufacturing Corporation (「Grace Cayman」)	Cayman Islands 開曼群島	US\$0.001 0.001美元	100%	–	Investment holding 投資控股
Shanghai Huahong Grace Semiconductor Manufacturing Corporation (“HHGrace”)* 上海華虹宏力半導體製造有限公司 (「華虹宏力」)*	PRC/Mainland China 中國／中國內地	RMB20,460,928 人民幣 20,460,928元	100%	–	Manufacture and sale of semiconductor products 生產及銷售半導體產品
Huahong Semiconductor (Wuxi) Co., Ltd. (“Hua Hong Wuxi”)** 華虹半導體(無錫)有限公司 (「華虹無錫」)**	PRC/Mainland China 中國／中國內地	US\$2,536,852 2,536,852美元	22.2%	28.8%	Manufacture and sale of semiconductor products 生產及銷售半導體產品

1. 公司及集團資料

華虹半導體有限公司(「本公司」)為一家於二零零五年一月二十一日在香港註冊成立的有限公司。本公司的註冊辦事處為香港中環夏慤道12號美國銀行中心2212室。主要營業地點為上海市張江高科技園區哈雷路288號。

本公司的主要活動為投資控股。於年內，本公司的子公司主要從事半導體產品的生產及銷售及房地產開發。

董事認為，本公司的母公司為上海華虹(集團)有限公司(「華虹集團」)，該公司為於中華人民共和國(「中國」)成立並由上海市國有資產監督管理委員會(「上海市國資委」)監管的國有公司。本公司的最終控股公司為上海市國資委。

有關子公司的資料

本公司的子公司詳情如下：

NOTES TO FINANCIAL STATEMENTS

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財務報表附註

1. CORPORATE AND GROUP INFORMATION
(continued)

1. 公司及集團資料(續)

Information about subsidiaries (continued)

有關子公司的資料(續)

Name 名稱	Place of incorporation/ registration and business 註冊成立/ 登記地點及業務	Issued ordinary/ registered share capital ('000) 已發行普通/ 註冊股本(千元)	Percentage of equity attributable to the Company 本公司應佔權益百分比		Principal activities 主要業務活動
			Direct 直接	Indirect 間接	
Shanghai Huahong Real Estate (Wuxi) Co., Ltd. ("Huahong Real Estate Wuxi")*** 上海華宏置業(無錫)有限公司 (「華宏置業無錫」)***	PRC/Mainland China 中國/中國內地	RMB30,000 人民幣30,000元	22.2%	28.8%	Real estate development 房地產開發
Huahong Semiconductor Manufacturing (Wuxi) Co., Ltd. ("Hua Hong Manufacturing Wuxi")** 華虹半導體製造(無錫)有限公司 (「華虹製造無錫」)**	PRC/Mainland China 中國/中國內地	US\$4,020,000 4,020,000美元	21.9%	29.1%	Manufacture and sale of semiconductor products 生產及銷售半導體產品
Global Synergy Technology Limited ("GST") 力鴻科技有限公司(「力鴻科技」)	PRC/Hong Kong 中國/香港	HK\$10 10港元	100%	—	Trading 貿易
HHGrace Semiconductor USA, Inc. HHGrace Semiconductor USA, Inc.	USA 美國	— —	100%	—	Sales office 銷售辦事處
HHGrace Semiconductor Japan Co., Ltd. HHGrace Semiconductor Japan Co., Ltd.	Japan 日本	JPY10,000 10,000日圓	100%	—	Sales office 銷售辦事處

* HHGrace is registered as a wholly-foreign-owned company under PRC law.

* 華虹宏力根據中國法律註冊為外商獨資公司。

** Hua Hong Wuxi and Hua Hong Manufacturing Wuxi are registered as Sino-foreign joint companies under PRC law.

** 華虹無錫及華虹製造無錫根據中國法律註冊為中外合資公司。

*** Huahong Real Estate Wuxi is registered as a domestic company under PRC law.

*** 華宏置業無錫根據中國法律註冊為內資公司。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2024
二零二四年十二月三十一日

2. ACCOUNTING POLICIES

2.1 BASIS OF PREPARATION

These financial statements have been prepared in accordance with Hong Kong Financial Reporting Standards (“HKFRSs”) (which include all Hong Kong Financial Reporting Standards, Hong Kong Accounting Standards (“HKASs”) and Interpretations) issued by the Hong Kong Institute of Certified Public Accountants (“HKICPA”) and the Hong Kong Companies Ordinance. They have been prepared under the historical cost convention, except for an investment property and equity investments designated at fair value through other comprehensive income which have been measured at fair value. These financial statements are presented in United States dollars (“US\$”) and all values are rounded to the nearest thousand except when otherwise indicated.

Basis of consolidation

The consolidated financial statements include the financial statements of the Company and its subsidiaries (collectively referred to as the “Group”) for the year ended 31 December 2024. A subsidiary is an entity (including a structured entity), directly or indirectly, controlled by the Company. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee (i.e., existing rights that give the Group the current ability to direct the relevant activities of the investee).

Generally, there is a presumption that a majority of voting rights results in control. When the Company has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

- (a) the contractual arrangement with the other vote holders of the investee;
- (b) rights arising from other contractual arrangements; and
- (c) the Group’s voting rights and potential voting rights.

The financial statements of the subsidiaries are prepared for the same reporting period as the Company, using consistent accounting policies. The results of subsidiaries are consolidated from the date on which the Group obtains control, and continue to be consolidated until the date that such control ceases.

2. 會計政策

2.1 編製基準

該等財務報表乃根據由香港會計師公會(「香港會計師公會」)頒佈的香港財務報告準則(「香港財務報告準則」,包括所有香港財務報告準則、香港會計準則(「香港會計準則」)及詮釋)以及香港公司條例編製。財務報表乃根據歷史成本慣例編製,惟已按公平值計量的投資物業及指定按公平值計入其他全面收益的股權投資除外。該等財務報表以美元(「美元」)呈列,而除另有指明外,所有數值已約整至最接近的千位數。

綜合基準

綜合財務報表包括本公司及其子公司(統稱為「本集團」)截至二零二四年十二月三十一日止年度的財務報表。子公司指受本公司直接或間接控制的實體(包括結構性實體)。倘本集團透過參與被投資方業務而享有或有權取得被投資方的可變回報,且有能力行使在被投資方的權力影響有關回報,則本集團擁有該實體的控制權(即現時賦予本集團指導被投資方相關活動能力的現有權利)。

於一般情況下均存在多數投票權形成控制權之推定。倘本公司擁有的被投資方投票權或類似權利不及大半,則評估本公司對被投資方是否擁有權力時,本集團會考慮所有相關事實及情況,包括:

- (a) 與該被投資方其他投票權擁有人的合約安排;
- (b) 根據其他合約安排所享有的權利;及
- (c) 本集團的投票權及潛在投票權。

子公司與本公司的財務報表的報告期間相同,並採用一致會計政策編製。子公司的業績由本集團取得控制權之日起計綜合入賬,並繼續綜合入賬至該等控制權終止時為止。

NOTES TO FINANCIAL STATEMENTS

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二零二四年十二月三十一日

財務報表附註

2. ACCOUNTING POLICIES (continued)

2.1 BASIS OF PREPARATION (continued)

Basis of consolidation (continued)

Profit or loss and each component of other comprehensive income are attributed to the owners of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

The Group reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control described above. A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If the Group loses control over a subsidiary, it derecognises the related assets (including goodwill), liabilities, any non-controlling interest and the exchange fluctuation reserve; and recognises the fair value of any investment retained and any resulting surplus or deficit in profit or loss. The Group's share of components previously recognised in other comprehensive income is reclassified to profit or loss or retained profits, as appropriate, on the same basis as would be required if the Group had directly disposed of the related assets or liabilities.

2.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES

The Group has adopted the following revised HKFRSs for the first time for the current year's financial statements.

Amendments to HKFRS 16	<i>Lease Liability in a Sale and Leaseback</i>
Amendments to HKAS 1	<i>Classification of Liabilities as Current or Non-current</i>
Amendments to HKAS 1	<i>Non-current Liabilities with Covenants</i>

The application of the revised HKFRSs in the current year had no material impact on the Group's consolidated financial position and performance for the current and prior years.

2. 會計政策(續)

2.1 編製基準(續)

綜合基準 (續)

損益及其他全面收益的各部份乃歸屬於本集團母公司擁有人及非控股權益，即使導致非控股權益產生虧絀結餘。本集團成員公司之間交易所產生的集團內部資產及負債、權益、收入、支出及現金流量均在綜合入賬時全數對銷。

倘事實及情況顯示上述三項控制因素之一項或多項出現變動，本集團會重新評估其是否控制被投資方。子公司的所有權權益變動(沒有失去控制權)，按權益交易入賬。

倘本集團失去對一間子公司的控制權，則其取消確認相關資產(包括商譽)、負債、任何非控制權益及外匯波動儲備；並確認所保留任何投資的公平值及損益中任何因此產生的盈餘或虧損。先前於其他全面收益內確認的本集團應佔部份重新分類為損益或留存溢利(如適用)，倘本集團已直接出售相關資產或負債則須以同一基準確認。

2.2 會計政策的變動及披露

本集團已採納並在本年度財務報表首次應用以下經修訂香港財務報告準則。

香港財務報告準則第16號 (修訂本)	售後回租之 租賃負債
香港會計準則第1號 (修訂本)	負債分類為 流動或非流動
香港會計準則第1號 (修訂本)	具契諾之非流動 負債

本年度經修訂的香港財務報告準則的應用，對本集團本年度及以往年度的綜合財務狀況及業績並無重大影響。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

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2. ACCOUNTING POLICIES (continued)

2.3 ISSUED BUT NOT YET EFFECTIVE
HONG KONG FINANCIAL REPORTING
STANDARDS

The Group has not applied the following revised HKFRSs, that have been issued but are not yet effective, in these financial statements. The Group intends to apply these revised HKFRSs, if applicable, when they become effective.

HKFRS 18	<i>Presentation and Disclosure in Financial Statements³</i>
HKFRS 19	<i>Subsidiaries without Public Accountability: Disclosures³</i>
Amendments to HKFRS 9 and HKFRS 7	<i>Amendments to the Classification and Measurement of Financial Instruments²</i>
Amendments to HKFRS 10 and HKAS 28	<i>Sale or Contribution of Assets between an Investor and its Associate or Joint Venture⁴</i>
Amendments to HKAS 21	<i>Lack of Exchangeability¹</i>
1	Effective for annual periods beginning on or after 1 January 2025
2	Effective for annual periods beginning on or after 1 January 2026
3	Effective for annual/reporting periods beginning on or after 1 January 2027
4	No mandatory effective date yet determined but available for adoption

2. 會計政策(續)

2.3 已頒佈但尚未生效之香港財務報告準則

本集團並無於該等財務報表內應用下列已頒佈但尚未生效之經修訂香港財務報告準則。本集團擬於該等經修訂香港財務報告準則生效後應用該等經修訂香港財務報告準則(如適用)。

香港財務報告準則第18號	財務報表的呈列與披露 ³
香港財務報告準則第19號	非公共受託責任子公司的披露 ³
香港財務報告準則第9號及香港財務報告準則第7號(修訂本)	金融工具分類及計量之修訂 ²
香港財務報告準則第10號及香港會計準則第28號(修訂本)	投資者與其聯營公司或合營企業之間的資產出售或注資 ⁴
香港會計準則第21號(修訂本)	缺乏可兌換性 ¹
1	於二零二五年一月一日或之後開始之年度期間生效
2	於二零二六年一月一日或之後開始之年度期間生效
3	於二零二七年一月一日或之後開始之年度／報告期間生效
4	尚未釐定強制生效日期但可供採納

NOTES TO FINANCIAL STATEMENTS

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二零二四年十二月三十一日

財務報表附註

2. ACCOUNTING POLICIES (continued)

2.3 ISSUED BUT NOT YET EFFECTIVE
HONG KONG FINANCIAL REPORTING
STANDARDS (continued)

HKFRS 18 replaces HKAS 1 *Presentation of Financial Statements*. While a number of sections have been brought forward from HKAS 1 with limited changes, HKFRS 18 introduces new requirements for presentation within the statement of profit or loss, including specified totals and subtotals. Entities are required to classify all income and expenses within the statement of profit or loss into one of the five categories: operating, investing, financing, income taxes and discontinued operations and to present two new defined subtotals. It also requires disclosures about management-defined performance measures in a single note and introduces enhanced requirements on the grouping (aggregation and disaggregation) and the location of information in both the primary financial statements and the notes. Some requirements previously included in HKAS 1 are moved to HKAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*, which is renamed as HKAS 8 *Basis of Preparation of Financial Statements*. As a consequence of the issuance of HKFRS 18, limited, but widely applicable, amendments are made to HKAS 7 *Statement of Cash Flows*, HKAS 33 *Earnings per Share* and HKAS 34 *Interim Financial Reporting*. In addition, there are minor consequential amendments to other HKFRSs. HKFRS 18 and the consequential amendments to other HKFRSs are effective for annual periods beginning on or after 1 January 2027 with earlier application permitted. Retrospective application is required. The Group is currently analysing the new requirements and assessing the impact of HKFRS 18 on the presentation and disclosure of the Group's financial statements.

Save as disclosed above, none of these HKFRSs is expected to have a significant impact on the Group's results of operations and financial position.

2. 會計政策(續)

2.3 已頒佈但尚未生效之香港財務
報告準則(續)

香港財務報告準則第18號取代香港會計準則第1號財務報表的呈列。儘管香港會計準則第1號的多個章節已被納入而變動有限，香港財務報告準則第18號就損益表內呈列方式引入新規定，包括指定的總計及小計。實體須將損益表內所有收入及開支分類為以下五個類別之一：經營、投資、融資、所得稅及終止持續經營業務，並呈列兩項新界定小計。其亦規定於單一附註中披露管理層界定的績效指標，並對主要財務報表及附註中資料的組合(合併及分類)和位置提出更嚴格的要求。若干早前已納入香港會計準則第1號的規定移至香港會計準則第8號會計政策、會計估計變更及差錯，並更名為香港會計準則第8號財務報表的呈列基準。由於頒佈香港財務報告準則第18號，對香港會計準則第7號現金流量表、香港會計準則第33號每股盈利及香港會計準則第34號中期財務報告作出有限但廣泛適用的修訂。此外，其他香港財務報告準則亦有輕微的相應修訂。香港財務報告準則第18號及其他香港財務報告準則的相應修訂於二零二七年一月一日或之後開始的年度期間生效，須追溯應用，並可提早應用。本集團現正分析新訂規定並評估香港財務報告準則第18號對本集團財務報表的呈列及披露的影響。

除上文所披露者外，該等香港財務報告準則均預期不會對本集團的經營業績及財務狀況產生重大影響。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

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2.4 MATERIAL ACCOUNTING POLICIES

Investments in associates

An associate is an entity in which the Group has a long term interest of generally not less than 20% of the equity voting rights and over which it has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but is not control or joint control over those policies.

The Group's investments in associates are stated in the consolidated statement of financial position at the Group's share of net assets under the equity method of accounting, less any impairment losses.

Adjustments are made to bring into line any dissimilar accounting policies that may exist.

The Group's share of the post-acquisition results and other comprehensive income of an associate is included in the consolidated statement of profit or loss and consolidated other comprehensive income, respectively. In addition, when there has been a change recognised directly in the equity of the associate, the Group recognises its share of any changes, when applicable, in the consolidated statement of changes in equity. Unrealised gains and losses resulting from transactions between the Group and its associate are eliminated to the extent of the Group's investment in the associate, except where unrealised losses provide evidence of an impairment of the assets transferred. Goodwill arising from the acquisition of an associate is included as part of the Group's investment in an associate.

If an investment in an associate becomes an investment in a joint venture, the retained interest is not remeasured. Instead, the investment continues to be accounted for under the equity method. In all other cases, upon loss of significant influence over the associate, the Group measures and recognises any retained investment at its fair value. Any difference between the carrying amount of the associate upon loss of significant influence or joint control and the fair value of the retained investment and proceeds from disposal is recognised in profit or loss.

When an investment in an associate is classified as held for sale, it is accounted for in accordance with HKFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*.

2.4 重大會計政策

於聯營公司的投資

聯營公司為一間本集團對其擁有一般不少於20%股本投票權的長期權益，且本集團對其有重大影響力的實體。重大影響力指有權力參與投資對象的財務及經營政策決策，但並非對該等政策擁有控制或聯合控制權。

本集團於聯營公司的投資於綜合財務狀況表內按使用權益會計法計算的本集團應佔淨資產扣減任何減值虧損列賬。

為使任何可能存在之不同會計政策貫徹一致而作出調整。

本集團應佔其聯營公司的收購後業績及其他全面收益分別列入綜合損益表及綜合其他全面收益表。此外，倘聯營公司的權益內直接確認某一變動，則本集團會於綜合權益變動表內確認其於任何變動(如適用)的應佔部份。本集團及其聯營公司進行交易所產生的未變現收益及虧損按本集團於該聯營公司的投資進行撤銷，惟未變現虧損有證據顯示所轉讓資產出現減值者除外。收購聯營公司產生的商譽計入本集團於該聯營公司投資的一部分。

倘於一家聯營公司的投資變成於合營企業的投資，保留權益不會重新計量。相反，該投資將繼續按權益法列賬。於所有其他情形下，倘本集團不再對聯營公司擁有重大影響力，本集團將按其公平值計量及確認任何保留投資。於失去重大影響力或共同控制權後聯營公司的賬面值與保留投資的公平值及出售所得款項之間的任何差額於損益內確認。

倘於一家聯營公司的投資被分類為持作出售，則根據香港財務報告準則第5號持作出售非流動資產及終止持續經營業務列賬。

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES
(continued)**Fair value measurement**

The Group measures its investment properties and equity investments designated at fair value through other comprehensive income at the end of each reporting period. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either in the principal market for the asset or liability, or in the absence of a principal market, in the most advantageous market for the asset or liability. The principal or the most advantageous market must be accessible by the Group. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

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

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

2. 會計政策(續)

2.4 重大會計政策(續)

公平值計量

本集團於各報告期末按公平值計量投資物業及指定按公平值計入其他全面收益的股權投資。公平值指於計量日市場參與者之間的有序交易中，就出售資產所收取的價格或轉讓負債所支付的價格。公平值計量乃基於假設出售資產或轉讓負債的交易於資產或負債的主要市場或(在未有主要市場的情況下)資產或負債的最有利市場進行。主要或最有利市場須為本集團能參與的市場。假設市場參與者基於彼等最佳經濟利益行事，資產或負債的公平值使用市場參與者為資產或負債定價所用假設計量。

非金融資產的公平值計量會計及市場參與者將資產用於最高增值及最佳用途或售予會將資產用於最高增值及最佳用途的另一名市場參與者而創造經濟利益的能力。

本集團針對不同情況使用不同估值技術，確保有足夠數據計量公平值，並盡量利用相關可觀察輸入數據，減少使用不可觀察輸入數據。

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES (continued)

Fair value measurement (continued)

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 – based on quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2 – based on valuation techniques for which the lowest level input that is significant to the fair value measurement is observable, either directly or indirectly
- Level 3 – based on valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by reassessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

Impairment of non-financial assets

Where an indication of impairment exists, or when annual impairment testing for an asset is required (other than inventories, contract assets, deferred tax assets, investment properties and non-current assets/a disposal group classified as held for sale), the asset's recoverable amount is estimated. An asset's recoverable amount is the higher of the asset's or cash-generating unit's value in use and its fair value less costs of disposal, and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets, in which case the recoverable amount is determined for the cash-generating unit to which the asset belongs. In testing a cash-generating unit for impairment, a portion of the carrying amount of a corporate asset (e.g., a headquarters building) is allocated to an individual cash-generating unit if it can be allocated on a reasonable and consistent basis or, otherwise, to the smallest group of cash-generating units.

2. 會計政策(續)

2.4 重大會計政策(續)

公平值計量(續)

公平值於財務報表計量或披露的所有資產及負債，均基於對公平值計量整體而言屬重大的最低層級輸入數據按下述公平值層級分類：

- 第1級 – 基於相同資產或負債於活躍市場的市場報價(未經調整)
- 第2級 – 基於對公平值計量而言屬重大的直接或間接可觀察最低層級輸入數據的估值技術
- 第3級 – 基於對公平值計量而言屬重大的不可觀察最低層級輸入數據的估值技術

對於按經常性基準於財務報表確認的資產及負債，本集團於各報告期末重新評估分類(基於對公平值計量整體而言屬重大的最低層級輸入數據)，確定有否在不同層級之間轉移。

非金融資產減值

倘一項非金融資產(存貨、合約資產、遞延稅項資產、投資物業及非流動資產／分類為持作出售的出售組別除外)存在減值跡象，或需要進行年度減值測試，則會估計資產的可收回金額。資產可收回金額按該資產或現金產生單位的使用價值及其公平值減出售成本兩者中的較高金額計算，並按個別資產釐定，除非該資產所產生的現金流入基本上不能獨立於其他資產或資產組別所產生的現金流入，在此情況下，可收回金額將按該資產所屬現金產生單位釐定。於進行現金產生單位減值測試時，倘可按合理且一致基準分配，或如否，則分配至最小現金產生單位組別，企業資產(如，總部大樓)賬面值的一部份分配至個別現金產生單位。

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財務報表附註

2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES
(continued)**Impairment of non-financial assets (continued)**

An impairment loss is recognised only if the carrying amount of an asset exceeds its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. An impairment loss is charged to the statement of profit or loss in the period in which it arises in those expense categories consistent with the function of the impaired asset.

An assessment is made at the end of each reporting period as to whether there is an indication that previously recognised impairment losses may no longer exist or may have decreased. If such an indication exists, the recoverable amount is estimated. A previously recognised impairment loss of an asset other than goodwill is reversed only if there has been a change in the estimates used to determine the recoverable amount of that asset, but not to an amount higher than the carrying amount that would have been determined (net of any depreciation/amortisation) had no impairment loss been recognised for the asset in prior years. A reversal of such an impairment loss is credited to the statement of profit or loss in the period in which it arises.

Related parties

A party is considered to be related to the Group if:

- (a) the party is a person or a close member of that person's family and that person:
 - (i) has control or joint control over the Group;
 - (ii) has significant influence over the Group; or
 - (iii) is a member of the key management personnel of the Group or of a parent of the Group; or

2. 會計政策(續)

2.4 重大會計政策(續)

非金融資產減值(續)

減值虧損僅於資產賬面值超逾其可收回金額時確認。於評估使用價值時，估計未來現金流量乃按稅前貼現率貼現至其現值。稅前貼現率反映當時市場對貨幣時間值的評估及該資產的特有風險。減值虧損於其產生期間的損益表內在與減值資產的功能一致的相關開支類別中扣除。

於各報告期末，會評估是否有跡象顯示先前確認的減值虧損可能不再存在或可能已減少。倘有該等跡象存在，便會估計可收回金額。先前就資產(商譽除外)確認的減值虧損，僅於用以釐定該資產的可收回金額的估計有變時予以撥回，但撥回金額不得高於倘過往年度並無就該資產確認減值虧損情況下原應釐定的賬面值(扣除任何折舊／攤銷)。撥回的減值虧損於其產生期間計入損益表。

關聯方

以下人士將被視為與本集團有關聯：

- (a) 倘為以下人士或其近親：
 - (i) 控制或共同控制本集團；
 - (ii) 對本集團有重大影響力；或
 - (iii) 為本集團或本集團母公司的主要管理層成員；或

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES (continued)

Related parties (continued)

A party is considered to be related to the Group if: (continued)

- (b) the party is an entity where any of the following conditions applies:
 - (i) the entity and the Group are members of the same group;
 - (ii) one entity is an associate or joint venture of the other entity (or of a parent, subsidiary or fellow subsidiary of the other entity);
 - (iii) the entity and the Group are joint ventures of the same third party;
 - (iv) one entity is a joint venture of a third entity and the other entity is an associate of the third entity;
 - (v) the entity is a post-employment benefit plan for the benefit of employees of either the Group or an entity related to the Group;
 - (vi) the entity is controlled or jointly controlled by a person identified in (a);
 - (vii) a person identified in (a)(i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity); and
 - (viii) the entity, or any member of a group of which it is a part, provides key management personnel services to the Group or to the parent of the Group.

2. 會計政策(續)

2.4 重大會計政策(續)

關聯方(續)

以下人士將被視為與本集團有關聯：
(續)

- (b) 該人士為符合下列任何條件的實體：
 - (i) 該實體與本集團屬同一集團的成員公司；
 - (ii) 實體為另一實體(或另一實體的母公司、子公司或同系子公司)的聯營公司或合營企業；
 - (iii) 該實體與本集團為同一第三方的合營企業；
 - (iv) 實體為一名第三方實體的合營企業，而另一實體為該第三方實體的聯營公司；
 - (v) 該實體為本集團或與本集團有關聯的實體就僱員利益設立的離職後福利計劃；
 - (vi) 該實體由(a)項所列人士控制或共同控制；
 - (vii) (a)(i)項所列人士對該實體具有重大影響力或為該實體(或該實體的母公司)的主要管理層成員；及
 - (viii) 該實體或該實體所屬集團的任何成員公司為本集團或本集團的母公司提供主要管理人員服務。

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財務報表附註

2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES
(continued)**Property, plant and equipment and depreciation**

Property, plant and equipment, other than construction in progress, are stated at cost less accumulated depreciation and any impairment losses. When an item of property, plant and equipment is classified as held for sale or when it is part of a disposal group classified as held for sale, it is not depreciated and is accounted for in accordance with HKFRS 5. The cost of an item of property, plant and equipment comprises its purchase price and any directly attributable costs of bringing the asset to its working condition and location for its intended use.

