



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: 1347)

(股份代號：1347)

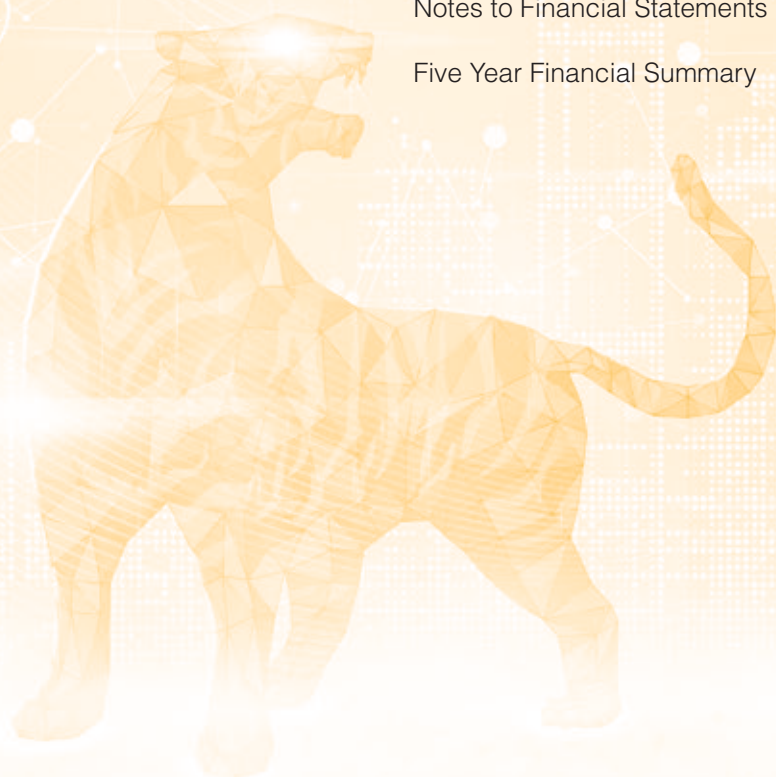
2021
ANNUAL REPORT
年度報告



華章宏圖
芯世紀
Empowering
the Information Era

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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 12 May 2022;
“Audit Committee”	the audit committee of the Board;
“Board”	the Board of Directors of the Company;
“China IC Fund”	China Integrated Circuit Industry Investment Fund Co., Ltd., 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 wafer and IC design, package test, equipment and materials etc;
“China” or “the PRC”	the People’s Republic of China, but for the purpose of this annual report and for geographical reference only and except where otherwise required by the context, references in this annual report to “China” and the “PRC” do not include Taiwan, the Macau Special Administrative Region and Hong Kong;
“Company” or “our Company”	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;
“Company Secretary”	the Company Secretary of the Company;
“Director(s)”	the Director(s) of the Company;
“EPS”	earnings per share;
“Executive Director(s)”	the Executive Director(s) of our Company;
“Extraordinary General Meeting” or “EGM”	an extraordinary general meeting of the Company;
“GDP”	gross domestic product;
“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;
“Grace Shanghai”	Shanghai Grace Semiconductor Manufacturing Corporation (上海宏力半導體製造有限公司), a company incorporated in the PRC on 20 December 2000 and a wholly-owned subsidiary of our Company. It was deregistered on 3 August 2018;

DEFINITIONS

“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;
“HHNEC”	Shanghai Hua Hong NEC Electronics Co., Ltd. (上海華虹NEC電子有限公司), a company incorporated in the PRC on 17 July 1997 and a wholly-owned subsidiary of our Company. It was deregistered on 3 August 2018;
“HK\$”	Hong Kong dollars, the lawful currency of Hong Kong;
“Hongri”	Shanghai Huahong Hongri Electronics Co., Ltd. (上海華虹虹日電子有限公司), previously known as Shanghai Hongri International Electronics Co., Ltd. until 16 December 2021, a company owned as to 51% by Huahong Group and a connected person of the Company;
“Hong Kong”	the Hong Kong Special Administrative Region of the PRC;
“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 significant shareholder of our Company;
“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 Integrated”	Shanghai Huali Integrated Circuit Corporation (上海華力集成電路製造有限公司), a company incorporated in the PRC on 8 August 2016. Its Shareholders include Shanghai Huali Microelectronics Corporation, Shanghai Integrated Circuit Industry Investment Fund Co., Ltd. and China Integrated Circuit Industry Investment Fund Co., Ltd.;

DEFINITIONS

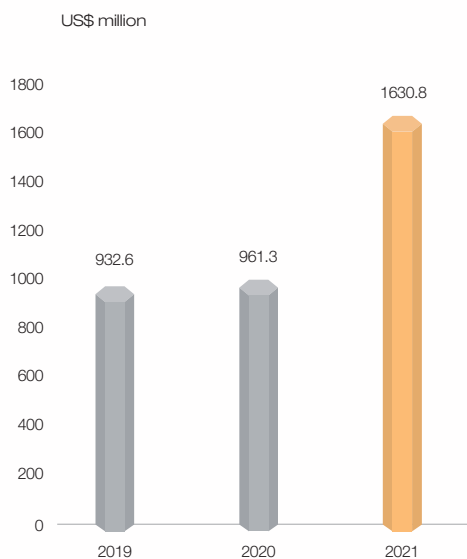
“Hua Hong Wuxi”	Hua Hong Semiconductor (Wuxi) Limited, a company incorporated in the PRC on 10 October 2017. Upon such incorporation, Hua Hong Wuxi was held 100% by HHGrace, a wholly-owned subsidiary of the Company, and continues to be held 51.0% by the Group following the completion of the transactions under the JV Agreement and the Capital Increase Agreement, of which 22.2% is held directly by the Company and 28.8% is held indirectly by the Company through HHGrace; China IC Fund and Wuxi Xi Hong Lian Xin hold 29.0% and 20.0% of Hua Hong Wuxi, respectively;
“ICRD”	Shanghai Integrated Circuit Research and Development Center (上海集成電路研發中心有限公司), a company incorporated in the PRC in 2002 and a connected person of the Company;
“Independent Non-Executive Director(s)”	the Independent Non-Executive Director(s) of our Company;
“INESA”	INESA (Group) Co., Ltd. (上海儀電(集團)有限公司), formerly known as INESA Holding Group (上海儀電控股(集團)有限公司), a state-owned company incorporated in the PRC in December 1993, and a controlling shareholder of our Company prior to 17 December 2020;
“JV Agreement”	the JV Agreement dated 3 January 2018 entered into by the Company, HHGrace, Hua Hong Wuxi, China IC Fund and Wuxi Xi Hong Lian Xin;
“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;
“Merger”	the merger of Grace Cayman and Hua Hong Semiconductor (Cayman) Inc., an exempted company established by the Company in the Cayman Islands;
“NEC”	NEC Corporation, a company incorporated in Japan and founded in 1899 as Nippon Electric Company, Limited;
“Nomination Committee”	the nomination committee of the Board;
“Non-Executive Director(s)”	the Non-Executive Director(s) of our Company;
“QST”	QST Corporation (上海矽睿科技有限公司), a company incorporated in the PRC on 13 September 2012 and a connected person of the Company until 1 September 2020;
“Remuneration Committee”	the remuneration committee of the Board;
“RMB”	Renminbi, the lawful currency of the PRC;
“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;

DEFINITIONS

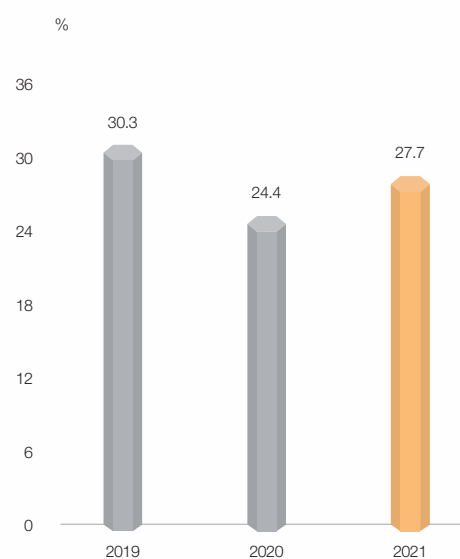
“SFC”	the Securities and Futures Commission of Hong Kong;
“SFO”	the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong), as amended or supplemented from time to time;
“Shanghai Awinic”	Shanghai Awinic Technology Co., Ltd. (上海艾為電子技術股份有限公司), a company incorporated in the PRC on 18 June 2008 whose shares are listed on the STAR Market of the Shanghai Stock Exchange (stock code: 688798);
“Shanghai Huali”	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;
“Shareholders”	holders of ordinary shares in the capital of the Company;
“SITRI”	Shanghai Industrial μ Technology Research Institute (上海新微技術研發中心有限公司), a company incorporated in the PRC in May 2013 and a connected person of the Company;
“Stock Exchange”	The Stock Exchange of Hong Kong Limited; and
“Wuxi Xi Hong Lian Xin”	Wuxi Xi Hong Lian Xin Investment Co., Ltd., a professional investment company incorporated in the PRC on 19 December 2017, jointly established by municipal and district-level state-owned enterprises.