Expenditure incurred after items of property, plant and equipment have been put into operation, such as repairs and maintenance, is normally charged to the statement of profit or loss in the period in which it is incurred. In situations where the recognition criteria are satisfied, the expenditure for a major inspection is capitalised in the carrying amount of the asset as a replacement. Where significant parts of property, plant and equipment are required to be replaced at intervals, the Group recognises such parts as individual assets with specific useful lives and depreciates them accordingly.

Depreciation is calculated on the straight-line basis to write off the cost of each item of property, plant and equipment to its residual value over its estimated useful life. The principal annual rates used for this purpose are as follows:

Buildings	3.8%
Plant and machinery	9.5% to 19.0%
Office equipment	19.0%
Motor vehicles	19.0%
Leasehold improvements	20.0%

Where parts of an item of property, plant and equipment have different useful lives, the cost of that item is allocated on a reasonable basis among the parts and each part is depreciated separately. Residual values, useful lives and the depreciation method are reviewed, and adjusted if appropriate, at least at each financial year end.

2. 會計政策(續)

2.4 重大會計政策(續)

物業、廠房及設備以及折舊

物業、廠房及設備(在建工程除外)乃按成本減累計折舊及任何減值虧損列賬。倘物業、廠房及設備項目被分類為持作出售或倘其為分類為持作出售的出售組別的一部份,則不會對此進行折舊,而根據香港財務報告準則第5號列賬。物業、廠房及設備項目的成本包括其購買價及任何使資產達致操作狀況及地點作擬定用途的直接應佔成本。

物業、廠房及設備項目投入運作後所產生維修保養等支出,一般於其產生期間自損益表內扣除。倘達到確認標準,重大檢修的開支於該資產的賬面值中資本化為重置資產。倘物業、廠房及設備須定期替換其重大部份,則本集團將該等部份確認為具有特定可使用年期的獨立資產,並相應對此進行折舊。

折舊的計算是按直線法,在其估計可使用年期內將物業、廠房及設備各項目的成本撇銷至剩餘價值。就此所用的主要年率如下:

樓宇	3.8%
廠房及機器	9.5%至19.0%
辦公設備	19.0%
汽車	19.0%
租賃物業裝修	20.0%

倘物業、廠房及設備項目的部份的可使用年期不同,該項目的成本會按合理基準分配至有關部份,而各部份均分開計提折舊。剩餘價值、可使用年期及折舊方法至少於各財政年度末檢討及按需要作出調整。

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES (continued)

Property, plant and equipment and depreciation (continued)

An item of property, plant and equipment including any significant part initially recognised is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on disposal or retirement recognised in the statement of profit or loss in the year the asset is derecognised is the difference between the net sales proceeds and the carrying amount of the relevant asset.

Construction in progress is stated at cost less any impairment losses and is not depreciated. It is reclassified to the appropriate category of property, plant and equipment when completed and ready for use.

Investment properties

Investment properties are interests in land and buildings (including right-of-use assets) held to earn rental income and/or for capital appreciation. Such properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are stated at fair value, which reflects market conditions at the end of the reporting period.

Gains or losses arising from changes in the fair value of the investment property are included in the statement of profit or loss in the year in which they arise.

Any gains or losses on the retirement or disposal of an investment property are recognised in the statement of profit or loss in the year of the retirement or disposal.

For a transfer from investment properties to owner-occupied properties or inventories, the deemed cost of a property for subsequent accounting is its fair value at the date of change in use. If a property occupied by the Group as an owner-occupied property becomes an investment property, the Group accounts for such property in accordance with the policy stated under "Property, plant and equipment and depreciation" for owned property and/or accounts for such property in accordance with the policy stated under "Right-of-use assets" for property held as a right-of-use asset up to the date of change in use, and any difference at that date between the carrying amount and the fair value of the property is accounted for as a revaluation in accordance with HKAS 16 Property, Plant and Equipment. For a transfer from inventories to investment properties, any difference between the fair value of the property at that date and its previous carrying amount is recognised in the statement of profit or loss.

2. 會計政策(續)

2.4 重大會計政策(續)

物業、廠房及設備以及折舊(續)

物業、廠房及設備項目(包括任何初始確認的重大部份)於出售或預期使用或出售有關項目不會產生未來經濟利益時終止確認。於終止確認資產年度在損益表內確認的出售或報廢資產的任何收益或虧損,為出售有關資產所得款項淨額與其賬面值兩者間的差額。

在建工程乃按成本減任何減值虧損列賬,但不會計提折舊。其於完工且可供使用時將重新分類至物業、廠房及設備的適當類別。

投資物業

投資物業是指為賺取租金收入及/或資本增值而持有的土地及樓宇權益(包括使用權資產)。該等物業初步以成本(包括交易費用)計量。於初始確認後,投資物業以反映報告期末市況的公平值列賬。

投資物業公平值變動產生的收益或虧損計入其產生年度的損益表內。

因投資物業報廢或出售而產生的任何收益或虧損於報廢或出售年度的損益表內確認。

由投資物業轉為自用物業或存貨時,該物業其後會計之認定成本為改變用途當日的公允價值。如本集團之自用物業轉為投資物業,本集團直至改變用途當日前會根據「物業、廠房及設備和折舊」所述之政策就自用物業將該物業入賬及/或根據「使用權資產」所述政策就直至改變用途當日持作使用權資產之物業將該物業入賬,而物業於當日的賬面值與公允價值之任何差額則根據香港會計準則第16號物業、廠房及設備列作重估。由存貨轉為投資物業時,該物業於當日的公允價值與先前的賬面值之任何差額於損益表中確認。

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財務報表附註

2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES
(continued)**Intangible assets (other than goodwill)**

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is the fair value as at the date of acquisition. The useful lives of intangible assets are assessed to be either finite or indefinite. Intangible assets with finite lives are subsequently amortised over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and the amortisation method for an intangible asset with a finite useful life are reviewed at least at each financial year end.

Process technology licence and software

Process technology licence and software are stated at cost less any impairment losses and are amortised on the straight-line basis over their estimated useful lives of 5 to 10 years of the underlying products, commencing from the date when the products are put into commercial production.

Research and development costs

All research costs are charged to the statement of profit or loss as incurred.

Expenditure incurred on projects to develop new products is capitalised and deferred only when the Group can demonstrate the technical feasibility of completing the intangible asset so that it will be available for use or sale, its intention to complete and its ability to use or sell the asset, how the asset will generate future economic benefits, the availability of resources to complete the project and the ability to measure reliably the expenditure during the development. Product development expenditure which does not meet these criteria is expensed when incurred.

2. 會計政策(續)

2.4 重大會計政策(續)

無形資產(商譽除外)

無形資產(商譽除外)單獨取得的無形資產於初始確認時按成本計量。通過業務合併取得的無形資產的成本為於收購日期的公平值。無形資產的可使用年期評定為有限期或無限期。有限期的無形資產隨後按可使用經濟年期攤銷，並於有跡象顯示無形資產可能出現減值時評估減值。有限可使用年期的無形資產的攤銷期及攤銷方法至少於各財政年度末檢討。

工藝技術許可及軟件

工藝技術許可及軟件按成本減任何減值虧損列賬，並自相關產品投入商業生產日期起計在其5至10年估計可使用年限內以直線法攤銷。

研發成本

所有研究成本於產生時列支於損益表。

研發新產品項目所產生的開支僅在本集團能夠顯示其在技術上能夠完成無形資產以供使用或出售、打算完成資產並能夠加以使用或將之出售、資產在未來如何帶來經濟利益、有足夠資源以完成項目並且有能力可靠地計量開發期間的開支的情況下，才會被資本化及遞延。未能符合以上標準的產品研發開支會在產生時列作開支。

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES (continued)

Leases

The Group assesses at contract inception whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

Group as a lessee

The Group applies a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Group recognises lease liabilities to make lease payments and right-of-use assets representing the right to use the underlying assets.

(a) Right-of-use assets

Right-of-use assets are recognised at the commencement date of the lease (that is the date the underlying asset is available for use). Right-of-use assets are measured at cost, less accumulated depreciation and any impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognised, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Right-of-use assets are depreciated on a straight-line basis over the shorter of the lease terms and the estimated useful lives of the assets as follows:

Land use rights	42 to 50 years
Buildings	2 to 20 years

If ownership of the leased asset transfers to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

2. 會計政策(續)

2.4 重大會計政策(續)

租賃

本集團於合約開始時評估合約是否為或包含租賃。倘合約為換取代價而授予在一段時間內控制已識別資產使用的權利，則合約為或包含租賃。

本集團作為承租人

本集團對所有租賃(惟短期租賃及低價值資產租賃除外)採取單一確認及計量方法。本集團確認租賃負債(以作出租賃付款)及使用權資產(即使用相關資產的權利)。

(a) 使用權資產

於租賃開始日期(即相關資產可供使用的日期)確認使用權資產。使用權資產按成本減累計折舊及任何減值虧損計量，並就任何重新計量租賃負債作出調整。使用權資產成本包括已確認租賃負債款額、已產生初始直接成本及於開始日期或之前作出的租賃付款減任何已收取租賃優惠。使用權資產於其租期及估計可使用年期的較短者內按直線法折舊如下：

土地使用權	42至50年
樓宇	2至20年

倘租賃資產的所有權於租賃期末轉移至本集團或成本反映購買選擇權獲行使，則使用資產的估計可使用年期計算折舊。

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財務報表附註

2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES
(continued)**Leases** (continued)*Group as a lessee (continued)*

(b) Lease liabilities

Lease liabilities are recognised at the commencement date of the lease at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for termination of a lease, if the lease term reflects the Group exercising the option to terminate the lease. The variable lease payments that do not depend on an index or a rate are recognised as an expense in the period in which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Group uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in lease payments (e.g., a change to future lease payments resulting from a change in an index or rate) or a change in assessment of an option to purchase the underlying asset.

(c) Short-term leases and leases of low-value assets

The Group applies the short-term lease recognition exemption to its short-term leases (i.e., those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the recognition exemption for lease of low-value assets to leases of office equipment that is considered to be of low value.

Lease payments on short-term leases and leases of low-value assets are recognised as an expense on a straight-line basis over the lease term.

2. 會計政策(續)

2.4 重大會計政策(續)

租賃(續)*本集團作為承租人(續)*

(b) 租賃負債

於租賃開始日期，租賃負債按租賃期內作出的租賃付款的現值予以確認。租賃付款包括固定付款(包括實質固定付款)減任何應收租賃優惠、取決於某一指數或比率的可變租賃付款，以及預期在剩餘價值擔保下支付的金額。租賃付款亦包括合理確定將由本集團行使的購買選擇權的行使價，及倘若租賃期限反映本集團行使終止租賃選擇權，則終止租賃而需支付的罰款。不取決於某一指數或比率的可變租賃付款於觸發付款的事件或條件發生的期間確認為開支。

在計算租賃付款的現值時，由於租賃中所隱含的利率不易確定，則本集團在租賃開始日期使用增量借貸利率。在開始日期之後，租賃負債的金額將會增加，以反映利息的增加及就已作出的租賃付款作出扣減。此外，如有修改、租期發生變化、租賃付款變化(如未來租賃付款因指數或比率變動而出現變動)或購買相關資產的選擇權評估變更，租賃負債的賬面值將重新計量。

(c) 短期租賃及低價值資產租賃

本集團將短期租賃確認豁免應用於其短期租賃(即自租賃開始日期起計租期為十二個月或以下，並且不包含購買選擇權的租賃)。低價值資產租賃的確認豁免亦應用於被認為低價值的辦公室設備租賃。

短期租賃及低價值資產租賃的租賃付款在租期內按直線法確認為支出。

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES (continued)

Leases (continued)

Group as a lessor

When the Group acts as a lessor, it classifies at lease inception (or when there is a lease modification) each of its leases as either an operating lease or a finance lease.

Leases in which the Group does not transfer substantially all the risks and rewards incidental to ownership of an asset are classified as operating leases. When a contract contains lease and non-lease components, the Group allocates the consideration in the contract to each component on a relative stand-alone selling price basis. Rental income is accounted for on a straight-line basis over the lease terms and is included in other income and gains in the statement of profit or loss due to its operating nature. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income. Contingent rents are recognised as other income and gains in the period in which they are earned.

Leases that transfer substantially all the risks and rewards incidental to ownership of an underlying asset to the lessee are accounted for as finance leases.

Investments and other financial assets

Initial recognition and measurement

Financial assets are classified, at initial recognition, as subsequently measured at amortised cost, fair value through other comprehensive income, and fair value through profit or loss.

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them. With the exception of trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient of not adjusting the effect of a significant financing component, the Group initially measures a financial asset at its fair value, plus in the case of a financial asset not at fair value through profit or loss, transaction costs. Trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient are measured at the transaction price determined under HKFRS 15 in accordance with the policies set out for "Revenue recognition" below.

2. 會計政策(續)

2.4 重大會計政策(續)

租賃(續)

本集團作為出租人

倘本集團為出租人，於租賃開始時(或發生租賃變更時)將其各個租賃分類為經營租賃或融資租賃。

本集團並未轉讓資產所有權所附帶的絕大部份風險及回報的租賃歸類為經營租賃。當合約包含租賃及非租賃組成部分時，本集團以相對獨立的銷售價格為基準將合約中的代價分配予各個組成部分。租金收入於租期內按直線法列賬，且因其經營性質計入損益表之其他收入及收益。於磋商及安排經營租賃時產生的初始直接成本乃計入租賃資產的賬面值，並於租期內按相同方法確認為租金收入。或然租金乃於所賺取的期間內確認為其他收入及收益。

將相關資產所有權所附帶的絕大部份風險及回報轉讓予承租人的租賃，則作為融資租賃入賬。

投資及其他金融資產

初始確認及計量

金融資產於初始確認時分類為其後按攤銷成本、按公平值計入其他全面收益及按公平值計入損益計量。

於初始確認時，金融資產分類取決於金融資產的合約現金流量特點及本集團管理該等金融資產的業務模式。除並無重大融資成分或本集團已應用並未就重大融資成分的影響作出調整的可行權宜方法的貿易應收款項外，本集團初步按公平值加上(倘金融資產並非按公平值計入損益)交易成本計量金融資產。並無重大融資成分或本集團已應用可行權宜方法的貿易應收款項乃根據下文「銷售收入確認」所載政策按香港財務報告準則第15號釐定的交易價格計量。

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES
(continued)**Investments and other financial assets** (continued)*Initial recognition and measurement (continued)*

In order for a financial asset to be classified and measured at amortised cost or fair value through other comprehensive income, it needs to give rise to cash flows that are solely payments of principal and interest ("SPPI") on the principal amount outstanding. Financial assets with cash flows that are not SPPI are classified and measured at fair value through profit or loss, irrespective of the business model.

The Group's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both. Financial assets classified and measured at amortised cost are held within a business model with the objective to hold financial assets in order to collect contractual cash flows, while financial assets classified and measured at fair value through other comprehensive income are held within a business model with the objective of both holding to collect contractual cash flows and selling. Financial assets which are not held within the aforementioned business models are classified and measured at fair value through profit or loss.

Purchases or sales of financial assets that require delivery of assets within the period generally established by regulation or convention in the marketplace are recognised on the trade date, that is, the date that the Group commits to purchase or sell the asset.

2. 會計政策(續)

2.4 重大會計政策(續)

投資及其他金融資產(續)*初始確認及計量(續)*

為使金融資產按攤銷成本或按公平值計入其他全面收益進行分類及計量，需產生純粹為支付本金及未償還本金利息(「純粹支付本金及利息」)的現金流量。現金流量並非純粹支付本金及利息的金融資產按公平值計入損益分類及計量(無論何種業務模式)。

本集團管理金融資產的業務模式指其如何管理其金融資產以產生現金流量。業務模式確定現金流量是否來自收集合約現金流量、出售金融資產，或兩者兼有。按攤銷成本分類及計量的金融資產於一種業務模式中持有，旨在持有金融資產以收取合約現金流量，而以公平值計入其他全面收益的已分類及計量金融資產則於一種業務模式中持有，旨在持有以收取合約現金流量及出售。未於上述業務模式中持有的金融資產，按公平值計入損益分類及計量。

按照一般市場規定或慣例須在一定期間內交付資產的金融資產買賣於交易日期(即本集團承諾買賣該資產之日)確認。

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES (continued)

Investments and other financial assets (continued)

Subsequent measurement

The subsequent measurement of financial assets depends on their classification as follows:

Financial assets at amortised cost (debt instruments)

Financial assets at amortised cost are subsequently measured using the effective interest method and are subject to impairment. Gains and losses are recognised in profit or loss when the asset is derecognised, modified or impaired.

Financial assets designated at fair value through other comprehensive income (equity investments)

Upon initial recognition, the Group can elect to classify irrevocably its equity investments as equity investments designated at fair value through other comprehensive income when they meet the definition of equity under HKAS 32 *Financial Instruments: Presentation* and are not held for trading. The classification is determined on an instrument-by-instrument basis.

Gains and losses on these financial assets are never recycled to the statement of profit or loss. Dividends are recognised as other income in the statement of profit or loss when the right of payment has been established, except when the Group benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in other comprehensive income. Equity investments designated at fair value through other comprehensive income are not subject to impairment assessment.

2. 會計政策(續)

2.4 重大會計政策(續)

投資及其他金融資產(續)

後續計量

金融資產其後視乎以下分類作出計量:

按攤銷成本計量的金融資產(債務工具)

按攤銷成本計量的金融資產其後使用實際利率法計量,並受減值影響。當資產終止確認、修訂或減值時,收益及虧損於損益中確認。

指定按公平值計入其他全面收益的金融資產(股本投資)

於初始確認時,本集團可選擇於股本投資符合香港會計準則第32號金融工具:呈報項下的股本定義且並非持作買賣時,將其股本投資不可撤回地分類為指定按公平值計入其他全面收益的股本投資。分類乃按個別工具基準釐定。

該等金融資產的收益及虧損概不會被重新計入損益表。當支付權確立,股息於損益表中確認為其他收入,惟當本集團於作為收回金融資產一部份成本的所得款項中獲益時則除外,於此等情況下,該等收益於其他全面收益入賬。指定按公平值計入其他全面收益的股本投資不受減值評估影響。

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財務報表附註

2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES
(continued)**Derecognition of financial assets**

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognised (i.e., removed from the Group's consolidated statement of financial position) when:

- the rights to receive cash flows from the asset have expired; or
- the Group has transferred its rights to receive cash flows from the asset, or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a "pass-through" arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if, and to what extent, it has retained the risk and rewards of ownership of the asset. When it has neither transferred nor retained substantially all the risks and rewards of the asset nor transferred control of the asset, the Group continues to recognise the transferred asset to the extent of the Group's continuing involvement. In that case, the Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Group could be required to repay.

2. 會計政策(續)

2.4 重大會計政策(續)

終止確認金融資產

出現以下情形時，金融資產(或(如適用)部份金融資產或一組同類金融資產的一部份)一般會終止確認(即自本集團綜合財務狀況表移除):

- 從資產收取現金流量的權利已屆滿; 或
- 本集團已根據「轉手」安排轉讓從資產收取現金流量的權利, 或已承擔向第三方無重大延誤全額支付所收現金流量的責任; 及(a)本集團已轉讓資產的絕大部份風險及回報, 或(b)本集團雖未轉讓或保留資產的絕大部份風險及回報, 但已轉讓資產的控制權。

倘本集團已轉讓從資產收取現金流量的權利或訂立轉手安排, 則評估有否保留資產所有權的風險及回報及保留程度。倘本集團並無轉讓或保留資產的絕大部份風險及回報, 亦無轉讓資產控制權, 則本集團將以本集團持續參與程度為限繼續確認所轉讓資產。在該情況下, 本集團亦確認相關負債。已轉讓資產及相關負債根據反映本集團所保留權利及責任的基準計量。

通過對已轉讓資產作出擔保的形式持續參與的計量, 按資產原賬面值與本集團或須償還的最高代價兩者中的較低者計算。

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES (continued)

Impairment of financial assets

The Group recognises an allowance for expected credit losses (“ECLs”) for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

General approach

ECLs are recognised in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12 months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

At each reporting date, the Group assesses whether the credit risk on a financial instrument has increased significantly since initial recognition. When making the assessment, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition and considers reasonable and supportable information that is available without undue cost or effort, including historical and forward-looking information. The Group considers that there has been a significant increase in credit risk when contractual payments are more than 30 days past due.

2. 會計政策(續)

2.4 重大會計政策(續)

金融資產減值

本集團確認對並非按公平值計入損益的所有債務工具預期信貸虧損(「預期信貸虧損」)的撥備。預期信貸虧損乃基於根據合約到期的合約現金流量與本集團預期收取的所有現金流量之間的差額而釐定、以原實際利率的近似值貼現。預期現金流量將包括出售所持抵押的現金流量或組成合約條款的其他信貸提升措施。

普通法

預期信貸虧損分兩個階段進行確認。就自初始確認起信貸風險並無大幅增加的信貸敞口而言，會就未來12個月內可能發生違約事件而導致的信貸虧損(12個月預期信貸虧損)計提預期信貸虧損。就自初始確認起信貸風險大幅增加的該等信貸敞口而言，不論何時發生違約，於敞口的餘下年期內的預期信貸虧損均須計提虧損撥備(全期預期信貸虧損)。

於各報告日期，本集團評估金融工具信貸風險是否自初始確認起大幅增加。於進行評估時，本集團比較金融工具於報告日期發生違約的風險及金融工具於初始確認日期發生違約的風險，認為在無需付出過多成本或努力的情況下即可獲得合理可靠的資料(包括歷史及前瞻性資料)。本集團認為，當合約付款逾期30天以上時，信貸風險顯著增加。

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES
(continued)**Impairment of financial assets** (continued)*General approach (continued)*

The Group considers a financial asset in default when contractual payments are 90 days to 150 days past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group.

A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

Debt investments at fair value through other comprehensive income and financial assets at amortised cost are subject to impairment under the general approach and they are classified within the following stages for measurement of ECLs except for trade receivables which apply the simplified approach as detailed below.

- Stage 1 – Financial instruments for which credit risk has not increased significantly since initial recognition and for which the loss allowance is measured at an amount equal to 12-month ECLs
- Stage 2 – Financial instruments for which credit risk has increased significantly since initial recognition but that are not credit-impaired financial assets and for which the loss allowance is measured at an amount equal to lifetime ECLs
- Stage 3 – Financial assets that are credit-impaired at the reporting date (but that are not purchased or originated credit-impaired) and for which the loss allowance is measured at an amount equal to lifetime ECLs

2. 會計政策(續)

2.4 重大會計政策(續)

金融資產減值(續)*普通法(續)*

本集團會在合約付款逾期90日至150日時考慮金融資產違約。然而，在若干情況下，當內部或外部資料顯示，在並無計及本集團持有的任何信貸提升措施時，本集團不大可能悉數收到未償還合約款項，則本集團亦可認為金融資產違約。

倘無法合理預期收回合約現金流量，則撇銷金融資產。

按公平值計入其他全面收益之債務投資及按攤銷成本計量的金融資產乃根據普通法減值，且於以下階段就預期信貸虧損計量予以分類，惟採用下文所述簡化法的貿易應收款項除外。

- 第一階段 – 信貸風險自初始確認起並未大幅增加且其虧損撥備按等於12個月預期信貸虧損的數額計量的金融工具
- 第二階段 – 信貸風險自初始確認起大幅增加但並非信貸減值金融資產且其虧損撥備按等於全期預期信貸虧損的數額計量的金融工具
- 第三階段 – 於報告日期出現信貸減值(但並非購入或源生信貸減值)且其虧損撥備按等於全期預期信貸虧損的數額計量的金融資產

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES (continued)

Impairment of financial assets (continued)

Simplified approach

For trade receivables that do not contain a significant financing component or when the Group applies the practical expedient of not adjusting the effect of a significant financing component, the Group applies the simplified approach in calculating ECLs. Under the simplified approach, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECLs at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings or payables.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Group's financial liabilities include trade payables, financial liabilities included in other payables and accruals, amounts due to related parties, interest-bearing bank borrowings and lease liabilities.

Subsequent measurement

The subsequent measurement of financial liabilities depends on their classification as follows:

2. 會計政策(續)

2.4 重大會計政策(續)

金融資產減值(續)

簡化法

就並無重大融資成分或本集團已應用並未就重大融資成分的影響作出調整的可行權宜方法的貿易應收款項而言，本集團採用簡化法計算預期信貸虧損。根據簡化法，本集團並未追蹤信貸風險變動，轉而於各報告日期根據全期預期信貸虧損確認虧損撥備。本集團已根據其歷史信貸虧損經驗建立撥備矩陣，並就債務人及經濟環境特定的前瞻性因素作出調整。

金融負債

初始確認及計量

金融負債於初始確認時分類為按公平值計入損益的金融負債、貸款及借貸或應付款項。

所有金融負債初始按公平值確認，貸款及借貸以及應付款項則須扣除直接應佔交易成本。

本集團的金融負債包括貿易應付款項、計入其他應付款項及應計費用的金融負債、應付關聯方款項、計息銀行借款以及租賃負債。

後續計量

金融負債其後視乎以下分類作出計量：

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財務報表附註

2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES
(continued)**Financial liabilities** (continued)*Financial liabilities at amortised cost (trade and other payables, and borrowings)*

After initial recognition, trade and other payables, and interest-bearing borrowings are subsequently measured at amortised cost, using the effective interest rate method unless the effect of discounting would be immaterial, in which case they are stated at cost. Gains and losses are recognised in the statement of profit or loss when the liabilities are derecognised as well as through the effective interest rate amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the effective interest rate. The effective interest rate amortisation is included in finance costs in the statement of profit or loss.

2. 會計政策(續)

2.4 重大會計政策(續)

金融負債(續)*按攤銷成本計量的金融負債(貿易及其他應付款項及借貸)*

初始確認後，貿易及其他應付款項以及計息借貸其後以實際利率法按攤銷成本計量，若貼現影響不大，則按成本列賬。收益及虧損於負債終止確認時透過實際利率攤銷程序於損益表確認。

計算攤銷成本時已計及任何收購折讓或溢價及屬實際利率不可分割部份的費用或成本。實際利率攤銷則計入損益表的財務費用。

NOTES TO FINANCIAL STATEMENTS

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES (continued)

Derecognition of financial liabilities

A financial liability is derecognised when the obligation under the liability is discharged or cancelled, or expires.

When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and a recognition of a new liability, and the difference between the respective carrying amounts is recognised in the statement of profit or loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, or to realise the assets and settle the liabilities simultaneously.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined on the weighted average basis and, in the case of work in progress and finished goods, comprises direct materials, direct labour and an appropriate proportion of overheads. Costs for properties under development include land costs, construction costs and other direct and indirect development expenses in relation to property development. Net realisable value is based on estimated selling prices less any estimated costs to be incurred to completion and disposal.

Cash and cash equivalents

Cash and cash equivalents in the statement of financial position comprise cash on hand and at banks, and short-term highly liquid deposits with a maturity of generally within three months that are readily convertible into known amounts of cash, subject to an insignificant risk of changes in value and held for the purpose of meeting short-term cash commitments.

For the purpose of the consolidated statement of cash flows, cash and cash equivalents comprise cash on hand and at banks, and short-term deposits as defined above, less bank overdrafts which are repayable on demand and form an integral part of the Group's cash management.

2. 會計政策(續)

2.4 重大會計政策(續)

終止確認金融負債

金融負債於負債的責任解除、註銷或屆滿時終止確認。

當現有金融負債被同一貸款人以條款明顯不同的負債取代時，或現有負債的條款有重大修改時，有關替換或修改則視為終止確認原有負債並確認一項新負債，而相關賬面值的差額於損益表確認。

抵銷金融工具

當且僅當有現行可強制執行的法律權利抵銷已確認金額，並且擬以淨額基準進行結算或同時將資產變現及清償負債，方可將金融資產及金融負債抵銷，而淨額於財務狀況表呈報。

存貨

存貨按成本及可變現淨值兩者中的較低者列賬。成本按加權平均基準釐定，而就在製品及製成品而言，成本包括直接材料、直接勞工及適當比例的生產費用。發展中物業成本包括土地成本、建造成本及其他與物業開發有關的直接及間接開發開支。可變現淨值按估計售價減去任何在完成及出售過程中產生的估計費用計。

現金及現金等價物

財務狀況表內的現金及現金等價物包括手頭現金及銀行存款，及為履行短期現金承諾而持有、通常於三個月內到期、可隨時轉換為已知金額現金且價值變動風險不大的短期高變現能力存款。

就綜合現金流量表而言，現金及現金等價物包括手頭現金及銀行存款以及上文界定的短期存款，減須按要償還的銀行透支，為本集團現金管理的組成部分。

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財務報表附註

2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES
(continued)**Provisions**

A provision is recognised when there is a present obligation (legal or constructive) has arisen as a result of a past event and it is probable that a future outflow of resources will be required to settle the obligation, provided that a reliable estimate can be made of the amount of the obligation. When the Group expects some or all of a provision to be reimbursed, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit or loss net of any reimbursement.

When the effect of discounting is material, the amount recognised for a provision is the present value at the end of the reporting period of the future expenditures expected to be required to settle the obligation. The increase in the discounted present value amount arising from the passage of time is included in finance costs in the statement of profit or loss.

Income tax

Income tax comprises current and deferred tax. Income tax relating to items recognised outside profit or loss is recognised outside profit or loss, either in other comprehensive income or directly in equity.

Current tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period, taking into consideration interpretations and practices prevailing in the countries in which the Group operates.

Deferred tax is provided, using the liability method, on all temporary differences at the end of the reporting period between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

2. 會計政策(續)

2.4 重大會計政策(續)

撥備

倘因過往事件而產生現時法定或推定責任，而履行該責任可能導致未來資源流出，且該責任所涉金額能夠可靠估計，則確認撥備。當本集團預計部分或全部撥備將得到報銷時，報銷金額將確認為單獨資產，但僅當報銷金額幾乎確定時才予以確認。與撥備相關的費用在扣除任何報銷後的損益表中呈列。

倘貼現影響重大，則確認撥備的數額為預期日後履行有關責任所需開支於報告期末的現值。倘已貼現的現值隨時間而有所增加，則該等增幅將於損益表列作財務費用。

所得稅

所得稅包括即期及遞延稅項。與於損益外確認的項目有關的所得稅於損益外確認為其他全面收益或直接於權益中確認。

即期稅項資產及負債，根據於報告期末已頒佈或實質上已頒佈的稅率（及稅法），按預期獲稅務機關退回或向稅務機關支付的款項，並計及本集團經營所在國家現行法律詮釋及慣例計量。

遞延稅項於報告期末採用負債法就資產及負債稅基與其就財務報告目的所使用的賬面值的所有暫時差額撥備。

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES (continued)

Income tax (continued)

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- when the deferred tax liability arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss and does not give rise to equal taxable and deductible temporary differences; and
- in respect of taxable temporary differences associated with investments in subsidiaries and associates when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, and the carryforward of unused tax credits and any unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carryforward of unused tax credits and unused tax losses can be utilised, except:

- when the deferred tax asset relating to the deductible temporary differences arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss and does not give rise to equal taxable and deductible temporary differences; and
- in respect of deductible temporary differences associated with investments in subsidiaries and associates, deferred tax assets are only recognised to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilised.

2. 會計政策(續)

2.4 重大會計政策(續)

所得稅(續)

除下列情況外，會就所有應課稅暫時差額確認遞延稅項負債：

- 倘遞延稅項負債因非業務合併交易中初始確認資產或負債而產生，且於交易時遞延稅項負債不會影響會計溢利或應課稅溢利或虧損及不會產生相等的應課稅及可扣減暫時差額；及
- 就於子公司及聯營公司投資相關的應課稅暫時差額而言，倘可控制暫時差額的撥回時間，且於可見未來可能不會撥回暫時差額。

於有可能動用應課稅溢利以抵銷可扣減暫時差額以及未動用稅項抵免及未動用稅項虧損結轉的情況下，就所有可扣減暫時差額以及未動用稅項抵免及任何未動用稅項虧損結轉確認遞延稅項資產，惟下列情況除外：

- 倘涉及可扣減暫時差額的遞延稅項資產因非業務合併交易中初始確認資產或負債而產生，且於交易時遞延稅項資產不會影響會計溢利或應課稅溢利或虧損及不會產生相等的應課稅及可扣減暫時差額；及
- 就於子公司及聯營公司投資相關的可扣減暫時差額而言，遞延稅項資產僅於可見未來可能撥回暫時差額，且可動用應課稅溢利以抵銷暫時差額的情況下確認。

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財務報表附註

2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES
(continued)**Income tax (continued)**

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are reassessed at the end of each reporting period and are recognised to the extent that it has become probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax assets and deferred tax liabilities are offset if and only if the Group has a legally enforceable right to set off current tax assets and current tax liabilities and the deferred tax assets and deferred tax liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realise the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

Government grants

Government grants are recognised at their fair value where there is reasonable assurance that the grant will be received and all attaching conditions will be complied with. When the grant relates to an expense item, it is recognised as income on a systematic basis over the periods that the costs, for which it is intended to compensate, are expensed.

Where the grant relates to an asset, the fair value is credited to a deferred income account and is released to the statement of profit or loss over the expected useful life of the relevant asset by equal annual instalments or deducted from the carrying amount of the asset and released to the statement of profit or loss by way of a reduced depreciation charge.

2. 會計政策(續)

2.4 重大會計政策(續)

所得稅(續)

遞延稅項資產賬面值於各報告期末檢討，並於不再可能有足夠應課稅溢利可容許動用全部或部份遞延稅項資產的情況下予以扣減。未確認遞延稅項資產於各報告期末重新評估，並在可能有足夠應課稅溢利可容許收回全部或部份遞延稅項資產的情況下予以確認。

遞延稅項資產及負債，根據於報告期末已頒佈或實質上已頒佈的稅率(及稅法)，按預期適用於變現資產或清償負債期間的稅率計量。

當且僅當本集團有可強制執行的法律權利可將即期稅項資產與即期稅項負債抵銷，且遞延稅項資產與遞延稅項負債與同一稅務機關對同一應課稅實體或於預期有大額遞延稅項負債或資產需要結算或清償的各未來期間擬按淨額基準結算即期稅項負債及資產或同時變現資產及結算負債之不同稅務實體徵收之所得稅相關，則遞延稅項資產與遞延稅項負債可予抵銷。

政府補助

政府補助在合理確定將會收取補助及將會符合一切所附條件時，按其公平值確認。如補助與開支項目有關，其將於擬用作補償的成本支銷期間按系統基準確認為收入。

倘補助與資產有關，則公平值計入遞延收入賬，並在相關資產的預期可使用年期內逐年按等額分期撥回損益表，或自資產賬面值扣減並通過減少折舊開支方式撥回損益表。

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財務報表附註

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES (continued)

Revenue recognition

Revenue from contracts with customers

Revenue from contracts with customers is recognised when control of goods or services is transferred to the customers at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services.

Revenue from other sources

Rental income is recognised on a time proportion basis over the lease terms. Variable lease payments that do not depend on an index or a rate are recognised as income in the accounting period in which they are incurred.

Other income

Interest income is recognised on an accrual basis using the effective interest method by applying the rate that exactly discounts the estimated future cash receipts over the expected life of the financial instrument or a shorter period, when appropriate, to the net carrying amount of the financial asset.

Contract liabilities

A contract liability is recognised when a payment is received or a payment is due (whichever is earlier) from a customer before the Group transfers the related goods or services. Contract liabilities are recognised as revenue when the Group performs under the contract (i.e., transfers control of the related goods or services to the customer).

Share-based payments

The Company operates a share option scheme. Employees (including directors) of the Group receive remuneration in the form of share-based payments, whereby employees render services in exchange for equity instruments ("equity-settled transactions"). The cost of equity-settled transactions with employees is measured by reference to the fair value at the date at which they are granted. The fair value is determined by an external valuer using a binomial model, further details of which are given in note 31 to the financial statements.

2. 會計政策(續)

2.4 重大會計政策(續)

銷售收入確認

客戶合約收入

於貨品或服務的控制權按反映本集團預期就交換該等貨品或服務有權收取的代價的金額轉移予客戶時確認客戶合約收入。

由其他來源產生之收入

租金收入於租賃期按時間比例確認。不取決於某一指數或比率的可變租賃付款於產生的會計期間確認為收入。

其他收入

利息收入按應計基準使用實際利率法，透過採用將金融工具在預期可使用年期或較短期間(如適用)內的估計未來現金收入準確貼現至金融資產之賬面淨值的比率予以確認。

合約負債

合約負債於本集團向客戶轉移相關貨品或服務前收取或付款到期時(以較早者為準)確認。合約負債於本集團履行合約時(即相關商品或服務的控制權轉移至客戶時)確認為收入。

以股份付款

本公司實施一項購股權計劃。本集團僱員(包括董事)以股份付款的方式收取報酬，僱員提供服務以換取股本工具(「股權結算交易」)。與僱員進行股權結算交易的成本，乃參照授出日期的公平值而計量。公平值由外聘估值師採用二項式模式釐定，進一步詳情載於財務報表附註31。

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財務報表附註

2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES
(continued)**Share-based payments (continued)**

The cost of equity-settled transactions is recognised in employee benefit expense, together with a corresponding increase in equity, over the period in which the performance and/or service conditions are fulfilled. The cumulative expense recognised for equity-settled transactions at the end of each reporting period until the vesting date reflects the extent to which the vesting period has expired and the Group's best estimate of the number of equity instruments that will ultimately vest. The charge or credit to the statement of profit or loss for a period represents the movement in the cumulative expense recognised as at the beginning and end of that period.

Service and non-market performance conditions are not taken into account when determining the grant date fair value of awards, but the likelihood of the conditions being met is assessed as part of the Group's best estimate of the number of equity instruments that will ultimately vest. Market performance conditions are reflected within the grant date fair value. Any other conditions attached to an award, but without an associated service requirement, are considered to be non-vesting conditions. Non-vesting conditions are reflected in the fair value of an award and lead to an immediate expensing of an award unless there are also service and/or performance conditions.

For awards that do not ultimately vest because non-market performance and/or service conditions have not been met, no expense is recognised. Where awards include a market or non-vesting condition, the transactions are treated as vesting irrespective of whether the market or non-vesting condition is satisfied, provided that all other performance and/or service conditions are satisfied.

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

2. 會計政策(續)

2.4 重大會計政策(續)

以股份付款(續)

股權結算交易成本連同權益相應增加部份，在績效及／或服務條件達成時於期內在僱員福利開支確認。截至歸屬日期前於報告期末確認的股權結算交易的累計開支，反映歸屬期已到期部份及本集團對最終將會歸屬的股本工具數目的最佳估計。期內在損益表扣除或進賬，乃指期初與期終已確認的累計開支的變動。

釐定獎勵的授出日期公平值並不考慮服務及非市場表現條件，惟能達成條件的可能性則被評定為將最終歸屬為本集團股本工具數目的最佳估計的一部份。市場表現條件將反映在授出日期的公平值。附帶於獎勵中但並無相關聯服務要求的其他任何條件皆視為非歸屬條件。反映非歸屬條件的獎勵公平值若當中不包含服務及／或表現條件乃即時予以支銷。

因未能達至非市場表現及／或服務條件，而導致最終並無歸屬的獎勵並不會確認支銷，惟包括一項市場或非歸屬條件之獎勵，無論市場或非歸屬條件是否達成，其均會被視為已歸屬，前提是所有其他表現及／或服務條件須已達成。

倘股權結算獎勵的條款有變更，假設符合獎勵原條款，則所確認之開支最少須達到猶如條款並無任何變更的水平。此外，倘按變更日期之計量，任何變更導致以股份付款的公平值總額增加，或為僱員帶來其他利益，則就該等變更確認開支。

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES (continued)

Share-based payments (continued)

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

The dilutive effect of outstanding options is reflected as additional share dilution in the computation of earnings per share.

Other employee benefits

Pension scheme

The employees of the Group's subsidiary which operates in Mainland China are required to participate in a central pension scheme operated by the local municipal government. This subsidiary is required to contribute a certain percentage of its payroll costs to the central pension scheme. The contributions are charged to the statement of profit or loss as they become payable in accordance with the rules of the central pension scheme.

Termination benefits

Termination benefits are recognised at the earlier of when the Group can no longer withdraw the offer of those benefits and when the Group recognises restructuring costs involving the payment of termination benefits.

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, i.e., assets that necessarily take a substantial period of time to get ready for their intended use or sale, are capitalised as part of the cost of those assets. The capitalisation of such borrowing costs ceases when the assets are substantially ready for their intended use or sale. All other borrowing costs are expensed in the period in which they are incurred. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

2. 會計政策(續)

2.4 重大會計政策(續)

以股份付款(續)

倘股權結算獎勵註銷，則視為已於註銷日期歸屬，任何尚未確認之獎勵(包括未能符合本集團或僱員可控制的非歸屬條件的任何獎勵)開支，均即時確認。然而，若已授出新獎勵代替已註銷的獎勵，並於授出日期指定為替代獎勵，則如前段所述，已註銷獎勵及新獎勵均視為原有獎勵的變更。

計算每股盈利時，未行使購股權的攤薄效應，反映為額外股份攤薄。

其他僱員福利

退休金計劃

本集團於中國內地營運的子公司屬下的僱員須參與由有關地方政府營運的中央退休金計劃。該子公司須按僱員薪金若干百分比對中央退休金計劃供款。供款於按中央退休金計劃規則應付時在損益表內支銷。

離職福利

離職福利於本集團不再能取消提供該等福利時及本集團確認涉及支付離職福利之重組成本時之較早者確認。

借款成本

收購、建設或生產合資格資產(即需要一段較長時間方可達致擬定用途或出售的資產)直接應佔的借款成本會撥充資本，作為該等資產的部份成本。當資產已大致可作擬定用途或出售時，則不會再將該等借款成本撥充資本。所有其他借款成本於產生期間支銷。借款成本包括一間實體借款時產生的利息及其他成本。

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財務報表附註

2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES
(continued)**Events after the reporting period**

There is no material subsequent event undertaken by the Group after 31 December 2024.

Dividends

Final dividends are recognised as a liability when they are approved by the shareholders in a general meeting. Proposed final dividends are disclosed in the notes to the financial statements.

Interim dividends are simultaneously proposed and declared, because the Company's memorandum and articles of association grant the directors the authority to declare interim dividends. Consequently, interim dividends are recognised immediately as a liability when they are proposed and declared.

Foreign currencies

These financial statements are presented in US\$, which is the Company's functional currency. Each entity in the Group determines its own functional currency and items included in the financial statements of each entity are measured using that functional currency. Foreign currency transactions recorded by the entities in the Group are initially recorded using their respective functional currency rates prevailing at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency rates of exchange ruling at the end of the reporting period. Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was measured. The gain or loss arising on translation of a non-monetary item measured at fair value is treated in line with the recognition of the gain or loss on change in fair value of the item (i.e., translation difference on the item whose fair value gain or loss is recognised in other comprehensive income or profit or loss is also recognised in other comprehensive income or profit or loss, respectively).

2. 會計政策(續)

2.4 重大會計政策(續)

報告期後事項

於二零二四年十二月三十一日後，本集團並無進行重大後續事項。

股息

末期股息於股東在股東大會上批准時確認為負債。擬派末期股息乃於財務報表附註披露。

由於本公司的組織章程大綱及細則授權董事宣派中期股息，故中期股息乃同時予以擬派及宣派。因此，中期股息於擬派及宣派後隨即確認為負債。

外幣

該等財務報表以本公司的功能貨幣美元呈列。本集團各實體自行決定其功能貨幣，而各實體財務報表所載項目均採用該功能貨幣計量。本集團實體記錄的外幣交易初步採用其各自於交易日期的功能貨幣匯率入賬。以外幣計值的貨幣資產及負債按各報告期末的功能貨幣匯率換算。結算或換算貨幣項目產生的差額於損益表確認。

根據以外幣計值的歷史成本計量的非貨幣項目採用首次交易日期的匯率換算。按外幣公平值計量的非貨幣項目採用計量公平值當日的匯率換算。換算以公平值計量的非貨幣項目產生的收益或虧損按與確認項目公平值變動的收益或虧損一致的方式處理(即公平值收益或虧損於其他全面收益或損益確認的項目的換算差額亦分別於其他全面收益或損益確認)。

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2. ACCOUNTING POLICIES (continued)

2.4 MATERIAL ACCOUNTING POLICIES (continued)

Foreign currencies (continued)

In determining the exchange rate on initial recognition of the related asset, expense or income on the derecognition of a non-monetary asset or non-monetary liability relating to an advance consideration, the date of initial transaction is the date on which the Group initially recognises the non-monetary asset or non-monetary liability arising from the advance consideration. If there are multiple payments or receipts in advance, the Group determines the transaction date for each payment or receipt of the advance consideration.

The functional currencies of certain Mainland China and overseas subsidiaries and associate are currencies other than US\$. As at the end of the reporting period, the assets and liabilities of these entities are translated into US\$ at the exchange rates prevailing at the end of the reporting period and their statements of profit or loss are translated into US\$ at the exchange rates that approximate to those prevailing at the dates of the transactions.

The resulting exchange differences are recognised in other comprehensive income and accumulated in the exchange fluctuation reserve, except to the extent that the differences are attributable to non-controlling interests. On disposal of a foreign operation, the cumulative amount in the reserve relating to that particular foreign operation is recognised in the statement of profit or loss.

For the purpose of the consolidated statement of cash flows, the cash flows of Mainland China and overseas subsidiaries are translated into US\$ at the weighted average exchange rates for the year of the cash flows. Frequently recurring cash flows of Mainland China and overseas subsidiaries which arise throughout the year are translated into US\$ at the weighted average exchange rates for the year.

2. 會計政策(續)

2.4 重大會計政策(續)

外幣(續)

就釐定於初步確認有關資產、開支或收入就非貨幣性資產或與墊支代價相關的非貨幣性負債的終止確認所用的匯率時，首次交易日期為本集團最初確認非貨幣性資產或墊支代價產生的非貨幣性負債的日期。倘存在多筆預付款或預收款，本集團須就每筆支付墊支代價或收取墊支代價釐定交易日期。

若干中國內地及海外子公司及聯營公司的功能貨幣為美元以外的貨幣。於報告期末，該等實體的資產及負債按報告期末的通行匯率換算為美元，而其損益表按與交易日期通行匯率大致相若的匯率換算為美元。

由此產生的匯兌差額於其他全面收益確認，並於匯率波動儲備中累計，除非有關差額來自非控股權益。出售國外業務時，儲備內有關特定國外業務的累計金額於損益表確認。

就綜合現金流量表而言，中國內地及海外子公司的現金流量乃按年內現金流量的加權平均匯率換算為美元。中國內地及海外子公司年內重複產生的現金流量乃按年內的加權平均匯率換算為美元。

NOTES TO FINANCIAL STATEMENTS

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財務報表附註

3. SIGNIFICANT ACCOUNTING ESTIMATES AND ASSUMPTIONS

The preparation of the Group's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and their accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that could require a material adjustment to the carrying amounts of the assets or liabilities affected in the future.

Judgements

In the process of applying the Group's accounting policies, management has made the following judgements, apart from those involving estimations, which have the most significant effect on the amounts recognised in the financial statements:

Property lease classification – Group as lessor

The Group has entered into commercial property leases on its investment property portfolio. The Group has determined, based on an evaluation of the terms and conditions of the arrangements, such as the lease term not constituting a major part of the economic life of the commercial property and the present value of the minimum lease payments not amounting to substantially all the fair value of the commercial property, that it retains substantially all the significant risks and rewards incidental to ownership of these properties which are leased out and accounts for the contracts as operating leases.

Estimation uncertainty

The key assumptions concerning the future and other key sources of estimation uncertainty at the end of the reporting period, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below.

3. 重要會計估計及假設

管理層在編製本集團財務報表時須作出判斷、估計及假設，而有關判斷、估計及假設會對收入、開支、資產及負債的呈報金額及其隨附披露，以及或然負債披露造成影響。該等假設及估計的不確定性或會導致須對在未來遭受影響的資產或負債的賬面值進行重大調整。

判斷

於採納本集團會計政策的過程中，除涉及估計的會計政策外，管理層已作出對財務報表已確認金額構成最重大影響的判斷如下：

物業租賃分類 – 本集團作為出租人

本集團訂立有關投資物業組合的商務物業租賃。根據對有關安排條款及條件之評估，如租期不構成商用物業之經濟壽命的主要部分且最低租賃款項現值不等於商用物業之絕大部分公平值，本集團已釐定其保留該等物業所有權附帶的絕大部分風險及回報，並將有關合約以經營租賃入賬。

估計不確定性

於報告期末，有關未來的主要假設及估計不確定的其他主要來源(存在導致於下一財政年度內對資產及負債的賬面值作出重大調整的重大風險)論述如下。

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3. SIGNIFICANT ACCOUNTING ESTIMATES AND ASSUMPTIONS (continued)

Estimation uncertainty (continued)

Impairment of non-financial assets (other than goodwill)

The Group assesses whether there are any indicators of impairment for all non-financial assets (including the right-of-use assets) at the end of each reporting period. Indefinite life intangible assets are tested for impairment annually and at other times when such an indicator exists. Other non-financial assets are tested for impairment when there are indicators that the carrying amounts may not be recoverable. An impairment exists when the carrying value of an asset or a cash-generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The calculation of the fair value less costs of disposal is based on available data from binding sales transactions in an arm's length transaction of similar assets or observable market prices less incremental costs for disposing of the asset. When value in use calculations are undertaken, management must estimate the expected future cash flows from the asset or cash-generating unit and choose a suitable discount rate in order to calculate the present value of those cash flows.

Fair value of unlisted equity investments

The unlisted equity investments have been valued using a market-based valuation technique as detailed in note 37 to the financial statements. For an unlisted equity investment of US\$271,921,000 as at 31 December 2024, where no recent deal price is available, the Group determines the comparable public companies (peers) and selects the price multiple. In addition, the Group makes estimates about the discount for illiquidity and size differences. Further details are included in notes 18 and 37 to the financial statements.