KEY FINANCIALS

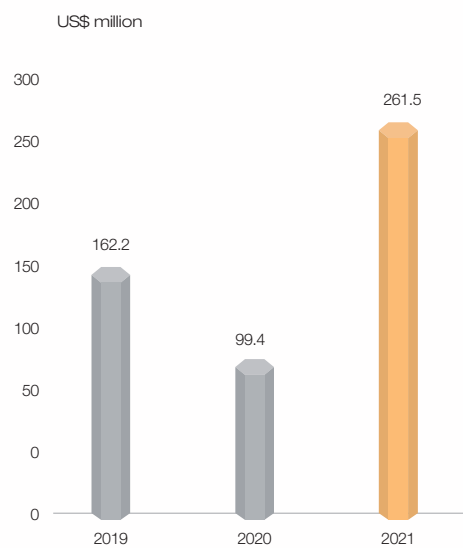
Revenue



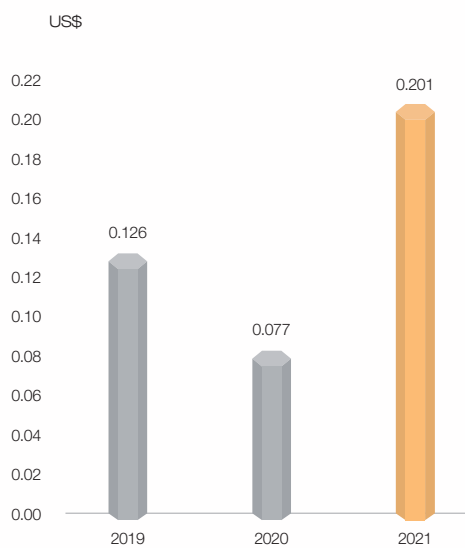
Gross Profit Margin



Profit attributable to owners of the parent



EPS



LETTER TO SHAREHOLDERS

Dear Shareholders,

2021 is a year of great development for the semiconductor industry. Global semiconductor sales exceeded US\$500 billion for the first time, a record high, with China remaining the world's largest semiconductor market. Severe fluctuations in the global economy, repeated partial pandemics, bottlenecks in the supply chain, and overall growth in emerging markets, such as Automotive Electronics, Renewable Energy Generation, National Integrated Big-data Center System, Internet of Things, and Smart Healthcare, have led to a continuous increase in chip demand. Additional excellent chip design houses in China are starting to demonstrate their capability and have generated higher requirements for local semiconductor manufacturing capacity. With our well-defined strategy of "IC + Power Discrete", Hua Hong Semiconductor seized on the resulting opportunity, achieving record revenue, profit, and growth for 2021. Furthermore, the Company is accelerating its capacity expansion of Hua Hong Semiconductor (Wuxi) Limited ("Hua Hong Wuxi") to address the global chip shortage and to continue our outstanding growth in 2022. Significant improvement is being achieved in the Company's comprehensive strengths, with deep penetration in the global industrial supply chain and greater leadership in the semiconductor industry.