3. 重要會計估計及假設(續)

估計不確定性(續)

非金融資產(商譽除外)減值

本集團於各報告期末評估所有非金融資產(包括使用權資產)有否任何減值跡象。年期無限的無形資產每年及於該跡象存在的其他時間作減值測試。其他非金融資產在有跡象表明可能無法收回賬面值時進行減值測試。當資產或現金產生單位賬面值超過可收回金額時,即存在減值,可收回金額按公平值減出售費用或使用價值兩者的較高者計算。公平值減出售費用按類似資產按公平原則進行具約束力的銷售交易所得的數據或可觀察市場價格減出售資產的增量成本計算。計算使用價值時,管理層須估計資產或現金產生單位的預期未來現金流量,並選擇適合的折現率計算該等現金流量的現值。

非上市股本投資的公平值

非上市股本投資已根據財務報表附註37所詳述的市場基準估值技術進行估值。就於二零二四年十二月三十一日倘並無近期交易價格,的非上市股本投資271,921,000美元而言,本集團釐定可資比較公眾公司(同業)並選擇價格倍數。此外,本集團須就流動性不足及規模差異的貼現作出估計。進一步詳情載於財務報表附註18及附註37。

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財務報表附註

3. SIGNIFICANT ACCOUNTING ESTIMATES
AND ASSUMPTIONS (continued)**Estimation uncertainty** (continued)*Fair value of an investment property*

In the absence of current prices in an active market for similar properties, the Group considers information from the discounted cash flow projections.

Discounted cash flow projections based on reliable estimates of future cash flows, supported by the terms of any existing lease and other contracts and (when possible) by external evidence such as current market rents for similar properties in the same location and condition, and using discount rates that reflect current market assessments of the uncertainty in the amount and timing of the cash flows.

The carrying amount of the investment property as at 31 December 2024 was US\$164,153,000 (31 December 2023: US\$166,643,000). Further details, including the key assumptions used for fair value measurement and a sensitivity analysis, are given in note 14 to the financial statements.

3. 重要會計估計及假設(續)

估計不確定性(續)*投資物業公平值*

倘類似物業於活躍市場中並無現行市價，則本集團會考慮貼現現金流量預測資料。

根據可靠的未來現金流量估算、任何現有租約及其他合約的年期及(如可能)外在證據(如於同一地點及狀況下，類似物業的現行市值租金)，以及使用可反映現金流量金額及出現時間不明朗因素的現時市場評估的貼現率計算而得出的貼現現金流量預測。

於二零二四年十二月三十一日，投資物業的賬面值為164,153,000美元(二零二三年十二月三十一日：166,643,000美元)。進一步詳情(包括公平值計量及敏感度分析所採用的主要假設)載於財務報表附註14。

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財務報表附註

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4. OPERATING SEGMENT INFORMATION

For management purposes, the Group is organised into one single business unit that includes primarily the manufacture and sale of semiconductor products. Management reviews the consolidated results when making decisions about allocating resources and assessing the performance of the Group. Accordingly, no segment analysis is presented.

The principal assets employed by the Group are located in Shanghai and Wuxi, the PRC. Therefore, no segment information based on the geographical location of non-current assets is presented for the year.

Revenues are attributed to geographical areas based on the locations of customers. Revenues by geographical segment based on the locations of customers for the year are presented as follows:

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
China (including Hong Kong)	中國(包括香港)	1,636,528	1,774,178
North America	北美	187,899	204,882
Asia (excluding China and Japan)	亞洲(不包括中國及日本)	103,410	149,087
Europe	歐洲	69,528	134,760
Japan	日本	6,628	23,206
Total revenue	總收入	2,003,993	2,286,113

The Group is involved in the business of the manufacture and sale of semiconductor products. Revenue from the sale of semiconductor products is recognised at the point in time when control of the asset is transferred to the customer, generally on delivery of the semiconductor products, where the performance obligation is satisfied. The normal credit term is 30 to 45 days upon delivery. Payment in advance is required for some contracts.

Information about major customers

No revenue amounting to 10% or more of the Group's revenue was derived from sales to a single customer for the year ended 31 December 2024 (31 December 2023: Nil).

4. 經營分部資料

出於管理需要，本集團僅構組一個業務單元，主要包括製造及銷售半導體產品。管理層在作出分配資源的相關決策及評估本集團表現時審核綜合業績。因此，並無呈列分部分析。

本集團使用的主要資產位於中國上海及無錫，故並無按非流動資產的地理位置於年內呈列分部資料。

地理區域應佔收入乃按客戶所在地劃分。年內按客戶所在地劃分的地區分部收入呈列如下：

本集團從事製造及銷售半導體產品業務。來自銷售半導體產品的收入於資產的控制權轉移予客戶時(一般於交付半導體產品時)(即達成履約責任時)確認。一般信貸期為交付後30至45天。若干合約須提前付款。

有關主要客戶的資料

截至二零二四年十二月三十一日止年度並無對單一客戶的銷售所得收入金額達本集團收入的10%或以上(二零二三年十二月三十一日：無)。

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5. REVENUE, OTHER INCOME AND GAINS AND OTHER EXPENSES

An analysis of revenue, other income and gains and other expenses is as follows:

5. 收入、其他收入及收益及其他費用

對收入、其他收入及收益及其他費用的分析如下：

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Revenue from contracts with customers	客戶合約收入		
Sale of goods	銷售貨品	2,003,993	2,286,113
Other income	其他收入		
Gross rental income from investment property operating leases:	來自投資物業經營租賃的租金收入總額：		
Fixed lease payments	固定租賃付款	14,210	14,259
Interest income	利息收入	101,967	61,345
Government subsidies	政府補貼	31,814	66,466
Others	其他	1,081	2,300
		149,072	144,370
Other expenses	其他費用		
Foreign exchange loss, net	外匯匯兌虧損淨額	33,164	33,055
Loss on disposal of items of property, plant and equipment	出售物業、廠房及設備項目的虧損	192	206
Others	其他	39	405
		33,395	33,666
		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Types of goods	貨品類型		
Sale of semiconductor products and total revenue from contracts with customers	半導體產品的銷售和來自客戶合約的總收入	2,003,993	2,286,113
Timing of revenue recognition	收入確認時間		
Goods transferred at a point in time and total revenue from contracts with customers	在某一時點轉讓的貨品及來自客戶合約的總收入	2,003,993	2,286,113

The disaggregation of the Group's revenue based on the geographical region for the year ended 31 December 2024 is given in note 4.

截至二零二四年十二月三十一日止年度，本集團基於地區的收入分類載列於附註4。

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6. (LOSS)/PROFIT BEFORE TAX

The Group's (loss)/profit before tax is arrived at after charging/
(crediting):

6. 稅前(虧損)/溢利

本集團的稅前(虧損)/溢利乃於扣除/
(計入)下列各項後達致:

			2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
	Notes 附註			
Cost of inventories sold		已售存貨成本	1,798,865	1,799,017
Depreciation of property, plant and equipment	13	物業、廠房及設備折舊	533,568	481,664
Depreciation of right-of-use assets	15	使用權資產折舊	6,303	6,427
Amortisation of intangible assets	16	無形資產攤銷	15,961	12,348
Research and development costs		研發成本	228,327	206,522
Lease payments not included in the measurement of lease liabilities	33(b)	未計入租賃負債計量的租賃付款	2,693	2,383
Auditor's remuneration		核數師薪酬	575	749
Employee benefit expense (including directors' and chief executive's remuneration (note 8)):		僱員福利開支(包括董事及最高行政人員的薪酬(附註8)):		
Wages, salaries and other benefits		工資、薪金及其他福利	291,204	282,762
Equity-settled share option expense	31	以權益結算的購股權開支	18	853
Pension scheme contributions (defined contribution scheme)*		退休金計劃供款(定額供款計劃)*	37,178	36,909
			328,400	320,524
Impairment of items of property, plant and equipment	13	物業、廠房及設備項目減值	—	2,476
Impairment of trade receivables	21	貿易應收款項減值	91	1,120
Write-down of inventories to net realisable value		存貨撇減至可變現淨值	2,935	45,572
Changes in fair value of an investment property	14	投資物業公平值變動	39	(103)

* There are no forfeited contributions that may be used by the Group as the employer to reduce the existing level of contributions.

* 本集團作為僱主概無可能將沒收的供款用於降低現有的供款水平。

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財務報表附註

7. FINANCE COSTS

7. 財務費用

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Interest on bank borrowings	銀行借款利息	96,052	99,429
Interest on lease liabilities	租賃負債利息	1,061	1,068
Total	總計	97,113	100,497

8. DIRECTORS' AND CHIEF EXECUTIVE'S REMUNERATION

8. 董事及最高行政人員的薪酬

Directors' and chief executive's remuneration for the year, disclosed pursuant to the Listing Rules, section 383(1)(a), (b), (c) and (f) of the Hong Kong Companies Ordinance and Part 2 of the Companies (Disclosure of Information about Benefits of Directors) Regulation, is as follows:

根據上市規則及香港公司條例第383(1)(a)、(b)、(c)及(f)節及公司(披露董事利益資料)規例第2部披露的本年度董事及最高行政人員薪酬如下:

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Fees	袍金	210	216
Other emoluments:	其他酬金:		
Performance related bonuses	與表現掛鉤的花紅	242	196
Salaries, allowances and benefits in kind	薪酬、津貼及實物利益	194	196
Pension scheme contributions	退休金計劃供款	10	10
Equity-settled share option expense	以權益結算的購股權開支	5	28
Subtotal	小計	451	430
Total	費用及其他報酬總額	661	646

In prior years, certain directors were granted share options, in respect of their services to the Group, under the share option scheme of the Company, further details of which are set out in note 31 to the financial statements. The fair value of such options, which has been recognised in the statement of profit or loss over the vesting period, was determined as at the date of grant and the amount included in the financial statements for the current year is included in the above directors' and chief executive's remuneration disclosures.

於過往年度，若干董事根據本公司的購股權計劃因其向本集團提供的服務獲授購股權，其進一步詳情載於財務報表附註31。相關購股權的公平值已按歸屬期於損益表確認，並於授出日期釐定且於本年度財務報表入賬的金額已計入前述董事及最高行政人員的薪酬披露中。

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8. DIRECTORS' AND CHIEF EXECUTIVE'S REMUNERATION (continued)

(a) Independent Non-Executive Directors

The fees paid to Independent Non-Executive Directors during the year were as follows:

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Mr. Stephen Tso Tung Chang	張祖同先生	70	72
Mr. Kwai Huen Wong, JP	王桂壘先生，太平紳士	70	72
Mr. Song Lin Feng (appointed on 28 March 2024)	封松林先生(於二零二四年三月二十八日獲委任)	35	–
Mr. Long Fei Ye (resigned on 28 March 2024)	葉龍蜚先生(於二零二四年三月二十八日辭任)	35	72
Total	總計	210	216

There were no other emoluments payable to the Independent Non-Executive Directors during the year (2023: Nil).

8. 董事及最高行政人員的薪酬 (續)

(a) 獨立非執行董事

年內向獨立非執行董事支付的袍金如下：

年內並無應付予獨立非執行董事的其他酬金(二零二三年：無)。

於年內，概無董事或最高行政人員作出安排放棄或同意放棄任何薪酬。

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9. FIVE HIGHEST PAID EMPLOYEES

The five highest paid employees during the year included one director, who is also the chief executive (2023: one director being also the chief executive), details of whose remuneration are set out in note 8 above. Details of the remuneration for the year of the remaining four (2023: four) highest paid employees who are not directors of the Company are as follows:

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Salaries, allowances and benefits in kind	薪酬、津貼及實物利益	1,105	1,163
Performance related bonuses	與表現掛鉤的花紅	430	336
Equity-settled share option expense	以權益結算的購股權開支	—	6
Pension scheme contributions	退休金計劃供款	19	29
Total	總計	1,554	1,534

The number of non-director and non-chief executive highest paid employees whose remuneration fell within the following bands is as follows:

		Number of employees 僱員人數	
		2024 二零二四年	2023 二零二三年
HK\$2,000,001 to HK\$2,500,000	2,000,001港元至2,500,000港元	1	1
HK\$2,500,001 to HK\$3,000,000	2,500,001港元至3,000,000港元	2	2
HK\$4,000,001 to HK\$4,500,000	4,000,001港元至4,500,000港元	1	1
Total	總計	4	4

In prior years, share options were granted to four non-director and non-chief executive highest paid employees in respect of their services to the Group, further details of which are included in the disclosures in note 31 to the financial statements. The fair value of such options, which has been recognised in the statement of profit or loss over the vesting period, was determined as at the date of grant and the amount included in the financial statements for the current year is included in the above non-director and non-chief executive highest paid employees' remuneration disclosures.

9. 五名最高薪僱員

年內，五名最高薪僱員包括一名董事(亦為最高行政人員)(二零二三年：一名董事(亦為最高行政人員))，其薪酬詳情載於上文附註8。年內，其餘四名(二零二三年：四名)並非本公司董事的最高薪僱員的薪酬詳情如下：

薪酬屬於以下範疇的非董事及非最高行政人員的最高薪僱員人數如下：

於過往年度，四名非董事及非最高行政人員的最高薪僱員因其向本集團提供服務獲授購股權，其進一步詳情於財務報表附註31披露。相關購股權的公平值已按歸屬期於損益表確認，並於授出日期釐定且於本年度財務報表入賬的金額已計入前述非董事及非最高行政人員的最高薪僱員的薪酬披露中。

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10. INCOME TAX

Profits arising in Hong Kong were subject to profits tax at the rate of 16.5% during the year (2023: 16.5%). No provision for Hong Kong profits tax has been made as the Company and a subsidiary incorporated in Hong Kong had no assessable income during the year (2023: Nil).

The Company's subsidiary incorporated in the Cayman Islands is not subject to corporate income tax ("CIT") as it does not have a place of business (other than a registered office) or carry on any business in the Cayman Islands.

All of the Company's subsidiaries registered in the PRC and only having operations in Mainland China are subject to PRC enterprise income tax on the taxable income as reported in their PRC statutory accounts, adjusted in accordance with relevant PRC income tax laws based on a statutory rate of 25%.

Pursuant to the relevant laws and regulations in the PRC and with approval from the tax authorities in charge, the Group's subsidiaries, HHGrace and Hua Hong Wuxi, are qualified as "High and New Technology Enterprises" and are therefore entitled to a preferential tax rate of 15% from 2023 to 2025.

Pursuant to the relevant laws and regulations in the PRC and with the approval from the tax authorities in charge, the Group's subsidiaries, Hua Hong Wuxi and Hua Hong Manufacturing Wuxi, are entitled to an exemption from CIT for five years, commencing from the first year that Hua Hong Wuxi and Hua Hong Manufacturing Wuxi generate taxable profits, and a deduction of 50% on the CIT rate for the following five years. Hua Hong Wuxi and Hua Hong Manufacturing Wuxi were in accumulated tax loss positions as at 31 December 2024 and the tax holiday has not yet begun.

The Company's subsidiary incorporated and operating in Japan was subject to corporation tax at a rate of 33.58% (2023: 33.58%).

The Company's subsidiary incorporated and operating in the United States was subject to federal corporation income tax at a rate of 21% during the year (2023: 21%), as well as a California state tax at 8.84% (2023: 8.84%).

10. 所得稅

於年內的香港溢利須按16.5%(二零二三年: 16.5%)的稅率繳納利得稅。由於本公司及一家在香港註冊成立的子公司於年內並無取得應評稅收入,故並無就香港利得稅作出撥備(二零二三年: 無)。

由於本公司在開曼群島註冊成立的子公司在開曼群島並無擁有營業地點(註冊辦事處除外)或經營任何業務,故有關子公司毋須繳納企業所得稅(「企業所得稅」)。

所有本公司在中國註冊且僅在中國內地營運的子公司,應就其根據相關中國所得稅法調整的中國法定賬目所呈報應課稅收入按25%的法定稅率繳納中國企業所得稅。

根據中國相關法律及法規及獲稅務主管機關批准,本集團子公司華虹宏力及華虹無錫符合資格成為「高新技術企業」,故有權於二零二三年至二零二五年期間按15%的優惠稅率繳稅。

根據中國相關法律及法規獲稅務主管機關批准,本集團的子公司華虹無錫及華虹製造無錫可從華虹無錫及華虹製造無錫產生應課稅溢利的第一年起五年獲豁免繳納企業所得稅,及隨後五年內享受企業所得稅稅率減免50%的優惠。於二零二四年十二月三十一日,華虹無錫及華虹製造無錫處於累計稅務虧損狀態,且免稅期尚未開始。

本公司在日本註冊成立及營運的子公司應按33.58%(二零二三年: 33.58%)的企業稅率繳稅。

本公司在美國註冊成立及營運的子公司應於年內按21%(二零二三年: 21%)的聯邦企業所得稅率及8.84%(二零二三年: 8.84%)的加利福尼亞州稅率繳稅。

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10. INCOME TAX (continued)

The major components of income tax expense of the Group are as follows:

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Current income tax – PRC	當期所得稅 – 中國	27,568	57,969
Current income tax – elsewhere	當期所得稅 – 其他地區	15	43
Deferred tax (note 28)	遞延稅項(附註28)	(20,990)	(10,858)
Total	總計	6,593	47,154

A reconciliation of the tax (credit)/expense applicable to (loss)/profit before tax at the statutory rate of 25% for the jurisdiction in which the Company and the majority of its subsidiaries are domiciled or operate to the tax expense at the effective tax rate is as follows:

本集團所得稅開支的主要組成部份如下:

按本公司及其大部份子公司註冊或經營所在司法權區的法定稅率25%計算的稅前(虧損)/溢利的適用稅項開支,與按實際稅率計算的稅項(抵免)/開支的對賬如下:

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
(Loss)/profit before tax	稅前(虧損)/溢利	(133,792)	173,579
Tax at the statutory tax rate of 25%	按法定稅率25%計算的稅項	(33,448)	43,395
Effect of different tax rates for specific provinces and countries or enacted by local authority	特定省份及國家或地方當局頒佈的不同稅率的影響	(26,456)	(47,962)
Adjustments in respect of current tax of previous periods	就上一期間當期稅項的調整	121	(108)
Profits attributable to associates	聯營公司應佔溢利	(519)	(1,387)
Income not subject to tax	免稅收入	(1,319)	(1,548)
Expenses not deductible for tax	不可扣稅開支	1,600	1,063
Tax losses not recognised due to improbable future taxable profits	因未來不大可能產生應課稅溢利而未確認的稅項虧損	144,816	121,483
Temporary differences not recognised	未確認暫時差額	1,457	397
Additional deduction of research and development costs	研發成本其他扣減	(60,216)	(56,503)
Effect of withholding tax at 10% (2023: 10%) on the distributable profits of the Group's PRC subsidiary	按本集團中國子公司可供分派溢利以10%(二零二三年: 10%)計算預扣稅影響	(19,443)	(11,676)
Tax charge at the Group's effective rate	按本集團實際稅率計算的稅項開支	6,593	47,154

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11. DIVIDEND

The proposed final dividend for the year is subject to the approval of the Company's shareholders at the forthcoming annual general meeting.

The Board did not recommend the payment of any dividend of the year ended 31 December 2024 (2023: HK\$0.165 per share, equivalent to US\$36,233,000).

11. 股息

本年度的建議末期股息須待本公司股東於應屆股東週年大會上批准後方可作實。

董事會不建議派發截至二零二四年十二月三十一日止年度的任何股息(二零二三年: 每股0.165港元, 相當於36,233,000美元)。

12. EARNINGS PER SHARE ATTRIBUTABLE TO ORDINARY EQUITY HOLDERS OF THE PARENT

The calculation of the basic earnings per share amount is based on the profit for the year attributable to ordinary equity holders of the parent, and the weighted average number of ordinary shares of 1,717,346,778 (2023: 1,477,978,482) outstanding during the year.

The calculation of the diluted earnings per share amount is based on the profit for the year attributable to ordinary equity holders of the parent. The weighted average number of ordinary shares used in the calculation is the number of ordinary shares outstanding during the year, as used in the basic earnings per share calculation, and the weighted average number of ordinary shares assumed to have been issued at the exercise price on the deemed exercise or conversion of all dilutive potential ordinary shares into ordinary shares.

12. 母公司普通股權持有人應佔每股盈利

每股基本盈利金額乃基於母公司普通股權持有人應佔年內溢利及於年內已發行1,717,346,778股(二零二三年: 1,477,978,482股)普通股的加權平均數計算。

每股已攤薄盈利金額乃根據母公司普通股權持有人應佔年內溢利計算。計算時採用之普通股加權平均數為計算每股基本盈利時採用之年內已發行普通股數目加上假設所有潛在攤薄普通股被視為行使或兌換為普通股時以行使價發行之普通股加權平均數。

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財務報表附註

31 December 2024
二零二四年十二月三十一日

12. EARNINGS PER SHARE ATTRIBUTABLE TO ORDINARY EQUITY HOLDERS OF THE PARENT (continued)

The calculations of basic and diluted earnings per share are based on:

12. 母公司普通股權持有人應佔每股盈利(續)

每股基本及攤薄盈利的計算乃基於：

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Earnings	盈利		
Profit attributable to ordinary equity holders of the parent	母公司普通股權持有人應佔溢利	58,108	280,034
		Number of shares 股份數目	
		2024 二零二四年	2023 二零二三年
Shares	股份		
Weighted average number of ordinary shares outstanding during the year used in the basic earnings per share calculation	用於計算每股基本盈利的年內已發行普通股加權平均數	1,717,346,778	1,477,978,482
Effect of dilution – weighted average number of ordinary shares:	普通股攤薄加權平均數的影響：		
Share options	購股權	3,739,068	8,553,472
Total	總計	1,721,085,846	1,486,531,954

NOTES TO FINANCIAL STATEMENTS

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二零二四年十二月三十一日

財務報表附註

13. PROPERTY, PLANT AND EQUIPMENT

13. 物業、廠房及設備

		Buildings 樓宇 US\$'000 千美元	Plant and machinery 廠房及機器 US\$'000 千美元	Office equipment 辦公設備 US\$'000 千美元	Motor vehicles 汽車 US\$'000 千美元	Leasehold improvements 租賃物業裝修 US\$'000 千美元	Construction in progress 在建工程 US\$'000 千美元	Total 總計 US\$'000 千美元
31 December 2024	二零二四年十二月三十一日							
At 1 January 2024:	於二零二四年一月一日:							
Cost	成本	423,230	7,138,922	66,032	1,236	3,901	765,367	8,398,688
Accumulated depreciation and impairment	累計折舊及減值	(234,985)	(4,574,826)	(49,635)	(887)	(3,860)	(15,203)	(4,879,396)
Net carrying amount	賬面淨值	188,245	2,564,096	16,397	349	41	750,164	3,519,292
At 1 January 2024, net of accumulated depreciation and impairment	於二零二四年一月一日， 扣除累計折舊及減值	188,245	2,564,096	16,397	349	41	750,164	3,519,292
Additions	添置	-	-	-	-	-	2,977,512	2,977,512
Transfers	轉撥	458,007	1,362,517	8,712	165	-	(1,829,401)	-
Offset by government grant	被政府補助抵銷	-	(28,386)	-	-	-	-	(28,386)
Disposal	處置	-	(67)	(148)	-	-	-	(215)
Depreciation provided during the year	年內計提折舊	(12,715)	(515,928)	(4,779)	(130)	(16)	-	(533,568)
Exchange realignment	匯兌調整	(7,200)	(45,553)	(276)	(5)	-	(22,484)	(75,518)
At 31 December 2024 net of accumulated depreciation and impairment	於二零二四年 十二月三十一日， 扣除累計折舊及減值	626,337	3,336,679	19,906	379	25	1,875,791	5,859,117
At 31 December 2024:	於二零二四年十二月三十一日:							
Cost	成本	870,445	8,352,634	70,042	1,381	3,844	1,890,771	11,189,117
Accumulated depreciation and impairment	累計折舊及減值	(244,108)	(5,015,955)	(50,136)	(1,002)	(3,819)	(14,980)	(5,330,000)
Net carrying amount	賬面淨值	626,337	3,336,679	19,906	379	25	1,875,791	5,859,117

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2024
二零二四年十二月三十一日13. PROPERTY, PLANT AND EQUIPMENT
(continued)

For the year ended 31 December 2024, no items of the Group's machinery and office equipment (31 December 2023: US\$2,476,000) were obsolete with a minimal recoverable amount determined based on their fair value less costs of disposal and were therefore fully impaired.

As at 31 December 2024, certain of the Group's property, plant and equipment with a net carrying value of US\$2,064,974,000 (31 December 2023: US\$1,487,211,000) were pledged to banks to secure the Group's banking facilities (note 26).

As management concluded there are impairment indicators for long-term assets of Hua Hong Wuxi as at 31 December 2024. Therefore, an impairment assessment was performed for the year ended 31 December 2024. The impairment test is based on the recoverable amount of the CGU to which the long-term assets is allocated. The key assumptions that management used in the valuation are as follows:

13. 物業、廠房及設備(續)

截至二零二四年十二月三十一日止年度，本集團並無機器及辦公設備項目(二零二三年十二月三十一日：2,476,000美元)過時，而根據彼等公平值減出售成本確定的可收回金額極小，因而完全減值。

於二零二四年十二月三十一日，本集團賬面淨值為2,064,974,000美元(二零二三年十二月三十一日：1,487,211,000美元)的若干物業、廠房及設備已抵押予銀行以取得本集團的銀行融資(附註26)。

誠如管理層認為，於二零二四年十二月三十一日，華虹無錫長期資產存在減值跡象。因此，對截至二零二四年十二月三十一日止年度進行了減值評估。減值測試以分配長期資產的現金產生單位的可收回金額為基礎。管理層於評估中使用的主要假設如下：

		Carrying amount 賬面值 US\$'000 千美元	Recoverable amount 可收回金額 US\$'000 千美元	Impairment amount 減值金額 US\$'000 千美元	Years of the forecast period 預測期年份	Key assumptions for the forecast period 預測期的主要假設
Hua Hong Wuxi	華虹無錫	2,463,824	2,602,158	–	5 years based on the forecast and 2.5 years based on stable growth rates 按預測計為5年及按穩定增長率計為2.5年	Discount rate: 14.0%; revenue growth rate: 3.7%-17.1%; gross profit margin: (3.7) %-54.6%; net profit margin: (14.5) %-45.1% 貼現率：14.0%；收入增長率：3.7%至17.1%；毛利率：(3.7)%至54.6%；淨利率：(14.5)%至45.1%

NOTES TO FINANCIAL STATEMENTS

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二零二四年十二月三十一日

財務報表附註

14. INVESTMENT PROPERTY

14. 投資物業

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Carrying amount at 1 January	於一月一日的賬面值	166,643	169,363
Net gain from a fair value adjustment	公平值調整的收益淨額	(39)	103
Exchange realignment	匯兌調整	(2,451)	(2,823)
Carrying amount at 31 December	於十二月三十一日的賬面值	164,153	166,643

The Group's investment property is situated in Shanghai, the PRC. The directors have determined that the investment property is an industrial property based on the nature, characteristics and risks of the property.

The Group's investment property was revalued on 31 December 2024 based on valuation performed by Jones Lang LaSalle Corporate Appraisal and Advisory Limited, an independent professionally qualified valuer, on an open market value basis. The valuation is based on capitalisation of income derived from the existing tenancy with allowance for the reversionary income potential of the property.

Every year, the Group's property manager and the chief financial officer decide to appoint which external valuer to be responsible for the external valuations of the Group's properties. Selection criteria include market knowledge, reputation, independence and whether professional standards are maintained. The Group's property manager and the chief financial officer have discussions with the valuer on the valuation assumptions and valuation results annually when the valuation is performed for annual financial reporting.

The investment property is leased to a related party under an operating lease (note 33 and note 35(b)).

本集團的投資物業位於中國上海。董事已基於物業的性質、特點及風險釐定投資物業為工業物業。

於二零二四年十二月三十一日，本集團的投資物業已根據一家具專業資格的獨立估值師仲量聯行企業評估及諮詢有限公司按公開市值進行了重估。該估值基於現有租約收入的資本化，並考慮了物業的潛在可復歸收入。

每年，本集團的物業經理及財務總監決定委任外聘估值師負責本集團物業的外部估值。選聘標準包括對市場的了解、聲譽、獨立性及是否具備專業水準。本集團的物業經理及財務總監每年就年度財務報告進行估值時，會與估值師就估值假設及估值結果進行討論。

投資物業根據經營租約出租予關聯方(附註33和附註35(b))。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2024
二零二四年十二月三十一日

14. INVESTMENT PROPERTY (continued)

Fair value hierarchy

The recurring fair value measurement for the Group's investment property, which is an industrial property, was made using significant unobservable inputs (Level 3) as at 31 December 2024 and 2023. During the year, there were no transfers of fair value measurements between Level 1 and Level 2 and no transfers into or out of Level 3 (2023: Nil).

Below is a summary of the valuation techniques used and the key inputs to the valuation of the investment property:

Industrial property 工業物業	Valuation techniques 估值技術	Significant unobservable inputs 重大不可觀察輸入數據	Weighted average 加權平均
As at 31 December 2024	Term and reversion method	Estimated rental value (per sq.m. per month)	US\$12.7 (equivalent to RMB91.50)
於二零二四年十二月三十一日	年期及復歸法	估計租賃價值(每平方米每月)	12.7美元 (相當於 人民幣91.50元)
		Term yield 年期回報率	6.25%
		Reversionary yield 復歸回報率	6.75%
		Long term vacancy rate 長期空置率	10.00%
As at 31 December 2023	Term and reversion method	Estimated rental value (per sq.m. per month)	US\$13.1 (equivalent to RMB92.00)
於二零二三年十二月三十一日	年期及復歸法	估計租賃價值(每平方米每月)	13.1美元 (相當於 人民幣92.00元)
		Term yield 年期回報率	6.75%
		Reversionary yield 復歸回報率	7.25%
		Long term vacancy rate 長期空置率	10.00%

14. 投資物業(續)

公平值層級

本集團投資物業(為工業物業)於二零二四年及二零二三年十二月三十一日的週期公平值計量乃使用重大不可觀察輸入數據(第3級)作出。於年內,第1級與第2級間並無公平值計量轉移,且第3級並無轉入或轉出(二零二三年:無)。

下文為投資物業估值所用估值技術及主要輸入數據概要:

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財務報表附註

14. INVESTMENT PROPERTY (continued)

Fair value hierarchy (continued)

Under the term and reversion method, fair value is measured by taking into account the rental income derived from the existing lease with due allowance for the reversionary income potential of the lease, which is then capitalised into the value at appropriate rates.

The term value was estimated based on the existing rent, the tenancy period as stated in the lease agreement and the yield during the term period (tenancy period). The reversionary value was estimated based on the market rents, the market yield and the reversionary periods.

A significant increase/(decrease) in the estimated rental value and the market rent growth rate per annum in isolation would result in a significant increase/(decrease) in the fair value of the investment property. A significant increase/(decrease) in the long-term vacancy rate and the discount rate in isolation would result in a significant decrease/(increase) in the fair value of the investment property. Generally, a change in the assumption made for the estimated rental value is accompanied by a directionally similar change in the rent growth per annum and the discount rate and an opposite change in the long-term vacancy rate.

14. 投資物業(續)

公平值層級(續)

根據年期及復歸法，公平值乃經計及現有租約產生的租金收入，並適當納入租約的潛在可復歸收入，其後按適當資本化率折算為價值而達致。

定期價值乃根據租賃協議所訂明的現有租金、租期及年期內(租期)回報率估計。復歸價值乃根據市值租金、市場回報率及復歸期估計。

估計租賃價值及市場租金年增長率單獨大幅上升/(下降)將導致投資物業的公平值大幅增加/(減少)。長期空置率及貼現率單獨大幅上升/(下降)將導致投資物業的公平值大幅減少/(增加)。一般而言，就估計租賃價值作出的假設變動同時，租金年增長率及貼現率出現同向變動，而長期空置率出現反向變動。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

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15. RIGHT-OF-USE ASSETS

2024

		Land use rights 土地使用權 US\$'000 千美元	Buildings 樓宇 US\$'000 千美元	Total 總計 US\$'000 千美元
At 1 January 2024, net of accumulated depreciation	於二零二四年一月一日， 扣除累計折舊	59,591	18,954	78,545
Additions	添置	936	5,745	6,681
Depreciation provided during the year	年內計提折舊	(1,722)	(4,581)	(6,303)
Exchange realignment	匯兌調整	(866)	(296)	(1,162)
At 31 December 2024	於二零二四年十二月三十一日	57,939	19,822	77,761

2023

		Land use rights 土地使用權 US\$'000 千美元	Buildings 樓宇 US\$'000 千美元	Total 總計 US\$'000 千美元
At 1 January 2023, net of accumulated depreciation	於二零二三年一月一日， 扣除累計折舊	62,262	16,163	78,425
Additions	添置	–	7,862	7,862
Depreciation provided during the year	年內計提折舊	(1,641)	(4,786)	(6,427)
Exchange realignment	匯兌調整	(1,030)	(285)	(1,315)
At 31 December 2023	於二零二三年十二月三十一日	59,591	18,954	78,545

As at 31 December 2024, certain of the Group's land use rights with a carrying value of US\$47,069,000 as at 31 December 2024 (31 December 2023: US\$44,319,000) were pledged to banks to secure the Group's banking facilities (note 26).

於二零二四年十二月三十一日，本集團於二零二四年十二月三十一日賬面值為47,069,000美元(二零二三年十二月三十一日：44,319,000美元)的若干土地使用權已抵押予銀行以取得本集團的銀行融資(附註26)。

NOTES TO FINANCIAL STATEMENTS

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財務報表附註

16. INTANGIBLE ASSETS

16. 無形資產

		Process technology licence 工藝技術許可 US\$'000 千美元	Software 軟件 US\$'000 千美元	Total 總計 US\$'000 千美元
31 December 2024	二零二四年十二月三十一日			
At 1 January 2024:	於二零二四年一月一日：			
Cost	成本	283,354	157,237	440,591
Accumulated amortisation and impairment	累計攤銷及減值	(259,547)	(131,217)	(390,764)
Net carrying amount	賬面淨值	23,807	26,020	49,827
At 1 January 2024, net of accumulated amortisation and impairment	於二零二四年一月一日， 扣除累計攤銷及減值	23,807	26,020	49,827
Additions	添置	—	4,972	4,972
Offset by government grants	被政府補助抵銷	(6,844)	—	(6,844)
Amortisation provided during the year	年內作出攤銷	(7,215)	(8,746)	(15,961)
Exchange realignment	匯兌調整	(193)	(345)	(538)
At 31 December 2024, net of accumulated amortisation and impairment	於二零二四年十二月三十一日， 扣除累計攤銷及減值	9,555	21,901	31,456
At 31 December 2024:	於二零二四年十二月三十一日：			
Cost	成本	272,416	159,844	432,260
Accumulated amortisation and impairment	累計攤銷及減值	(262,861)	(137,943)	(400,804)
Net carrying amount	賬面淨值	9,555	21,901	31,456

NOTES TO FINANCIAL STATEMENTS

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二零二四年十二月三十一日

16. INTANGIBLE ASSETS (continued)

16. 無形資產(續)

		Process technology licence 工藝技術許可 US\$'000 千美元	Software 軟件 US\$'000 千美元	Total 總計 US\$'000 千美元
31 December 2023	二零二三年十二月三十一日			
At 1 January 2023:	於二零二三年一月一日:			
Cost	成本	270,734	147,145	417,879
Accumulated amortisation and impairment	累計攤銷及減值	(259,246)	(125,647)	(384,893)
Net carrying amount	賬面淨值	11,488	21,498	32,986
At 1 January 2023, net of accumulated amortisation and impairment	於二零二三年一月一日, 扣除累計攤銷及減值	11,488	21,498	32,986
Additions	添置	17,112	12,641	29,753
Offset by government grants	被政府補助抵銷	–	(35)	(35)
Amortisation provided during the year	年內作出攤銷	(4,646)	(7,702)	(12,348)
Exchange realignment	匯兌調整	(147)	(382)	(529)
At 31 December 2023, net of accumulated amortisation and impairment	於二零二三年十二月三十一日, 扣除累計攤銷及減值	23,807	26,020	49,827
At 31 December 2023:	於二零二三年十二月三十一日:			
Cost	成本	283,354	157,237	440,591
Accumulated amortisation and impairment	累計攤銷及減值	(259,547)	(131,217)	(390,764)
Net carrying amount	賬面淨值	23,807	26,020	49,827

As management concluded there are impairment indicators for long-term assets of Hua Hong Wuxi as at 31 December 2024. Therefore, an impairment assessment was performed for the year ended 31 December 2024. The impairment test is based on the recoverable amounts of the CGU to which the long-term assets is allocated. The key assumptions that management used in the valuation can be found in note 13.

誠如管理層認為，於二零二四年十二月三十一日，華虹無錫的長期資產存在減值跡象。因此，對截至二零二四年十二月三十一日止年度進行了減值評估。減值測試以分配長期資產的現金產生單位的可收回金額為基礎。管理層於評估中使用的主要假設參閱附註13。

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二零二四年十二月三十一日

財務報表附註

17. INVESTMENTS IN ASSOCIATES

17. 於聯營公司的投資

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Carrying amount	賬面值	139,799	139,099

Particulars of the material associate are as follows:

主要聯營公司詳情如下：

Name of company 公司名稱	Place of registration and business 登記及營業地點	Paid-in capital 實繳股本 RMB'000 人民幣千元	Percentage of equity interest attributable to the Group 本集團應佔 股權百分比	Percentage of voting power held by the Group 本集團所持 投票權百分比	Principal activities 主要業務
Shanghai Huahong Technology Development Co., Ltd. ("Huahong Technology Development") 上海華虹科技發展有限公司 (「華虹科技發展」)	PRC/Mainland China 中國／中國內地	548,000	50%	40%	Technology development and investment 科技開發及投資
Shanghai Huahong Investment Development Co., Ltd ("Huahong Investment Development") 上海華虹投資發展有限公司 (「華虹投資發展」)	PRC/Mainland China 中國／中國內地	480,000	20%	20%	Investment 投資

The Group's voting power held and profit sharing arrangement in relation to Huahong Technology Development are 40% and 50%, respectively.

本集團有關華虹科技發展持有的投票權及溢利分配安排分別為40%及50%。

The Group's shareholdings in the associates are held through a wholly-owned subsidiary of the Company.

本集團透過本公司的全資子公司持有該聯營公司的股權。

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17. INVESTMENTS IN ASSOCIATES (continued)

The following table illustrates the summarised financial information of Huahong Technology Development and Huahong Investment Development:

17. 於聯營公司的投資(續)

下表概述華虹科技發展及華虹投資發展的財務資料：

		Huahong Technology Development 華虹科技發展		Huahong Investment Development 華虹投資發展	
		31 December 2024 二零二四年十二月三十一日 US\$'000 千美元	31 December 2023 二零二三年十二月三十一日 US\$'000 千美元	31 December 2024 二零二四年十二月三十一日 US\$'000 千美元	31 December 2023 二零二三年十二月三十一日 US\$'000 千美元
Current assets	流動資產	15,495	24,581	8,847	8,917
Non-current assets	非流動資產	313,339	295,158	89,635	115,646
Current liabilities	流動負債	(62,126)	(63,265)	(348)	(169)
Non-current liabilities	非流動負債	(23,714)	(22,763)	(6,625)	(13,177)
Net assets	淨資產	242,994	233,711	91,509	111,217
Reconciliation to the Group's interest in the associate:	本集團於聯營公司的權益對賬：				
Proportion of the Group's interest in the associate	本集團於聯營公司的權益比例	50%	50%	20%	20%
Carrying amount of the investment	投資賬面值	121,497	116,856	18,302	22,243

		Huahong Technology Development 華虹科技發展		Huahong Investment Development 華虹投資發展	
		31 December 2024 二零二四年十二月三十一日 US\$'000 千美元	31 December 2023 二零二三年十二月三十一日 US\$'000 千美元	31 December 2024 二零二四年十二月三十一日 US\$'000 千美元	31 December 2023 二零二三年十二月三十一日 US\$'000 千美元
Revenue	收入	26,610	51,500	804	811
Profit/(loss) for the year	年內溢利(虧損)／	12,848	13,341	(14,825)	12,797
Other comprehensive (loss)/income	其他全面(虧損)／收益	—	—	(3,315)	6,760
Total comprehensive income/(loss) for the year	年內全面收益／(虧損)總額	12,848	13,341	(18,140)	19,557

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財務報表附註

18. FINANCIAL INVESTMENTS

18. 金融投資

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Equity investments designated at fair value through other comprehensive income:	指定為按公平值計入其他全面收益的股本投資：		
Listed equity investments	上市股本投資	—	2,429
Unlisted equity investments	非上市股本投資	289,311	268,077
Total	總計	289,311	270,506

Equity investments designated at fair value through other comprehensive income, primarily including an unlisted equity investment in Shanghai Huali Microelectronics Co., Ltd. ("Shanghai Huali") with a carrying amount of US\$269,139,000, were irrevocably designated at fair value through other comprehensive income as the Group considers the investment to be strategic in nature.

指定為按公平值計入其他全面收益的股本投資主要包括賬面值為269,139,000美元的上海華力微電子有限公司(「上海華力」)的非上市股本投資，而本集團認為該等投資不可撤回地指定為按公平值計入其他全面收益，乃由於該等投資屬策略性質。

19. PROPERTIES UNDER DEVELOPMENT

19. 發展中物業

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Carrying amount at 1 January	於一月一日的賬面值	178,828	134,723
Additions	添置	43,077	44,105
As at 31 December	於十二月三十一日	221,905	178,828

The Group's properties under development are recognised in leasehold land situated in Mainland China.

本集團發展中物業於中國內地租賃土地內確認。

As at 31 December 2024, the Group's properties under development with an aggregate carrying amount of approximately US\$90,275,000 (31 December 2023: US\$86,565,000) were pledged to secure bank and other borrowings granted to the Group (note 26).

於二零二四年十二月三十一日，本集團發展中物業賬面總值約90,275,000美元(二零二三年十二月三十一日：86,565,000美元)已抵押以換取授予本集團銀行及其他借款(附註26)。

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20. INVENTORIES

20. 存貨

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Raw materials	原材料	256,417	261,359
Work in progress	在製品	214,623	149,321
Finished goods	製成品	70,696	111,912
		541,736	522,592
Provision for inventories	存貨撥備	(74,676)	(72,843)
Total	總計	467,060	449,749

21. TRADE AND NOTES RECEIVABLES

21. 貿易應收款項及應收票據

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Trade receivables	貿易應收款項	225,682	214,414
Notes receivables	應收票據	47,535	66,951
		273,217	281,365
Impairment of trade receivables	貿易應收款項減值	(2,756)	(2,696)
Net carry amount	賬面淨值	270,461	278,669

The Group's trading terms with its customers are mainly on credit and the credit period is generally 30 to 150 days. There is no significant concentration of credit risk. The Group does not hold any collateral or other credit enhancements over its trade receivable balances. Trade receivables are non-interest-bearing.

An ageing analysis of the trade and bills receivables, based on the invoice date and net of loss allowance, is as follows:

本集團與其客戶的貿易賬期以信貸為主，信貸期一般為30至150天。本集團並無重大集中信貸風險。本集團並無就其貿易應收款項餘額持有任何抵押品或採取其他信貸提升措施。貿易應收款項為免息。

按發票日期計，貿易應收款項及應收票據(扣除虧損撥備)的賬齡分析如下：

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Within 3 months	3個月以內	229,151	232,485
3 to 6 months	3至6個月	33,918	43,762
Over 6 months but within one year	超過六個月但於一年內	7,392	2,422
Total	總計	270,461	278,669

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財務報表附註

21. TRADE AND NOTES RECEIVABLES
(continued)

The movements in loss allowance for impairment of trade and bills receivables are as follows:

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
At 1 January	於一月一日	2,696	1,591
Impairment losses, net (note 6)	減值虧損淨額(附註6)	91	1,120
Exchange realignment	匯兌調整	(31)	(15)
As at 31 December	於十二月三十一日	2,756	2,696

The Group applies a simplified approach in calculating ECLs prescribed by HKFRS 9, which permits the use of the lifetime expected loss for all trade and notes receivables. To measure the expected credit losses, trade and notes receivables have been grouped based on shared credit risk characteristics and the days past due. The expected credit losses have also incorporated forward-looking information. The expected credit loss rates for trade and notes receivables that were not yet past due or aged within 3 months are minimal.

An impairment analysis is performed at each reporting date using a provision matrix to measure expected credit losses. The provision rates are based on days past due for groupings of various customer segments with similar loss patterns (i.e., by geographical region, product type, customer type and rating, and coverage by letters of credit or other forms of credit insurance). The calculation reflects the probability-weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions. Generally, trade receivables are written off if past due for more than one year and are not subject to enforcement activity.

Set out below is the information about the credit risk exposure on the Group's trade receivables using a provision matrix:

21. 貿易應收款項及應收票據(續)

貿易應收款項及應收票據減值虧損撥備的變動如下:

本集團採用香港財務報告準則第9號訂明計算預期信貸虧損之簡化方法，該準則允許就所有貿易應收款項及應收票據採用整個存續期的預期虧損。為計量預期信貸虧損，貿易應收款項及應收票據已根據共同信貸風險特性及逾期天數進行分組。預期信貸虧損亦包含前瞻性資料。尚未逾期或賬齡為3個月以內的貿易應收款項及應收票據的預期信貸損失率極低。

於各報告日期採用撥備矩陣進行減值分析，以計量預期信貸虧損。撥備率乃基於具有類似虧損模式的多個客戶分部組別(即按地區、產品類型、客戶類型及評級、以及信用證或其他形式的信用保險承保範圍劃分)的逾期天數釐定。該計算反映概率加權結果、貨幣時值及於報告日期可得的有關過往事項、當前狀況及未來經濟條件預測的合理及可靠資料。一般而言，倘貿易應收款項逾期超過一年及毋須受限於強制執行活動，則予以撇銷。

下文載列本集團使用撥備矩陣計算的貿易應收款項信用風險敞口的資料:

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(continued)

The credit quality of the trade and bills receivables is as follows:

As at 31 December 2024

		Past due 逾期				Total 總計
		Current 即期	Less than 3 months 少於3個月	3 to 6 months 3至6個月	Over 6 months 6個月以上	
Expected credit loss rate	預期信貸虧損率	0.06%	1.52%	27.80%	100.00%	1.01%
Gross carrying amount (US\$'000)	賬面總值(千美元)	248,688	19,874	3,273	1,382	273,217
Expected credit losses (US\$'000)	預期信貸虧損 (千美元)	161	303	910	1,382	2,756

As at 31 December 2023

貿易應收款項及應收票據的信貸質量如下:

於二零二四年十二月三十一日

		Past due 逾期				Total 合計
		Current 即期	Less than 3 months 少於3個月	3 to 6 months 3至6個月	Over 6 months 6個月以上	
Expected credit loss rate	預期信貸虧損率	0.06%	1.45%	28.57%	100.00%	0.96%
Gross carrying amount (US\$'000)	賬面總值(千美元)	273,399	5,505	14	2,447	281,365
Expected credit losses (US\$'000)	預期信貸虧損 (千美元)	165	80	4	2,447	2,696

於二零二三年十二月三十一日

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22. PREPAYMENTS, OTHER RECEIVABLES
AND OTHER ASSETS

22. 預付款項、其他應收款項及其他資產

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Other receivables	其他應收款項	33,825	12,520
Prepayments and other assets	預付款項及其他資產	12,361	11,393
Value-added input tax	增值稅進項稅額	318,690	10,796
		364,876	34,709
Impairment of other receivables	其他應收款項減值	(879)	(888)
Total	總計	363,997	33,821

Other receivables are repayable on demand.

其他應收款項須按要求償還。

The movements in the loss allowance for impairment of other receivables are as follows:

其他應收款項減值撥備虧損的變動如下：

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
At 1 January	於一月一日	888	899
Exchange realignment	匯兌調整	(9)	(11)
As at 31 December	於十二月三十一日	879	888

The Group applies a general approach in calculating ECLs for other receivables. Other receivables related to debtors that are in default are classified as Stage 3 and the lifetime ECL rate was estimated to be 100% based on historical credit loss experience, resulting in an impairment balance of US\$879,000 (2023: US\$888,000). The remaining other receivables are classified as Stage 1 without any significant increase in credit risk tracked since initial recognition. Their recoverability was assessed with reference to the credit status of the debtors, and the expected credit losses as at 31 December 2024 and 2023 were considered to be insignificant.

本集團採用一般方法計算其他應收款項的預期信貸虧損。與違約債務人相關的其他應收款項歸類為第三階段，根據歷史信貸虧損經驗估計全期預期信貸虧損率為100%，因此減值結餘為879,000美元(二零二三年：888,000美元)。其餘其他應收款項歸類為第一階段，自初步確認後追蹤的信貸風險並無任何重大增加。其可收回性參照債務人的信用狀況評定，而於二零二四年及二零二三年十二月三十一日的預期信貸虧損被視為不重大。

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二零二四年十二月三十一日23. CASH AND CASH EQUIVALENTS AND
PLEGDED DEPOSITS23. 現金及現金等價物以及已抵押
存款

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Cash and bank balances	現金及銀行結餘	2,749,279	4,638,292
Time deposits	定期存款	1,741,477	978,977
Subtotal	小計	4,490,756	5,617,269
Less:	減:		
Pledged deposits	已抵押存款	(31,591)	(32,061)
Others	其他	(33)	(27)
Cash and cash equivalents	現金及現金等價物	4,459,132	5,585,181

At the end of the reporting period, the cash and bank balances and time deposits of the Group denominated in Renminbi ("RMB") amounted to US\$3,786,750,000 (2023: US\$4,849,390,000). The RMB is not freely convertible into other currencies, however, under Mainland China's Foreign Exchange Control Regulations and Administration of Settlement, and Sale and Payment of Foreign Exchange Regulations, the Group is permitted to exchange RMB for other currencies through banks authorised to conduct foreign exchange business.

Cash at banks earns interest at floating rates based on daily bank deposit rates. Short term time deposits are made for varying periods of between seven days and three months depending on the immediate cash requirements of the Group and earn interest at the respective short term time deposit rates. The bank balances are deposited with creditworthy banks with no recent history of default.

於報告期末，本集團的現金及銀行結餘以及定期存款乃以人民幣（「人民幣」）計值，為3,786,750,000美元（二零二三年：4,849,390,000美元）。人民幣不可自由兌換為其他貨幣。然而，根據中國內地的《外匯管理條例》及《結匯、售匯及付匯管理規定》，本集團獲准透過獲授權開展外匯業務的銀行將人民幣兌換為其他貨幣。

銀行現金乃根據每日銀行存款利率按浮動利率計息。短期的定期存款乃視乎本集團的即時現金需求為期七日至三個月不等，按各短期定期存款的利率賺取利息。銀行結餘乃存放於信譽良好且近期並無違約記錄的銀行。

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24. TRADE PAYABLES

An ageing analysis of the trade payables of the Group as at the end of the reporting period, based on the invoice date, is as follows:

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Within 1 month	1個月以內	151,190	149,116
1 to 3 months	1至3個月	70,474	42,579
3 to 6 months	3至6個月	16,758	16,166
6 to 12 months	6至12個月	22,776	11,158
Over 12 months	12個月以上	37,174	16,391
Total	總計	298,372	235,410

The trade payables are unsecured, non-interest-bearing and are normally settled on terms of 30 to 60 days.

於報告期末按發票日期計，本集團貿易應付款項的賬齡分析如下：

貿易應付款項為無抵押、不計息及一般於30天至60天期限內結清。

25. OTHER PAYABLES AND ACCRUALS

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Other payables and accruals	其他應付款項及暫估費用	690,101	251,248
Contract liabilities	合約負債	107,631	86,545
Payroll and bonus payables	應付薪金及花紅	82,682	92,658
Others	其他	33	27
Total	總計	880,447	430,478

Other payables are unsecured, non-interest-bearing and repayable on demand.

As at 1 January 2023, the carrying amount of contract liability was US\$192,588,000.

During the year ended 31 December 2024, contract liabilities of US\$86,545,000 (2023: US\$192,588,000) at the beginning of the year were recognised as revenue. The increase in contract liabilities in 2024 was mainly due to the increase in short-term advances received from customers in relation to the sale of semiconductor products.

25. 其他應付款項及暫估費用

其他應付款項無抵押、免息及須於要求時償還。

於二零二三年一月一日，合約負債的賬面值為192,588,000美元。

截至二零二四年十二月三十一日止年度，年初86,545,000美元(二零二三年：192,588,000美元)的合約負債被確認為收入。於二零二四年的合約負債增加主要是由於與銷售半導體產品有關的客戶短期墊款增加。

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26. INTEREST-BEARING BANK BORROWINGS

26. 計息銀行借款

		2024 二零二四年		
		Effective interest rate (%) 實際利率(%)	Maturity 到期	US\$'000 千美元
Current	流動			
Current portion of long-term bank loans – secured	長期銀行貸款的即期部份 – 有抵押	1.20 – 6.40 1.20至6.40	2025 二零二五年	280,704
Total – current	總計 – 流動			280,704
Non-current	非流動			
Secured bank loans	有抵押銀行貸款	1.20 – 6.40 1.20至6.40	2026-2033 二零二六年 – 二零三三年	1,696,011
Unsecured bank loans	無抵押銀行貸款	2.00 – 2.51 2.00至2.51	2026-2033 二零二六年 – 二零三三年	221,224
Total – non-current	總計 – 非流動			1,917,235
Total	總計			2,197,939

		2023 二零二三年		
		Effective interest rate (%) 實際利率(%)	Maturity 到期	US\$'000 千美元
Current	流動			
Current portion of long-term bank loans – secured	長期銀行貸款的即期部份 – 有抵押	1.20 - 5.50 1.20至5.50	2024 二零二四年	193,035
Total – current	總計 – 流動			193,035
Non-current	非流動			
Secured bank loans	有抵押銀行貸款	1.20 - 5.50 1.20至5.50	2025-2033 二零二五年 – 二零三三年	1,786,526
Unsecured bank loans	無抵押銀行貸款	2.00 2.00	2025-2033 二零二五年 – 二零三三年	120,000
Total – non-current	總計 – 非流動			1,906,526
Total	總計			2,099,561

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26. INTEREST-BEARING BANK BORROWINGS
(continued)

26. 計息銀行借款(續)

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Analysed into:	分析為:		
Bank loans repayable:	應償還銀行貸款:		
Within one year	一年內	280,704	193,035
In the second year	第二年	420,860	266,809
In the third to fifth years, inclusive	第三至第五年 (包括首尾兩年)	1,041,487	989,585
After five years	五年後	454,888	650,132
Total	總計	2,197,939	2,099,561

Except for bank loans of US\$697,271,000 (2023: US\$446,551,000) which are denominated in RMB, all borrowings are dominated in United States dollars.

除697,271,000美元(二零二三年: 446,551,000美元)的銀行貸款以人民幣計值外,所有借款均以美元計值。

As at 31 December 2024 and 2023, certain of the Group's bank loans were secured by pledges of the Group's assets with carrying values as follows:

於二零二四年及二零二三年十二月三十一日,本集團的若干銀行貸款由抵押本集團的資產作擔保,資產的賬面值如下:

			2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
		Notes 附註		
Property, plant and equipment	物業、廠房及設備	13	2,064,974	1,487,211
Right-of-use assets	使用權資產	15	47,069	44,319
Properties under development	發展中物業	19	90,275	86,565
Total	總計		2,202,318	1,618,095

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27. LEASE LIABILITIES

27. 租賃負債

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Carrying amount at 1 January	於一月一日的賬面值	22,205	19,348
Additions	添置	5,745	7,862
Accretion of interest	利息增加	1,061	1,068
Payments	付款	(5,694)	(5,674)
Exchange realignment	匯兌調整	(337)	(399)
Carrying amount at 31 December	於十二月三十一日的賬面值	22,980	22,205

The maturity profile of lease liabilities as at 31 December 2024 is as follows:

租賃負債於二零二四年十二月三十一日的到期情況如下：

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Within one year	一年內	5,828	3,981
In the second year	第二年	3,465	2,554
In the third to fifth years, inclusive	第三至第五年(包括首尾兩年)	7,550	7,663
After five years	五年後	10,066	12,771
Total undiscounted lease liabilities	未貼現租賃負債總額	26,909	26,969
Discount amount	貼現額	(3,929)	(4,764)
Total present value of lease liabilities	租賃負債的總現值	22,980	22,205
Current portion	即期部分	4,912	3,076
Non-current portion	非即期部分	18,068	19,129

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Analysed into:	分析為:		
Within one year	一年內	4,912	3,076
In the second year	第二年	2,737	1,742
In the third to fifth years, inclusive	第三至第五年(包括首尾兩年)	5,948	5,755
After five years	五年後	9,383	11,632
Total present value of lease liabilities	租賃負債的總現值	22,980	22,205

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28. DEFERRED TAX

The movements in deferred tax liabilities and assets during the year are as follows:

Deferred tax liabilities

28. 遞延稅項

年內遞延稅項負債及資產的變動如下：

遞延稅項負債

		Fair value gains on investments 金融投資的公平值收益 US\$'000 千美元	Fair value gain on an investment property 投資物業的公平值收益 US\$'000 千美元	Withholding tax 預扣稅 US\$'000 千美元	Difference of fixed assets between accounting and tax basis 固定資產稅會差異 US\$'000 千美元	Right-of use assets 使用權資產 US\$'000 千美元	Total 總計 US\$'000 千美元
At 1 January 2023	於二零二三年一月一日	–	590	41,268	3,621	2,424	47,903
Deferred tax charged/(credited) to profit or loss during the year (note 10)	年內扣自/(計入)損益的遞延稅項(附註10)	–	16	(11,676)	(565)	461	(11,764)
Deferred tax charged to other comprehensive income during the year	年內扣自其他全面收益的遞延稅項	10,749	–	–	–	–	10,749
Exchange realignment	匯兌調整	(335)	(10)	–	(65)	(42)	(452)
Gross deferred tax liabilities as at 31 December 2023	於二零二三年十二月三十一日遞延稅項負債總額	10,414	596	29,592	2,991	2,843	46,436
At 1 January 2024	於二零二四年一月一日	10,414	596	29,592	2,991	2,843	46,436
Deferred tax (credited)/charged to profit or loss during the year (note 10)	年內(計入)/扣自損益的遞延稅項(附註10)	–	(6)	(19,443)	(685)	175	(19,959)
Deferred tax charged to other comprehensive income during the year	年內扣自其他全面收益的遞延稅項	1,199	–	–	–	–	1,199
Exchange realignment	匯兌調整	(257)	(9)	–	(37)	(45)	(348)
Gross deferred tax liabilities as at 31 December 2024	於二零二四年十二月三十一日遞延稅項負債總額	11,356	581	10,149	2,269	2,973	27,328

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28. DEFERRED TAX (continued)

The Group is liable for withholding taxes on dividends distributed by those subsidiaries established in Mainland China in respect of earnings generated from 1 January 2008. A lower withholding tax rate may be applied if there is a tax treaty between Mainland China and the jurisdiction of the foreign investors.

There are no income tax consequences attaching to the payment of dividends by the Company to its shareholders.

Deferred tax is not recognised in respect of the Group's investments in associates where the Group is able to control the timing of remittance or other realisation and where remittance or realisation is not probable in the foreseeable future. The aggregate temporary differences relating to unrecognised deferred tax liabilities arising on investments in associates is US\$88,327,000 (2023: US\$86,825,000).

28. 遞延稅項(續)

本集團須就於中國內地成立的該等子公司自二零零八年一月一日起產生的盈利所分派的股息繳納預扣稅。倘中國內地與外國投資者所屬司法權區間訂有稅務協定，可能適用較低的預扣稅率。

本公司向其股東派付股息並無附帶任何所得稅後果。

若本集團可控制其於聯營公司的投資的匯款或以其他方式變現的時間，以及於可見未來匯款或變現的機會不大，本集團將不會就此等投資確認遞延稅項。有關於聯營公司投資產生的未確認遞延稅項負債之暫時差異總額為88,327,000美元(二零二三年：86,825,000美元)。

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財務報表附註

28. DEFERRED TAX (continued)

28. 遞延稅項(續)

Deferred tax assets

遞延稅項資產

		Write-down of inventories and impairment of receivables 存貨撇減及 應收款項減值 US\$'000 千美元	Accruals 暫估費用 US\$'000 千美元	Lease liabilities 租賃負債 US\$'000 千美元	Fair value loss on financial investments 金融投資的 公平值虧損 US\$'000 千美元	Government grants 政府補助 US\$'000 千美元	Total 總計 US\$'000 千美元
At 1 January 2023	於二零二三年 一月一日	2,864	6,465	2,815	3,879	4,677	20,700
Deferred tax credited/(charged) to profit or loss during the year (note 10)	年內計入/(扣自)損益 的遞延稅項(附註10)	571	(1,715)	488	-	(250)	(906)
Deferred tax charged to other comprehensive income during the year	年內扣自其他全面收益 的遞延稅項	-	-	-	(3,879)	-	(3,879)
Exchange realignment	匯兌調整	(45)	(139)	(49)	-	(80)	(313)
Gross deferred tax assets as at 31 December 2023	於二零二三年 十二月三十一日遞延 稅項資產總額	3,390	4,611	3,254	-	4,347	15,602
At 1 January 2024	於二零二四年 一月一日	3,390	4,611	3,254	-	4,347	15,602
Deferred tax credited/(charged) to profit or loss during the year (note 10)	年內計入/(扣自)損益 的遞延稅項(附註10)	399	442	202	-	(12)	1,031
Exchange realignment	匯兌調整	(50)	(88)	(52)	-	(63)	(253)
Gross deferred tax assets as at 31 December 2024	於二零二四年 十二月三十一日遞延 稅項資產總額	3,739	4,965	3,404	-	4,272	16,380

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28. DEFERRED TAX (continued)

For presentation purposes, certain deferred tax assets and liabilities have been offset in the statement of financial position. The following is an analysis of the deferred tax balances of the Group for financial reporting purposes:

	2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Net deferred tax liabilities recognised in the consolidated statement of financial position	10,948	30,834

The Group has tax losses arising in Hong Kong of US\$26,819,000 that are available indefinitely for offsetting against future taxable profits of the companies in which the losses arose. The Group also has tax losses arising in Mainland China of US\$1,503,187,000 that will expire in one to ten years for offsetting against future taxable profits. Relevant deferred tax assets have not been recognised due to improbable future taxable profits.

The Group has tax losses arising in Hong Kong of US\$31,628,000 (2023: US\$24,916,000) that are available indefinitely for offsetting against future taxable profits of the companies in which the losses arose. The Group also has tax losses arising in Mainland China of US\$12,935,000 (2023: US\$11,622,000) that will expire in one to five years for offsetting against future taxable profits.

Deferred tax assets have not been recognised in respect of these losses as they have arisen in subsidiaries that have been loss-making for some time and it is not considered probable that taxable profits will be available against which the tax losses can be recognised.

Deferred tax assets have not been recognised in respect of the temporary differences as it is not considered probable that the above items can be recognised.

28. 遞延稅項(續)

出於呈列目的，若干遞延稅項資產及負債已在財務狀況表中抵銷。以下為就財務報告目的對本集團遞延稅項結餘進行的分析：

本集團於香港產生的稅項虧損為26,819,000美元，可無限期用作抵銷產生虧損的公司的未來應課稅溢利。本集團亦有於中國內地產生的稅項虧損1,503,187,000美元，將於一至十年內屆滿，可用作抵銷未來應課稅溢利。由於不大可能出現未來應課稅溢利，故並無確認相關遞延稅項資產。

本集團在香港產生的稅項虧損為31,628,000美元(二零二三年：24,916,000美元)，可無限期抵銷產生虧損的公司的未來應課稅溢利。本集團亦於中國內地產生稅項虧損12,935,000美元(二零二三年：11,622,000美元)，將於一至五年內到期以抵銷未來應課稅溢利。

由於遞延稅項資產乃源自已虧損多時的子公司，且不大可能有應課稅溢利可用以抵銷可予確認的稅項虧損，故並無就該等虧損確認遞延稅項資產。

由於認為上述項目不大可能得到確認，故並無就暫時差額確認遞延稅項資產。

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29. GOVERNMENT GRANTS

29. 政府補助

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
At 1 January	於一月一日	35,017	37,714
Additions	添置	69,319	18,976
Released to offsetting research and development costs	撥入以抵銷研發成本	(5,773)	(6,408)
Released to offset finance costs	撥入以抵銷財務費用	(5,459)	(3,015)
Offset with long term assets	抵銷長期資產	(35,230)	(11,632)
Exchange realignment	匯兌調整	(311)	(618)
As at 31 December	於十二月三十一日	57,563	35,017

The Group received government funding for several government-sponsored projects focusing on the research and development of advanced technologies.

本集團的多個政府資助項目均獲得政府撥付資金資助，該等項目專注於研發先進技術。

30. SHARE CAPITAL

30. 股本

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Issued and fully paid: 1,718,468,815 (2023: 1,716,588,694) ordinary shares	已發行及繳足： 1,718,468,815股(二零二三年： 1,716,588,694股)普通股	4,938,457	4,933,559

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30. SHARE CAPITAL (continued)

A summary of movements in the Company's share capital is as follows:

		Number of shares in issue 已發行股份數目 '000 千股	Amount of share capital 股本金額 US\$'000 千美元
At 1 January 2023	於二零二三年一月一日	1,306,837	1,994,462
Share options exercised (note (a))	行使購股權(附註(a))	2,002	5,126
Shares issued (note (b))	已發行股份(附註(b))	407,750	2,933,971
At 31 December 2023 and 1 January 2024	於二零二三年十二月三十一日及 二零二四年一月一日	1,716,589	4,933,559
Share options exercised (note (a))	行使購股權(附註(a))	1,880	4,898
At 31 December 2024	於二零二四年十二月三十一日	1,718,469	4,938,457

Notes:

- (a) The subscription rights attaching to 1,880,000 (2023: 2,002,000) share options under the 2018 Options were exercised at the subscription prices of HK\$15.056 and HK\$17.952 per share (2023: HK\$15.056 and HK\$17.952 per share), resulting in the issue of 1,880,000 (2023: 2,002,000) shares for a total cash consideration of US\$3,683,000 (2023: US\$3,878,000). An amount of US\$1,215,000 (2023: US\$1,248,000) was transferred from the share option reserve to share capital upon exercise of the share options.
- (b) On 7 August 2023, the Company was listed on the SSE STAR Market. By way of the share issuance, 407,750,000 ordinary shares of the Company were subscribed with gross proceeds of RMB21,203 million (equivalent to US\$2,974 million). After deducting issuance costs, including underwriting fees and other issuance costs, the net proceeds were RMB20,921 million (equivalent to US\$ 2,934 million), which resulted in an increase of RMB20,921 million (equivalent to US\$2,934 million) in the share capital of ordinary shares.

30. 股本(續)

本公司股本的變動概述如下:

附註:

- (a) 根據二零一八年購股權, 1,880,000份(二零二三年: 2,002,000份)購股權附帶之認購權已按認購價每股15.056港元及每股17.952港元(二零二三年: 每股15.056港元及每股17.952港元)行使, 引致發行1,880,000股(二零二三年: 2,002,000股)股份, 總現金代價為3,683,000美元(二零二三年: 3,878,000美元)。購股權獲行使後, 1,215,000美元(二零二三年: 1,248,000美元)款項已由購股權儲備轉撥至股本。
- (b) 於二零二三年八月七日, 本公司於上交所科创板上市。通過發行股份的方式, 本公司407,750,000股普通股已獲認購, 所得款項總額為人民幣21,203百萬元(相當於2,974百萬美元)。經扣除發行成本(包括承銷費用及其他發行費用)後, 所得款淨額為人民幣20,921百萬元(相當於2,934百萬美元), 因此普通股股本增加人民幣20,921百萬元(相當於2,934百萬美元)。

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31. SHARE OPTION SCHEME

The Company operates a share option scheme (the “Scheme”) for the purpose of providing incentives and rewards to eligible participants who contribute to the success of the Group’s operations. The Scheme includes two batches, each of which was effective on 4 September 2015 (the “2015 Options”) and on 24 December 2018 (the “2018 Options”), respectively. Eligible participants of the Scheme include the Company’s directors, including a non-executive director, an executive director and other employees of the Group. The share options, unless otherwise cancelled or amended, will remain in force for 7 years from the respective effective dates.

The maximum number of unexercised share options currently permitted to be granted under the Scheme is an amount equivalent, upon their exercise, to 10% of the shares of the Company in issue at any time. The maximum number of shares issuable under share options to each eligible participant in the Scheme within any 12-month period is limited to 1% of the shares of the Company in issue at any time. Any further grant of share options in excess of this limit is subject to shareholders’ approval in a general meeting.

Share options granted to a director, chief executive or substantial shareholder of the Company, or to any of their associates, are subject to approval in advance by the Independent Non-Executive Directors. In addition, any share options granted to a substantial shareholder or an independent non-executive director of the Company, or to any of their associates, in excess of 0.1% of the shares of the Company in issue at any time or with an aggregate value (based on the price of the Company’s shares at the date of grant) in excess of HK\$5 million, within any 12-month period, are subject to shareholders’ approval in advance in a general meeting.

The exercise period of the share options granted is determinable by the directors, and commences after a vesting period of two to five years and ends on a date which is not later than the expiry date of the Scheme.

The exercise price of share options is determinable by the directors, but may not be less than the higher of (i) the Stock Exchange closing price of the Company’s shares on the date of offer of the share options; and (ii) the average Stock Exchange closing price of the Company’s shares for the five trading days immediately preceding the date of offer.

31. 購股權計劃

本公司設有一項購股權計劃(「該計劃」),旨在為對本集團順利發展有所貢獻之符合資格參與者提供激勵及獎勵。該計劃分為兩批,各自分別於二零一五年九月四日(「二零一五年購股權」)及二零一八年十二月二十四日(「二零一八年購股權」)生效。該計劃之符合資格參與者包括本公司董事(包括一名非執行董事、一名執行董事)及本集團其他僱員。除非另被取消或修訂,該等購股權將由各生效日期起計7年內有效。

現時可根據該計劃授出之未行使購股權數目不得超過該等購股權行使後本公司任何時候已發行股份之10%。於任何十二個月期間,該計劃各符合資格參與者根據購股權可獲發行之股份數目不得超過本公司任何時候已發行股份之1%。進一步授予超出此限額之購股權則須股東在股東大會上批准。

向本公司董事、最高行政人員或主要股東或彼等之任何聯繫人士授予購股權須事先取得獨立非執行董事批准。此外,倘若於任何十二個月期間,授予本公司主要股東或獨立非執行董事或彼等各自之任何聯繫人士之購股權超出本公司任何時候已發行股份之0.1%或總值(根據授出日期本公司股份價格計算)超過5百萬港元,則須事先在股東大會上取得股東批准。

已授出購股權之行使期由董事決定,並於二至五年歸屬期後開始以及於該計劃屆滿之日前終止。

購股權之行使價為由董事釐定,惟不得少於以下兩者之最高者:(i)本公司股份於授予購股權日期在聯交所之收市價;及(ii)本公司股份於緊接授出日期前五個交易日在聯交所之平均收市價。

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31. SHARE OPTION SCHEME (continued)

There are no cash settlement alternatives. The Group does not have a past practice of cash settlement for these share options. The Group accounts for the Scheme as an equity-settled plan.

Share options do not confer rights on the holders to dividends or to vote at shareholders' meetings.

2018 Options

The following 2018 Options were outstanding during the year:

31. 購股權計劃(續)

不可選擇以現金結算。本集團過往並無以現金結算該等購股權。本集團將該計劃作為權益結算計劃入賬。

購股權並非附帶可令持有人獲得股息或於股東大會投票的權利。

二零一八年購股權

年內，以下購股權尚未根據二零一八年購股權獲行使：

		2024 二零二四年		2023 二零二三年	
		Weighted average exercise price HK\$ per share 加權平均 行使價 每股港元	Number of options '000 購股權數目 千份	Weighted average exercise price HK\$ per share 加權平均 行使價 每股港元	Number of options '000 購股權數目 千份
At 1 January	於一月一日	15.329	21,422	15.318	23,438
Exercised during the year	年內行使	15.272	(1,880)	15.184	(2,002)
Forfeited during the year	年內沒收	16.709	(205)	16.382	(14)
At 31 December	於十二月三十一日	15.320	19,337	15.329	21,422

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31. SHARE OPTION SCHEME (continued)

2018 Options (continued)

The exercise prices and exercise periods of the 2018 Options outstanding as at the end of the reporting period are as follows:

31. 購股權計劃(續)

二零一八年購股權(續)

於報告期末二零一八年購股權項下尚未行使購股權的行使價及行使期如下：

2024 二零二四年 Number of options 購股權數目 '000 千份	2023 二零二三年 Number of options 購股權數目 '000 千份	Exercise price* 行使價* HK\$ per share 每股港元	Exercise period 行使期
5,273	5,883	15.056	24 December 2020 to 23 December 2025 二零二零年十二月二十四日至二零二五年十二月二十三日
3,263	3,872	15.056	24 December 2021 to 23 December 2025 二零二一年十二月二十四日至二零二五年十二月二十三日
8,179	8,788	15.056	24 December 2022 to 23 December 2025 二零二二年十二月二十四日至二零二五年十二月二十三日
925	925	15.056	24 December 2023 to 23 December 2025 二零二三年十二月二十四日至二零二五年十二月二十三日
63	63	18.400	29 March 2021 to 28 March 2026 二零二一年三月二十九日至二零二六年三月二十八日
125	125	18.400	29 March 2022 to 28 March 2026 二零二二年三月二十九日至二零二六年三月二十八日
125	125	18.400	29 March 2023 to 28 March 2026 二零二三年三月二十九日至二零二六年三月二十八日
125	125	18.400	29 March 2024 to 28 March 2026 二零二四年三月二十九日至二零二六年三月二十八日
125	211	17.952	23 December 2021 to 22 December 2026 二零二一年十二月二十三日至二零二六年十二月二十二日
508	594	17.952	23 December 2022 to 22 December 2026 二零二二年十二月二十三日至二零二六年十二月二十二日
551	636	17.952	23 December 2023 to 22 December 2026 二零二三年十二月二十三日至二零二六年十二月二十二日
75	75	17.952	23 December 2024 to 22 December 2026 二零二四年十二月二十三日至二零二六年十二月二十二日
19,337	21,422		

* The exercise price of the share options is subject to adjustment in the case of rights or bonus issues, or other similar changes in the Company's share capital.

* 倘若進行供股或紅股發行，或本公司之股本有其他類似改動，則購股權之行使價可予調整。

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31. SHARE OPTION SCHEME (continued)

2018 Options (continued)

The Group recognised a share option expense of the 2018 Options of US\$18,000 (2023: US\$853,000) during the year.

The 1,880,000 (2023: 2,002,000) share options exercised under the 2018 Options during the year, resulted in the issue of 1,880,000 (2023: 2,002,000) ordinary shares of the Company for a total cash consideration of US\$3,683,000 (2023: US\$3,878,000). An amount of US\$1,215,000 (2023: US\$1,248,000) was transferred from the share option reserve to share capital upon the exercise of the share options, as further detailed in note 30 to the financial statements.

At the end of the reporting period, the Company had 19,337,000 2018 Options outstanding. The exercise in full of the outstanding share options would, under the present capital structure of the Company, result in the issue of 19,337,000 additional ordinary shares of the Company and additional share capital of US\$50,432,000 (including US\$12,268,000 transferred from the share option reserve to share capital).

At the date of approval of these financial statements, the Company had 12,382,480 2018 Options outstanding, which represented approximately 0.72% of the Company's shares in issue as at that date.

31. 購股權計劃(續)

二零一八年購股權(續)

本集團於年內根據二零一八年購股權確認購股權開支 18,000 美元(二零二三年: 853,000 美元)

年內,二零一八年購股權項下 1,880,000 份(二零二三年: 2,002,000 份)購股權獲行使,引致本公司發行 1,880,000 股(二零二三年: 2,002,000 股)普通股,總現金代價為 3,683,000 美元(二零二三年: 3,878,000 美元)。如財務報表附註 30 進一步詳述,購股權獲行使後,1,215,000 美元(二零二三年: 1,248,000 美元)的款項已由購股權儲備轉撥至股本。

於報告期末,本公司擁有 19,337,000 份尚未行使的二零一八年購股權。根據本公司現時的資本架構,悉數行使尚未行使的購股權可能會導致額外發行 19,337,000 股本公司普通股及增加股本 50,432,000 美元(包括由購股權儲備轉撥至股本的 12,268,000 美元)

於批准該等財務報表日期,本公司擁有 12,382,480 份尚未行使的二零一八年購股權,佔該日期本公司已發行股份的約 0.72%。

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32. RESERVES

The amounts of the Group's reserves and the movements therein for the current and prior years are presented in the consolidated statement of changes in equity on pages 306 to 307 of the financial statements.

According to the relevant PRC laws and regulations for wholly-foreign-owned enterprises, which are applicable to the Company's subsidiaries in the PRC, profits of the PRC subsidiaries, as determined in accordance with the applicable accounting rules and regulations in the PRC, are available for distribution in the form of cash dividends to the Company after the PRC subsidiaries have (1) satisfied all tax liabilities; (2) provided for losses in previous years; and (3) made appropriations to the statutory reserve funds. The Company's subsidiaries in the PRC are required to appropriate not less than 10% of their profit after taxation to the statutory reserve funds until the reserve balance reaches 50% of their registered capital.

32. 儲備

本集團於本年度及過往年度的儲備及相關變動金額於財務報表第306至307頁綜合權益變動表中呈列。

根據中國有關外商獨資企業的法律及法規(適用於本公司的中國子公司),按照適用的中國會計規則及規例釐定的中國子公司的溢利,可於中國子公司(1)償付所有稅務負債;(2)就過往年度虧損作出撥備;及(3)就法定儲備金作出撥備後以現金股息形式向本公司作出分派。本公司的中國子公司須劃撥不少於其除稅後溢利的10%作為法定儲備金,直至儲備結餘達到其註冊資本的50%。

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33. LEASES

As lessor

The Group leases its investment property (note 14) to Shanghai Huali, under an operating lease arrangement, with a lease term of 20 years. The terms of the lease generally also require the tenant to provide for periodic rent adjustments according to the then prevailing market conditions. Rental income recognised by the Group during the year was US\$14,210,000 (31 December 2023: US\$14,259,000), details of which are included in note 5 to the financial statements.

At 31 December 2024 and 2023, undiscounted lease payments receivable by the Group in future periods under non-cancellable operating leases with its tenant are as follows:

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Within one year	一年內	13,940	13,884
After one year but within two years	一年後但於兩年內	13,745	13,884
After two years but within three years	兩年後但於三年內	13,745	13,884
After three years but within four years	三年後但於四年內	13,745	13,884
After four years but within five years	四年後但於五年內	13,745	13,884
More than five years	超過五年	3,174	17,097
Total	總計	72,094	86,517

As lessee

The Group has various lease contracts for land use rights, offices and dormitory properties used in its operation. Lump sum payments were made upfront to acquire the leased land from the owners with lease periods of 42 to 50 years, and no ongoing payments will be made under the terms of these land leases. Leases of offices and dormitory properties generally have lease terms between 2 and 20 years. Generally, the Group is restricted from assigning and subleasing the leased assets outside the Group.

33. 租賃

作為出租人

本集團根據一項經營租賃安排，將其投資物業(附註14)出租予上海華力，租期為20年。該租約的條款一般亦規定承租人根據當時市況就定期租金調整作出撥備。本集團於年內確認的租賃收入為14,210,000美元(二零二三年十二月三十一日：14,259,000美元)，其詳情載於財務報表附註5。

於二零二四年及二零二三年十二月三十一日，本集團根據不可撤銷經營租約於未來期間應收其租戶的未貼現租賃付款如下：

作為承租人

本集團擁有用於其業務營運的土地使用權、辦公室及宿舍物業的若干租賃合約。已提前作出一次性付款以向業主收購租賃土地，租期介乎42至50年，而根據該等土地租賃的條款，將不會繼續支付任何款項。辦公室及宿舍物業的租期通常介乎2至20年。一般而言，本集團不可向本集團以外人士轉讓及分租租賃資產。

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財務報表附註

33. LEASES (continued)

As lessee (continued)

(a) Right-of-use assets and lease liabilities

Detailed information regarding right-of-use assets and lease liabilities is set out in notes 15 and 27, respectively, to the financial statements.

(b) The amounts recognised in profit or loss in relation to leases are as follows:

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Interest on lease liabilities	租賃負債利息	1,061	1,068
Depreciation charge of right-of-use assets	使用權資產折舊開支	6,303	6,427
Expense relating to short-term leases	與短期租賃有關的開支	2,693	2,383
Total amount recognised in profit or loss	於損益確認的總金額	10,057	9,878

(c) Total cash outflows for leases and non-cash additions to right-of-use assets and lease liabilities are disclosed in note 39 to the financial statements.

33. 租賃(續)

作為承租人(續)

(a) 使用權資產及租賃負債

與使用權資產及租賃負債有關的資料詳情分別載於財務報表附註15及27。

(b) 於損益中確認的租賃相關金額如下:

(c) 租賃現金流出總額以及使用權資產及租賃負債的非現金添置於財務報表附註39內披露。

34. COMMITMENTS

The Group had the following contractual commitments at the end of the reporting period:

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Contracted, but not provided for:	已訂約，但未撥備：		
Property, plant and equipment	物業、廠房及設備	1,187,570	1,258,232

34. 承擔

本集團於報告期末有以下合約承擔：

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35. RELATED PARTY TRANSACTIONS AND BALANCES

35. 關聯方交易及結餘

(a) Name and relationship

(a) 名稱及關係

Name of related party 關聯方名稱	Relationship with the Group 與本集團的關係
Huahong Group and its subsidiaries 華虹集團及其子公司	
– Hua Hong International Inc. (“Huahong International”) – 華虹國際有限公司(「華虹國際」)	20.23% shareholder of the Company 持股20.23%之本公司股東
– Shanghai Huahong Zealcore Electronics Co., Ltd. (“Huahong Zealcore”) – 上海華虹摯芯科技有限公司(「華虹摯芯」)	Subsidiary of Huahong Group 華虹集團子公司
– Zealcore Electronics Shanghai Co., Ltd. (“Zealcore Shanghai”) – 上海華虹摯芯電子科技有限公司(「摯芯上海」)	Subsidiary of Huahong Group 華虹集團子公司
– Shanghai Hongri International Electronics Co., Ltd. (“Hongri”) – 上海虹日國際電子有限公司(「虹日」)	Subsidiary of Huahong Group 華虹集團子公司
– Shanghai Hua Hong Jitong Smart System Co., Ltd. (“Jitong”) – 上海華虹計通智能系統股份有限公司(「計通」)	Subsidiary of Huahong Group 華虹集團子公司
– Shanghai Huali – 上海華力	Subsidiary of Huahong Group 華虹集團子公司
SAIL and its subsidiaries 上海聯和及其子公司	
– Shanghai Alliance Investment Ltd. (“SAIL”) – 上海聯和投資有限公司(「上海聯和」)	Holding company of Sino-Alliance International Ltd. Sino-Alliance International Ltd. 的控股公司
– Sino-Alliance International Ltd. (“SAIL International”) – Sino-Alliance International Ltd.(「SAIL International」)	11.00% shareholder of the Company 持股11.00%之本公司股東
Huahong Technology Development 華虹科技發展	Associate of the Group 本集團聯營公司
– Shanghai Huahong Real Estate Co., Ltd. (“Huahong Real Estate”) – 上海華虹置業有限公司(「華虹置業」)	Subsidiary of Huahong Technology Development 華虹科技發展子公司
– Shanghai Huajin Property Management Co., Ltd. (“Huajin”) – 上海華錦物業管理有限公司(「華錦」)	Subsidiary of Huahong Technology Development 華虹科技發展子公司

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財務報表附註

35. RELATED PARTY TRANSACTIONS AND
BALANCES (continued)

(b) Related party transactions

The Group had the following material transactions with related parties during the year:

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Sales of goods to related parties (note (i))	向關聯方出售貨品(附註(i))		
Huahong Zealcore [#]	華虹摯芯 [#]	19,969	18,495
Hongri [#]	虹日 [#]	472	2,083
Purchases of goods from related parties (note (ii))	自關聯方購買貨品(附註(ii))		
Hongri [#]	虹日 [#]	38,790	18,433
Huahong Zealcore [#]	華虹摯芯 [#]	711	801
Zealcore Shanghai [#]	摯芯上海 [#]	30	—
Jitong	計通	16	32
Purchases of intangible assets from a related party (note (iii))	自關聯方購買無形資產(附註(iii))		
Shanghai Huali [#]	上海華力 [#]	—	17,112
Rental income from a related party (note (iv))	來自關聯方的租金收入(附註(iv))		
Shanghai Huali [#]	上海華力 [#]	14,089	13,985
Service fees charged by related parties (note (v))	關聯方收取的服務費(附註(v))		
Huajin [#]	華錦 [#]	553	567
Interest expense charged by a related party (note (vi))	關聯方收取的利息開支(附註(vi))		
Huahong Real Estate [#]	華虹置業 [#]	887	709
Expense paid on behalf of a related party (note (vii))	代關聯方支付的開支(附註(vii))		
Shanghai Huali [#]	上海華力 [#]	28,571	29,026

[#] The related party transactions also constitute continuing connected transactions as defined in Chapter 14A of the Listing Rules.

(b) 關聯方交易

本集團於年內已與關聯方進行以下重大交易：

[#] 關聯方交易亦構成上市規則第十四A章所界定的持續關連交易。

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35. RELATED PARTY TRANSACTIONS AND BALANCES (continued)

(b) Related party transactions (continued)

Note (i) The sales of goods to related parties were made according to the prices and terms agreed between the related parties.

Note (ii) The purchases of goods and intangible assets from related parties were made according to the prices and terms offered by the related parties.

Note (iii) The purchases of intangible assets from a related party were made according to the prices and terms offered by the related party.

Note (iv) The rental income received from a related party was based on the prices and terms agreed between the related parties.

Note (v) The service fees and interest expense charged by related parties were based on the prices and terms agreed between the related parties.

Note (vi) The Group entered into leases in respect of certain dormitory properties from Huahong Real Estate. The amount of rent payable by the Group under the leases is US\$2,544,000 per year. At 31 December 2024, the balances of those right-of-use assets and lease liabilities were US\$16,035,000 (31 December 2023: US\$18,083,000) and US\$18,848,000 (31 December 2023: US\$20,790,000), respectively.

Note (vii) The expense paid on behalf of the related party is interest-free and repayable on demand.

35. 關聯方交易及結餘(續)

(b) 關聯方交易(續)

附註(i) 向關聯方出售的貨品乃根據與關聯方協定的價格及條款作出。

附註(ii) 自關聯方購買的貨品及無形資產乃根據關聯方提供的價格及條款作出。

附註(iii) 自關聯方購買無形資產乃根據關聯方提供的價格及條款作出。

附註(iv) 來自關聯方的租金收入乃根據與關聯方協定的價格及條款收取。

附註(v) 服務費及利息開支乃由關聯方根據與關聯方協定的價格及條款收取。

附註(vi) 本集團就自華虹置業租賃的若干宿舍物業訂立租約。本集團於租賃項下應付的租金為每年2,544,000美元。於二零二四年十二月三十一日，該等使用權資產及租賃負債的結餘分別為16,035,000美元(二零二三年十二月三十一日：18,083,000美元)及18,848,000美元(二零二三年十二月三十一日：20,790,000美元)。

附註(vii) 代關聯方支付的開支為不計息，及須按要求償還。

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35. RELATED PARTY TRANSACTIONS AND
BALANCES (continued)

35. 關聯方交易及結餘(續)

(c) Outstanding balances with related parties

(c) 與關聯方之間的未結清餘額

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Amounts due from related parties	應收關聯方款項		
Shanghai Huali	上海華力	10,074	6,933
Huahong Zealcore	華虹摯芯	8,250	4,286
Total	總計	18,324	11,219
Amounts due to related parties	應付關聯方款項		
Hongri	虹日	6,455	2,126
Shanghai Huali	上海華力	2,445	11,304
Huahong Zealcore	華虹摯芯	196	190
Jitong	計通	18	35
Huajin	華錦	11	221
Total	總計	9,125	13,876

(d) Compensation of key management personnel of the Group

(d) 本集團主要管理人員的酬金

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Short term employee benefits	短期僱員福利	6,070	5,744
Pension scheme contributions	退休金計劃供款	183	183
Equity-settled share option expense	以權益結算的購股權開支	18	113
Total compensation paid to key management personnel	支付予主要管理人員的酬金總額	6,271	6,040

Further details of directors' remuneration are included in note 8 to the financial statements.

董事薪酬之進一步詳情載於財務報表附註8。

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36. FINANCIAL INSTRUMENTS BY CATEGORY

The carrying amounts of each of the categories of financial instruments as at the end of the reporting period are as follows:

Financial assets – at amortised cost

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Trade and notes receivables	貿易應收款項及應收票據	270,461	278,669
Financial assets included in prepayments, other receivables and other assets (note 22)	計入預付款項、其他應收款項及其他資產的金融資產 (附註22)	32,946	11,632
Due from related parties	應收關聯方款項	18,324	11,219
Pledged deposits	已抵押存款	31,624	32,088
Cash and cash equivalents	現金及現金等價物	4,459,132	5,585,181
Total	合計	4,812,487	5,918,789

Financial assets – at fair value through other comprehensive income without recycling to profit or loss

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Equity investments designated at fair value through other comprehensive income	指定為按公平值計入其他全面收益的股權投資	289,311	270,506

Financial liabilities – at amortised cost

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Trade payables	貿易應付款項	298,372	235,410
Financial liabilities included in other payables and accruals (note 25)	計入其他應付款項及暫估費用的金融負債(附註25)	690,134	251,275
Interest-bearing bank borrowings	計息銀行借款	2,197,939	2,099,561
Due to related parties	應付關聯方款項	9,125	13,876
Total	合計	3,195,570	2,600,122

36. 按類別劃分的金融工具

各類金融工具於報告期末的賬面值如下：

金融資產 – 按攤銷成本

金融資產 – 按公平值計入其他全面收益
(不得重新計入損益)

金融負債 – 按攤銷成本

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37. FAIR VALUE AND FAIR VALUE HIERARCHY OF FINANCIAL INSTRUMENTS

The carrying amounts and fair values of the Group's financial instruments, other than those with carrying amounts that reasonably approximate to fair values, are as follows:

		Carrying amounts		Fair values	
		賬面值		公平值	
		2024	2023	2024	2023
		二零二四年	二零二三年	二零二四年	二零二三年
		US\$'000	US\$'000	US\$'000	US\$'000
		千美元	千美元	千美元	千美元
Financial assets	金融資產				
Equity investments designated at fair value through other comprehensive income	指定為按公平值計入其他全面收益的股權投資	289,311	270,506	289,311	270,506
Financial liabilities	金融負債				
Interest-bearing bank borrowings	計息銀行借款	1,917,235	1,906,526	1,910,907	1,911,206

Management has assessed that the fair values of cash and cash equivalents, pledged deposits, trade and notes receivables, financial assets included in prepayments, other receivables, trade payables, financial liabilities included in other payables and accruals, amounts due from/to related parties, the current portion of interest-bearing bank borrowings and lease liabilities approximate to their carrying amounts largely due to the short term maturities of these instruments.

The Group's finance department headed by the finance manager is responsible for determining the policies and procedures for the fair value measurement of financial instruments. The finance department reports directly to the chief financial officer. At each reporting date, the finance department analyses the movements in the values of financial instruments and determines the major inputs applied in the valuation. The valuation is reviewed and approved by the chief financial officer. The valuation process and results are discussed with the board of directors twice a year for interim and annual financial reporting.

37. 金融工具的公平值及公平值層級

本集團金融工具(不包括賬面值與公平值大致相若的金融工具)的賬面值及公平值載列如下:

管理層已評估現金及現金等價物、已抵押存款、貿易應收款項及應收票據、計入預付款項的金融資產、其他應收款項、貿易應付款項、計入其他應付款項及暫估費用的金融負債、應收／應付關聯方款項及計息銀行借款及租賃負債的流動部份的公平值與其賬面值相若，主要是由於該等工具均於短期內到期。

本集團旗下以財務經理為首的財務部負責釐定金融工具公平值計量的政策及程序。財務部直接向財務總監報告。於各報告日期，財務部分析金融工具的價值變動並釐定估值中適用的主要輸入數據。估值由財務總監審核及批准。估值過程及結果由董事會每年討論兩次，以進行中期及年度財務申報。

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37. FAIR VALUE AND FAIR VALUE HIERARCHY OF FINANCIAL INSTRUMENTS (continued)

The fair values of the financial assets and liabilities are included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The following methods and assumptions were used to estimate the fair values:

The fair values of the non-current portion of interest-bearing bank borrowings have been calculated by discounting the expected future cash flows using rates currently available for instruments with similar terms, credit risk and remaining maturities. The changes in fair value as a result of the Group's own non-performance risk for the non-current portion of interest-bearing bank borrowings as at 31 December 2024 were assessed to be insignificant.

The fair values of unlisted equity investments designated at fair value through other comprehensive income have been estimated using the market approach. If there is a recent deal regarding the unlisted investments, the fair values are estimated based on the dealing price. If there is no such deal to be referenced, the directors will determine comparable public companies (peers) based on industry, size, leverage and strategy, and calculate an appropriate price multiple, such as price to book value ("P/B") multiple, for each comparable company identified. The multiple is calculated by dividing the enterprise value of the comparable company by net assets. The trading multiple is then discounted for considerations such as illiquidity based on company-specific facts and circumstances. The discounted multiple is applied to the corresponding net assets of the unlisted equity investments to measure the fair value. The directors believe that the estimated fair values resulting from the valuation technique, which are recorded in the consolidated statement of financial position, and the related changes in fair values, which are recorded in other comprehensive income, are reasonable, and that they were the most appropriate values at the end of the reporting period.

37. 金融工具的公平值及公平值層級(續)

金融資產及負債的公平值是按當前與自願方交易(而非被迫或清盤出售)中可交換有關工具的金額列賬。估計公平值乃使用以下的方法及假設:

計息銀行借款的非流動部份的公平值乃透過採用具有類似年期、信貸風險及剩餘到期期限的工具的現有利率貼現預期未來現金流量而計算。本集團評估後認為,於二零二四年十二月三十一日因其自身的計息銀行借款的非流動部分不履約風險而導致的公平值變動並不重大。

指定為按公平值計入其他全面收益的非上市股本投資之公平值採用市場法估算。倘最近成交易有關未上市投資,公平值乃基於交易價估算。倘並無該等交易可供參考,董事將根據行業、規模、影響力及策略釐定可比較上市公司(同行),且就已確定的各可資比較公司計算適當的價格倍數,如市賬率(「市賬率」)倍數。該倍數乃按可資比較公司之企業價值除以淨資產所得。交易倍數隨後根據公司特定情況及狀況就非流動性等因素予以貼現。貼現倍數適用於非上市股本投資的相應淨資產以計量公平值。董事認為,計入綜合財務狀況表的估值技術所產生的估計公平值以及計入其他全面收益的公平值相關變動屬合理,而於報告期末的價值最為恰當。

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37. FAIR VALUE AND FAIR VALUE HIERARCHY OF FINANCIAL INSTRUMENTS (continued)

Fair value hierarchy

The following tables illustrate the fair value measurement hierarchy of the Group's financial instruments:

Financial assets measured at fair value
31 December 2024

		Fair value measurement using 公平值計量採用以下基準			Total 總計 US\$'000 千美元
		Quoted prices in active markets 於活躍市場 的市場報價 Level 1 第1級 US\$'000 千美元	Quoted prices in active markets 於活躍市場 的市場報價 Level 2 第2級 US\$'000 千美元	Quoted prices in active markets 於活躍市場 的市場報價 Level 3 第3級 US\$'000 千美元	
Equity investments designated at fair value through other comprehensive income	指定為按公平值計入 其他全面收益的股 權投資	—	17,390	271,921	289,311

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二零二三年十二月三十一日

		Fair value measurement using 公平值計量採用以下基準			Total 總計 US\$'000 千美元
		Quoted prices in active markets 於活躍市場 的市場報價 Level 1 第1級 US\$'000 千美元	Quoted prices in active markets 於活躍市場 的市場報價 Level 2 第2級 US\$'000 千美元	Quoted prices in active markets 於活躍市場 的市場報價 Level 3 第3級 US\$'000 千美元	
Equity investments designated at fair value through other comprehensive income	指定為按公平值計入 其他全面收益的股 權投資	2,429	265,128	2,949	270,506

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37. FAIR VALUE AND FAIR VALUE HIERARCHY OF FINANCIAL INSTRUMENTS (continued)

Fair value hierarchy (continued)

Financial assets measured at fair value (continued)

The Group's policy is to recognise transfers between levels of the fair value hierarchy at the end of the reporting period.

During the year, there were no transfers of fair value measurements between Level 1 and Level 2 (2023: Nil).

During the year 2024, there was a transfer from Level 2 to Level 3 for an equity investment designated at fair value through other comprehensive income with a carrying amount of US\$265,128,000 because there was no recent dealing price to be referenced and the significant inputs used in the fair value measurements were no longer observable.

During the year 2023, there was a transfer from Level 3 to Level 2 for an equity investment designated at fair value through other comprehensive income with a carrying amount of US\$174,170,000 because there was a recent dealing price to be referenced and the significant inputs used in the fair value measurements were observable.

37. 金融工具的公平值及公平值層級(續)

公平值層級(續)

按公平值計量的金融資產(續)

於報告期末，本集團的政策為確認公平值層級之間的轉移。

於年內，第1級與第2級公平值計量之間並無轉移(二零二三年：無)

於二零二四年內，賬面值為265,128,000美元的指定為按公平值計入其他全面收益的股權投資自第2級轉入第3級，因為並無近期交易價可供參考，且公平值計量所用重大輸入數據為不再可供觀察。

於二零二三年內，賬面值為174,170,000美元的指定為按公平值計入其他全面收益的股權投資自第3級轉入第2級，因為有近期交易價可供參考，且公平值計量所用重大輸入數據為可觀察。

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37. FAIR VALUE AND FAIR VALUE HIERARCHY OF FINANCIAL INSTRUMENTS (continued)

Fair value hierarchy (continued)

The recurring fair value measurement for the Group's financial assets at fair value through profit or loss was performed using significant unobservable inputs (Level 3) as at 31 December 2024 and 2023. Below is a summary of the valuation technique used and the key inputs to the valuation:

37. 金融工具的公平值及公平值層級(續)

公平值層級(續)

本集團按公平值計入損益的金融資產的週期公平值計量乃使用二零二四年及二零二三年十二月三十一日的重大不可觀察輸入數據(第3級)作出。下文為估值所用估值技術及主要輸入數據概要:

		Valuation technique 估值技術	Significant unobservable input 重大不可觀察輸入數據	Range 範圍	Sensitivity of fair value to the input 公平值對輸入數據之敏感度
Equity investments designated at fair value through other comprehensive income 指定為按公平值計入其他全面收益的股本投資	Valuation multiples	Average P/B multiple of peers	2024: 0.7x-3.0x	5%	increase/decrease would result in increase/decrease in fair value by 5%
	估值倍數	同業平均市賬率	二零二四年: 0.7x-3.0x	5%	的增加/減少將導致公平值增加/減少5%
	Valuation multiples	Average P/S multiple of peers	2024: 3.9x-7.4x 2023: 4.5x-11.9x	5% (2023: 5%)	increase/decrease would result in increase/decrease in fair value by 5% (2023: 5%)
	估值倍數	同業平均市銷率	二零二四年: 3.9x-7.4x 二零二三年: 4.5x-11.9x	5% (二零二三年: 5%)	的增加/減少將導致公平值增加/減少5% (二零二三年: 5%)
	Discount for illiquidity		2024: 20%-30% 2023: 20%-30%	5% (2023: 5%)	increase/decrease would result in decrease/increase in fair value by 5% (2023: 5%)
	缺乏流通性的折讓價		二零二四年: 20%-30% 二零二三年: 20%-30%	5% (二零二三年: 5%)	的增加/減少將導致公平值減少/增加5% (二零二三年: 5%)

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37. FAIR VALUE AND FAIR VALUE HIERARCHY OF FINANCIAL INSTRUMENTS (continued)

Fair value hierarchy (continued)

The movements in financial assets categorised into Level 3 during the year are as follows:

37. 金融工具的公平值及公平值層級(續)

公平值層級(續)

年內分類為第3級的金融資產變動如下:

		Equity investments designated at fair value through other comprehensive income 指定為按公平值計入其他全面收益的股權投資 US\$'000 千美元
At 1 January 2023	於二零二三年一月一日	176,190
Transfer to level 2	轉入第2級	(174,170)
Total gains recognised in other comprehensive income	於其他全面收益確認的收益總額	968
Exchange realignment	匯兌調整	(39)
At 31 December 2023 and 1 January 2024	於二零二三年十二月三十一日及二零二四年一月一日	2,949
Transfer from level 2	自第2級轉入	265,128
Total gains recognised in other comprehensive income	於其他全面收益確認的收益總額	7,991
Exchange realignment	匯兌調整	(4,147)
As at 31 December 2024	於二零二四年十二月三十一日	271,921

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財務報表附註

**38. FINANCIAL RISK MANAGEMENT
OBJECTIVES AND POLICIES**

The Group's principal financial instruments comprise bank loans, cash and short-term deposits. The main purpose of these financial instruments is to raise finance for the Group's operations. The Group has various other financial assets and liabilities, such as trade and other receivables and trade and other payables, which arise directly from its operations.

The main risks arising from the Group's financial instruments are interest rate risk, foreign currency risk, credit risk and liquidity risk. The board of directors reviews and agrees policies for managing each of these risks and they are recognised below.

Interest rate risk

The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's interest-bearing bank borrowings with a floating interest rate. The Group's policy is to manage its interest cost using a mix of fixed and variable rate debts.

As at 31 December 2024, if the interest rates had been 100 basis points higher/lower with all other variables held constant, profit before tax for the year would have been US\$20,053,000 lower/higher (31 December 2023: US\$17,524,000), mainly as a result of higher/lower interest expense on floating rate bank borrowings.

38. 財務風險管理目標及政策

本集團的主要金融工具包括銀行貸款、現金及短期存款。該等金融工具的主要用途乃為本集團的營運籌措資金。本集團有多種直接自其營運產生的其他金融資產及負債，如貿易及其他應收款項以及貿易及其他應付款項。

本集團金融工具所產生的主要風險為利率風險、外幣風險、信貸風險及流動資金風險。董事會檢討及協定管理各類該等風險的政策，有關政策概述於下文。

利率風險

本集團面臨市場利率變動的風險，主要與本集團浮動利率計息銀行借款有關。本集團的政策為運用固定及浮動利率債務組合管理利息成本。

於二零二四年十二月三十一日，倘利率增加或減少100基點，而所有其他變量維持不變，年內稅前溢利將減少或增加20,053,000美元(二零二三年十二月三十一日：17,524,000美元)，乃主要由於浮動利率銀行借款的利息開支增加或減少。

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OBJECTIVES AND POLICIES (continued)

Foreign currency risk

The Group has transactional currency exposures. These exposures arise from sales or purchases by its significant subsidiary operating in Mainland China in US\$ other than the subsidiary's functional currency, which is RMB. During the year, approximately 18% (2023: 22%) of the Group's sales were denominated in currencies other than the functional currency of the subsidiary making the sale, whilst 61% (2023: 53%) of costs of sales were denominated in the subsidiary's functional currency.

In addition, the Group has currency exposures from interest-bearing bank borrowings, held by its subsidiary operating in Mainland China. As at 31 December 2024, interest-bearing bank borrowings with a carrying amount of US\$1,502,330,000 (31 December 2023: US\$1,653,010,000) are dominated in United States dollars, other than the subsidiary's functional currency, which is RMB.

The following table demonstrates the sensitivity at the end of the reporting period to a reasonably possible change in the RMB exchange rates, with all other variables held constant, of the Group's profit before tax (arising from USD and RMB denominated financial instruments):

		Increase/ (decrease) in US\$ rate 美元匯率增加／ (減少)	Increase/ (decrease) in profit before tax 稅前溢利增加／ (減少)
Year ended 31 December 2024	截至二零二四年十二月三十一日止年度		
If US\$ weakens against RMB	倘美元兌人民幣貶值	5%	99,620
If US\$ strengthens against RMB	倘美元兌人民幣升值	(5%)	(99,620)
Year ended 31 December 2023	截至二零二三年十二月三十一日止年度		
If US\$ weakens against RMB	倘美元兌人民幣貶值	5%	47,599
If US\$ strengthens against RMB	倘美元兌人民幣升值	(5%)	(47,599)

38. 財務風險管理目標及政策(續)

外幣風險

本集團面臨交易外匯風險。該等風險產生自其在中國內地經營的重要子公司以美元進行的買賣，而並非以其功能貨幣人民幣進行。於年內，本集團的銷售額中約18%(二零二三年：22%)乃以進行銷售的子公司的功能貨幣以外的貨幣計值，與此同時，銷售成本中61%(二零二三年：53%)乃以子公司的功能貨幣計值。

此外，本集團面臨來自計息銀行借款的外幣風險，該借款由其在中國內地經營的子公司持有。於二零二四年十二月三十一日，賬面值為1,502,330,000美元(二零二三年十二月三十一日：1,653,010,000美元)的計息銀行借款以美元計值，而非以該子公司的功能貨幣人民幣計值。

下表顯示在所有其他變量維持不變的情況下，於報告期末本集團稅前溢利(由美元及人民幣計值的金融工具產生)對人民幣匯率的合理可能變動的敏感度：

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財務報表附註

**38. FINANCIAL RISK MANAGEMENT
OBJECTIVES AND POLICIES (continued)****Credit risk**

Credit risk is the risk that a counterparty cannot meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Group is exposed to credit risk from its operating activities (primarily trade receivables).

The Group trades only with recognised and creditworthy third parties and related parties. It is the Group's policy that all customers who wish to trade on credit terms are subject to credit verification procedures. In addition, receivable balances are monitored on an ongoing basis and the Group's exposure to bad debts is not significant.

The carrying amounts of cash and cash equivalents, trade and notes receivables, financial assets included in prepayments, other receivables and other assets, amounts due from related parties and pledged deposits included in the consolidated statement of financial position represent the Group's maximum exposure to credit risk in relation to its financial assets. The Group has no other financial assets which carry significant exposure to credit risk.

Further qualitative and quantitative information regarding trade receivables, for which the Group applies the simplified approach in calculating ECLs under HKFRS 9, is disclosed in note 21 to the financial statements.

Apart from trade and notes receivables, all the carrying amounts of financial assets at amortised cost, applying the general approach under HKFRS 9, are classified as Stage 1 in terms of ECLs as at 31 December 2024 in addition to the fully impaired other receivables classified as Stage 3, as stated in note 22 to the financial statements.

Liquidity risk

The Group's policy is to monitor regularly the current and expected liquidity requirements to ensure that it maintains sufficient reserves of cash and adequate committed lines of funding from major financial institutions to meet its liquidity requirements in the short and long term.

38. 財務風險管理目標及政策(續)**信貸風險**

信貸風險指對手方無法履行金融工具或客戶合約項下責任而引致金融損失之風險。本集團面臨來自其經營活動(主要為貿易應收款項)的信貸風險。

本集團僅與獲認可及信譽良好的第三方及關聯方交易。本集團的政策規定,所有擬按信用方式交易的客戶均須通過信用核實程序。此外,由於持續對應收款項結餘進行監控,故本集團的壞賬風險並不重大。

綜合財務狀況表內現金及現金等價物、貿易應收款項及應收票據及計入預付款項、其他應收款項及其他資產的金融資產、應收關聯方款項以及已抵押存款的賬面值為本集團就其金融資產所面臨的最大信貸風險。本集團並無其他存在重大信貸風險的金融資產。

有關貿易應收款項的進一步定性及定量資料(本集團根據香港財務報告準則第9號對其採用簡化方法計算預期信貸虧損)於財務報表附註21內披露。

除財務報表附註22內所載分類為第三階段的全數已減值的其他應收款項(除貿易應收款項及應收票據外),所有按攤銷成本計量的金融資產的賬面值(根據香港財務報告準則第9號採用一般方法)就二零二四年十二月三十一日的預期信貸虧損分類為第一階段。

流動資金風險

本集團的政策為定期監控現時及預期流動資金需要,以確保維持充裕的現金儲備及從主要金融機構獲得足夠的融資承擔額度,以應對其短期及長期流動資金需要。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2024
二零二四年十二月三十一日38. FINANCIAL RISK MANAGEMENT
OBJECTIVES AND POLICIES (continued)

Liquidity risk (continued)

The maturity profile of the Group's financial liabilities as at the end of the reporting period, based on the contractual undiscounted payments, is as follows:

31 December 2024

		On demand 按要求 US\$'000 千美元	Less than 3 months 少於三個月 US\$'000 千美元	3 to 12 months 三至十二個月 US\$'000 千美元	1 to 5 years 一至五年 US\$'000 千美元	Over 5 years 五年以上 US\$'000 千美元	Total 總計 US\$'000 千美元
Interest-bearing bank borrowings	計息銀行借款	2,552	4,925	388,251	1,692,471	495,886	2,584,085
Lease liabilities	租賃負債	282	3,131	2,415	11,015	10,066	26,909
Trade payables	貿易應付款項	76,708	221,664	—	—	—	298,372
Financial liabilities included in other payables and accruals	計入其他應付款項及暫估費用的金融負債	483,094	207,040	—	—	—	690,134
Amounts due to related parties	應付關聯方款項	9,125	—	—	—	—	9,125
Total	總計	571,761	436,760	390,666	1,703,486	505,952	3,608,625

31 December 2023

二零二三年十二月三十一日

		On demand 按要求 US\$'000 千美元	Less than 3 months 少於三個月 US\$'000 千美元	3 to 12 months 三至十二個月 US\$'000 千美元	1 to 5 years 一至五年 US\$'000 千美元	Over 5 years 五年以上 US\$'000 千美元	Total 總計 US\$'000 千美元
Interest-bearing bank borrowings	計息銀行借款	—	1,676	283,006	1,578,487	703,782	2,566,951
Lease liabilities	租賃負債	—	3,468	513	10,217	12,771	26,969
Trade payables	貿易應付款項	43,715	191,695	—	—	—	235,410
Financial liabilities included in other payables and accruals	計入其他應付款項及暫估費用的金融負債	175,893	75,382	—	—	—	251,275
Amounts due to related parties	應付關聯方款項	13,876	—	—	—	—	13,876
Total	總計	233,484	272,221	283,519	1,588,704	716,553	3,094,481

38. 財務風險管理目標及政策(續)

流動資金風險(續)

於報告期末，本集團金融負債根據合約未貼現付款的到期情況如下：

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財務報表附註

38. FINANCIAL RISK MANAGEMENT
OBJECTIVES AND POLICIES (continued)

Capital management

The primary objectives of the Group's capital management are to safeguard the Group's ability to continue as a going concern and to maintain healthy capital ratios to support its business and maximise shareholders' value.

The Group manages its capital structure and makes adjustments to it in light of changes in economic conditions. To maintain or adjust the capital structure, the Group may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. The Group is not subject to any externally imposed capital requirements. No changes were made in the objectives, policies or processes for managing capital during the year.

The Group monitors capital using a gearing ratio, which is net debt divided by total equity plus net debt. The Group includes, within net debt, trade payables, other payables and accruals, interest-bearing bank borrowings, lease liabilities and amounts due to related parties, less cash and cash equivalents. The gearing ratios as at the end of each of the reporting periods were as follows:

38. 財務風險管理目標及政策(續)

資本管理

本集團資本管理的首要目標為，維護本集團的持續經營能力及維持良好的資本比率，以支持其業務及實現股東價值最大化。

本集團根據經濟狀況的變動管理及調整其資本架構。為維持或調整資本架構，本集團或會調整派付予股東的股息、向股東返還資本或發行新股。本集團不受任何外部施加的資本要求規限。於年內，本集團管理資本的目標、政策或程序概無任何變動。

本集團以資產負債比率監控資本，資產負債比率按淨負債除以權益總額加淨負債計算。本集團將貿易應付款項、其他應付款項及暫估費用、計息銀行借款、租賃負債以及應付關聯方款項扣除現金及現金等價物計入淨負債。於各報告期末的資產負債比率如下：

		31 December 2024 二零二四年 十二月三十一日 US\$'000 千美元	31 December 2023 二零二三年 十二月三十一日 US\$'000 千美元
Trade payables	貿易應付款項	298,372	235,410
Other payables and accruals, excluding contract liabilities (note 24)	其他應付款項及暫估費用(合約 負債除外)(附註24)	772,816	343,933
Interest-bearing bank borrowings	計息銀行借款	2,197,939	2,099,561
Lease liabilities	租賃負債	22,980	22,205
Amounts due to related parties	應付關聯方款項	9,125	13,876
Less: Cash and cash equivalents	減：現金及現金等價物	(4,459,132)	(5,585,181)
Net debt	淨負債	(1,157,900)	(2,870,196)
Total equity	權益總額	8,906,619	8,014,544
Total equity and net debt	權益總額及淨負債	7,748,719	5,144,348
Gearing ratio	資產負債比率	(14.94)%	(55.79)%

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財務報表附註

31 December 2024
二零二四年十二月三十一日

39. NOTES TO THE CONSOLIDATED STATEMENT OF CASH FLOWS

(a) Major non-cash transactions

During the year, the Group had non-cash additions to right-of-use assets or lease liabilities of US\$5,745,000 (2023: US\$7,862,000) in respect of lease arrangements for buildings.

(b) Changes in liabilities arising from financing activities are as follows:

		Interest-bearing bank borrowings 計息銀行借款 US\$'000 千美元	Lease liabilities 租賃負債 US\$'000 千美元
As at 1 January 2023	於二零二三年一月一日	1,908,336	19,348
Changes from financing cash flows	融資現金流量變動	85,657	(5,674)
Interest expense	利息開支	102,444	1,068
New leases	新租賃	—	7,862
Foreign exchange movements	外匯變動	3,124	(399)
As at 31 December 2023 and 1 January 2024	於二零二三年十二月三十一日及二零二四年一月一日	2,099,561	22,205
Changes from financing cash flows	融資現金流量變動	1,086	(5,694)
Interest expense	利息開支	101,511	1,061
New leases	新租賃	—	5,745
Foreign exchange movements	外匯變動	(4,219)	(337)
As at 31 December 2024	於二零二四年十二月三十一日	2,197,939	22,980

(c) Total cash outflow for leases

The total cash outflow for leases included in the statement of cash flows is as follows:

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Within operating activities	經營活動內	2,693	2,383
Within financing activities	融資活動內	5,694	5,674
Total	總計	8,387	8,057

39. 綜合現金流量表附註

(a) 主要非現金交易

於年內，本集團與建築物租賃安排有關的使用權資產或租賃負債的非現金添置為5,745,000美元(二零二三年：7,862,000美元)

(b) 融資活動所產生的負債變動如下：

(c) 租賃現金流出總額

計入現金流量表的租賃現金流出總額如下：

NOTES TO FINANCIAL STATEMENTS

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財務報表附註

40. PARTLY-OWNED SUBSIDIARIES WITH MATERIAL NON-CONTROLLING INTERESTS

Details of the Group's subsidiaries that have material non-controlling interests are set out below:

		2024 二零二四年	2023 二零二三年
Percentage of interest held by non-controlling interests:	非控股權益持有權益比率：		
Hua Hong Manufacturing	華虹製造	49%	49%
Hua Hong Wuxi	華虹無錫	49%	49%

The board of directors is the supreme governing body for Hua Hong Wuxi, in which non-controlling shareholders hold three seats out of seven. Therefore, the proportion of voting rights is different from that of the ownership interest above.

40. 有重大非控股權益之非全資子公司

本集團具有重大非控股權益之子公司之詳情如下：

董事會為華虹無錫的最高管理機構，由七名董事組成，其中三名董事為非控股股東。因此，投票權比例不同於上述所有權權益比例。

		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元
Loss for the year allocated to non-controlling interests:	分配至非控股權益之年內虧損：		
Hua Hong Wuxi	華虹無錫	(174,455)	(150,000)
Hua Hong Manufacturing	華虹製造	(24,038)	(3,609)
		(198,493)	(153,609)
Accumulated balances of non-controlling interests at the reporting date:	於報告日期非控股權益累計結餘：		
Hua Hong Wuxi	華虹無錫	750,194	936,596
Hua Hong Manufacturing	華虹製造	1,909,399	776,953
		2,659,593	1,713,549

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2024
二零二四年十二月三十一日40. PARTLY-OWNED SUBSIDIARIES WITH
MATERIAL NON-CONTROLLING INTERESTS
(continued)

The following tables illustrate the summarised financial information of the above subsidiary. The amounts disclosed are before any inter-company eliminations:

40. 有重大非控股權益之非全資子
公司(續)

下表概述上述子公司的財務資料，所披露之金額為任何公司間抵銷前之金額：

		Hua Hong Wuxi 華虹無錫	
		2024	2023
		二零二四年	二零二三年
		US\$'000	US\$'000
		千美元	千美元
Revenue	銷售收入	1,006,948	995,981
Other income	其他收入	17,878	61,382
Total expenses	開支總額	(1,380,856)	(1,357,791)
Loss and total comprehensive loss for the year	年內虧損及全面虧損總額	(356,030)	(300,428)
Current assets	流動資產	1,351,216	1,248,003
Non-current assets	非流動資產	2,516,963	2,846,165
Current liabilities	流動負債	653,614	475,938
Non-current liabilities	非流動負債	1,678,009	1,701,179
Net cash flows generated from operating activities	經營活動所得現金流量淨額	272,611	219,745
Net cash flows used in investing activities	投資活動所用現金流量淨額	(200,949)	(533,561)
Net cash flows used in financing activities	融資活動所用現金流量淨額	(40,283)	(50,119)
Effect of foreign exchange rate changes, net	外匯匯率變動影響，淨額	(8,967)	(13,819)
Net increase/(decrease) in cash and cash equivalents	現金及現金等價物增加／ (減少)淨額	22,412	(377,754)

NOTES TO FINANCIAL STATEMENTS

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財務報表附註

40. PARTLY-OWNED SUBSIDIARIES WITH MATERIAL NON-CONTROLLING INTERESTS
(continued)

The following tables illustrate the summarised financial information of the above subsidiaries. The amounts disclosed are before any inter-company eliminations:

40. 有重大非控股權益之非全資子公司(續)

下表概述上述子公司的財務資料，所披露之金額為任何公司間抵銷前之金額：

		Hua Hong Manufacturing 華虹製造	
		2024	2023
		二零二四年	二零二三年
		US\$'000	US\$'000
		千美元	千美元
Revenue	銷售收入	485	–
Other income	其他收入	34,905	9,002
Total expenses	開支總額	(84,572)	(16,450)
Loss and total comprehensive loss for the year	年內虧損及全面虧損總額	(49,182)	(7,448)
Current assets	流動資產	1,778,408	1,444,804
Non-current assets	非流動資產	2,896,429	357,112
Current liabilities	流動負債	606,185	103,430
Non-current liabilities	非流動負債	172,126	112,951
Net cash flows used in operating activities	經營活動所用現金流量淨額	(84,512)	(8,487)
Net cash flows used in investing activities	投資活動所用現金流量淨額	(2,359,696)	(260,150)
Net cash flows generated from financing activities	融資活動所得現金流量淨額	2,472,698	1,772,576
Effect of foreign exchange rate changes, net	外匯匯率變動影響，淨額	(27,379)	(18,123)
Net increase in cash and cash equivalents	現金及現金等價物增加淨額	1,111	1,435,816

41. EVENT AFTER THE REPORTING PERIOD

There is no material subsequent event undertaken by the Group after 31 December 2024.

41. 報告期後事項

於二零二四年十二月三十一日後，本集團並無進行重大後續事項。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2024
二零二四年十二月三十一日

42. STATEMENT OF FINANCIAL POSITION OF THE COMPANY

Information about the statement of financial position of the Company at the end of the reporting period is as follows:

42. 本公司的財務狀況表

有關本公司於報告期末的財務狀況表資料載列如下：

		31 December 2024 二零二四年 十二月三十一日 US\$'000 千美元	31 December 2023 二零二三年 十二月三十一日 US\$'000 千美元
NON-CURRENT ASSETS	非流動資產		
Investments in subsidiaries	投資於子公司	4,795,657	4,267,223
Total non-current assets	非流動資產總額	4,795,657	4,267,223
CURRENT ASSETS	流動資產		
Trade and notes receivables	貿易應收款項及應收票據	2,481	2,680
Prepayments, other receivables and other assets	預付款項、其他應收款項及其他資產	307	360
Due from a subsidiary	應收子公司款項	1,001	1,001
Restricted and time deposits	已凍結及定期存款	33	27
Cash and cash equivalents	現金及現金等價物	457,551	1,021,676
Total current assets	流動資產總額	461,373	1,025,744
CURRENT LIABILITIES	流動負債		
Other payables and accruals	其他應付款項及暫估費用	712	801
Due to subsidiaries	應付子公司款項	96,467	98,701
Total current liabilities	流動負債總額	97,179	99,502
NET CURRENT ASSETS	流動資產淨額	364,194	926,242
TOTAL ASSETS LESS CURRENT LIABILITIES	資產總值減流動負債	5,159,851	5,193,465
Net assets	淨資產	5,159,851	5,193,465
EQUITY	權益		
Share capital (note 30)	股本(附註30)	4,938,457	4,933,559
Reserves (note)	儲備(附註)	221,394	259,906
Total equity	權益總額	5,159,851	5,193,465

Junjun Tang
唐均君
Director
董事

Jun Ye
葉峻
Director
董事

NOTES TO FINANCIAL STATEMENTS

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財務報表附註

42. STATEMENT OF FINANCIAL POSITION OF THE COMPANY (continued)

Note:

A summary of the Company's reserves is as follows:

42. 本公司的財務狀況表(續)

附註:

本公司的儲備概述如下:

		Other reserve 其他儲備 US\$'000 千美元	Share option reserve 購股權儲備 US\$'000 千美元	Retained profits 留存溢利 US\$'000 千美元	Total 總計 US\$'000 千美元
As at 1 January 2023	於二零二三年一月一日	(68,260)	14,434	180,048	126,222
Profit for the year	年內溢利	—	—	134,079	134,079
Equity-settled share option arrangements	以權益結算的購股權安排	—	853	—	853
Issue of shares	發行股份	—	(1,248)	—	(1,248)
At 31 December 2023 and 1 January 2024	於二零二三年十二月三十一日 及二零二四年一月一日	(68,260)	14,039	314,127	259,906
Profit for the year	年內溢利	—	—	(1,082)	(1,082)
Equity-settled share option arrangements	以權益結算的購股權安排	—	18	—	18
Dividends	股息	—	—	(36,233)	(36,233)
Issue of shares	發行股份	—	(1,215)	—	(1,215)
As at 31 December 2024	於二零二四年十二月三十一日	(68,260)	12,842	276,812	221,394

43. APPROVAL OF THE FINANCIAL STATEMENTS

The financial statements were approved and authorised for issue by the board of directors on 27 March 2025.

43. 財務報表的批准

財務報表已於二零二五年三月二十七日
獲董事會批准及授權刊發。

FIVE YEAR FINANCIAL SUMMARY

五年財務概覽

A summary of the results and of the assets, liabilities and non-controlling interests of the Group for the last five financial years, as extracted from the published audited financial statements, is set out below.

下文載列本集團於最近五個財政年度的業績以及資產、負債及非控股權益的概要，有關資料乃摘錄自己刊發經審核財務報表。

		Year ended 31 December 截至十二月三十一日止年度				
		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元	2022 二零二二年 US\$'000 千美元	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
RESULTS	業績					
REVENUE	銷售收入	2,003,993	2,286,113	2,475,488	1,630,754	961,279
Cost of sales	銷售成本	(1,798,865)	(1,799,017)	(1,631,832)	(1,179,156)	(726,486)
Gross profit	毛利	205,128	487,096	843,656	451,598	234,793
Other income and gains	其他收入及收益	149,072	144,370	70,986	60,758	57,313
Fair value gain on an investment property	投資物業的公平值收益	(39)	103	78	183	198
Selling and distribution expenses	銷售及分銷費用	(9,628)	(10,189)	(12,464)	(10,673)	(8,169)
Administrative expenses	管理費用	(351,276)	(322,868)	(266,666)	(198,920)	(261,139)
Other expenses	其他費用	(33,395)	(33,666)	(111,360)	(165)	(10)
Finance costs	財務費用	(97,113)	(100,497)	(40,331)	(13,226)	(2,968)
Share of profits of associates	分佔聯營公司溢利	3,459	9,230	12,171	6,765	26,059
PROFIT BEFORE TAX	稅前溢利	(133,792)	173,579	496,070	296,320	46,077
Income tax expense	所得稅開支	(6,593)	(47,154)	(89,499)	(65,349)	(12,762)
(LOSS)/PROFIT FOR THE YEAR	年內(虧損)/溢利	(140,385)	126,425	406,571	230,971	33,315
Attributable to:	以下各項應佔:					
Owners of the parent	母公司擁有人	58,108	280,034	449,912	261,476	99,443
Non-controlling interests	非控股權益	(198,493)	(153,609)	(43,341)	(30,505)	(66,128)
		(140,385)	126,425	406,571	230,971	33,315
		As at 31 December 於十二月三十一日				
		2024 二零二四年 US\$'000 千美元	2023 二零二三年 US\$'000 千美元	2022 二零二二年 US\$'000 千美元	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Total assets	資產總值	12,415,108	10,943,420	7,055,376	6,202,099	4,568,586
Total liabilities	負債總額	(3,508,489)	(2,928,876)	(2,919,908)	(2,517,552)	(1,214,465)
Non-controlling interests	非控股權益	(2,659,593)	(1,713,549)	(1,104,998)	(814,188)	(825,679)
		6,247,026	6,300,995	3,030,470	2,870,359	2,528,442



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