Hua Hong Semiconductor's financial performance was outstanding in all categories for 2021. The Company's annual revenue hit a record high of US\$1,630.8 million, representing an increase of 69.6% compared with 2020. Despite increases in raw material costs and depreciation of the 12-inch production line, the Company recorded a gross margin of 27.7% for the year, representing an increase of 3.3 percentage points compared with the previous year. This was achieved through efforts including cost reduction, efficiency improvement, and product value enhancement. The three 8-inch production lines in Shanghai, with their traditional advantages, operated for the first time at a profit margin above 40%, showing their paramount commercial value. In 2021, profit attributable to owners of the parent was US\$261.5 million, representing an increase of 162.9% compared with the previous year; and the return on equity reached 9.7%, representing a year-on-year increase of 5.5 percentage points.

In 2021, Hua Hong Wuxi's 12-inch production line ushered in its third year of operation. Since October 2021, wafer-starts at Hua Hong Wuxi have exceeded 65,000 per month, with the utilization rate maintained at over 100%. The Company continuously migrated its Embedded Non-Volatile Memory (eNVM), Power Device, Analog & Power Management Integrated Circuits (PMIC), and Logic & Radio Frequency (RF) technology platforms from 8-inch to 12-inch. With the world's first 12-inch Power Device production line, our Power Device products in 12-inch have passed the IATF 16949 automotive quality management system certification with all electrical parameters at excellent levels, in preparation for opportunities in the era of electrification and intelligence, as well as the Automotive Electronics market. As a result of the stability and reliability of the 12-inch process, the high-yield 90nm Bipolar-CMOS-DMOS (BCD) platform enabled a more competitive manufacturing solution for chip applications, including Motor Drivers, Digital Power Supplies, and Digital Audio Amplifiers.

The Company is committed to continuous innovation of advanced specialty semiconductor technologies, having patent strategy for its core research and development competencies, with a focus on intellectual property rights for the eNVM, Power Device, Analog & PM, and Logic & RF technology platforms. In 2021, Shanghai Huahong Grace Semiconductor Manufacturing Corporation ("HHGrace"), a wholly-owned subsidiary of Hua Hong Semiconductor, distinguished itself from many other candidates in the 18th Shanghai International Intellectual Property Forum and was granted the "3rd Shanghai IPR Innovation Award (Creation)." As at the end of 2021, the Company has applied for a total of 6,593 patents in China and has obtained 3,575 domestic and 147 international patents.

LETTER TO SHAREHOLDERS

In 2021, we once again demonstrated the Company's leading position in eNVM innovation by launching the NORD-Flash memory cell, developed by the Company with proprietary intellectual property rights. This technology incorporates shared select gates, greatly reducing the cell area, with an extremely competitive number of photo layers and won the "2021 Excellent (Technology) Solution Award for Highly Reliable Microcontrollers (MCU)" by China Electronics News. MCU products utilizing this eNVM technology have been mass-produced, providing strong technical support for rapidly growing applications, such as Automotive Electronics, New Generation Communication, Internet of Things, and Smart Healthcare.

Looking forward to the "14th Five-Year Plan", China's development in the next five years and beyond puts forward more urgent requirements for accelerating scientific and technological innovation. Under the new "dual circulation" development pattern, in which the domestic economic cycle plays a leading role, while the international economic cycle remains its extension and supplement. We will continue to work on the capacity expansion of Hua Hong Wuxi's 12-inch production line and do our best to build up total capacity to more than 90,000 wafers per month by the end of 2022. At the same time, the Company will expand and strengthen our "8 inch + 12 inch" strategy, by increasing research and development investment under the "Specialty IC" concept, developing narrower technology nodes and improving chip performance. In addition, by innovating new device structures and establishing our automotive grade process, we will create the leading "Advanced Power Discrete" capability. We believe that 2022 will be a year when the Company enters the fast lane of high-quality development, and realizes growth at accelerated speeds.

We will use our best efforts to achieve our goals. With the construction of our world-class IC industrial cluster, we will continuously improve the Company's leadership, innovation, and execution. We would like to thank our investors, customers, and all of our stakeholders for supporting Hua Hong Semiconductor. We look forward to jointly forging ahead with you to achieve splendid results in the next level of development.

Mr. Suxin Zhang
Chairman and Executive Director

Mr. Junjun Tang
President and Executive Director

Shanghai, PRC
29 March 2022

CORPORATE INFORMATION

Corporate Culture

Vision

We empower our customers through continuous innovation



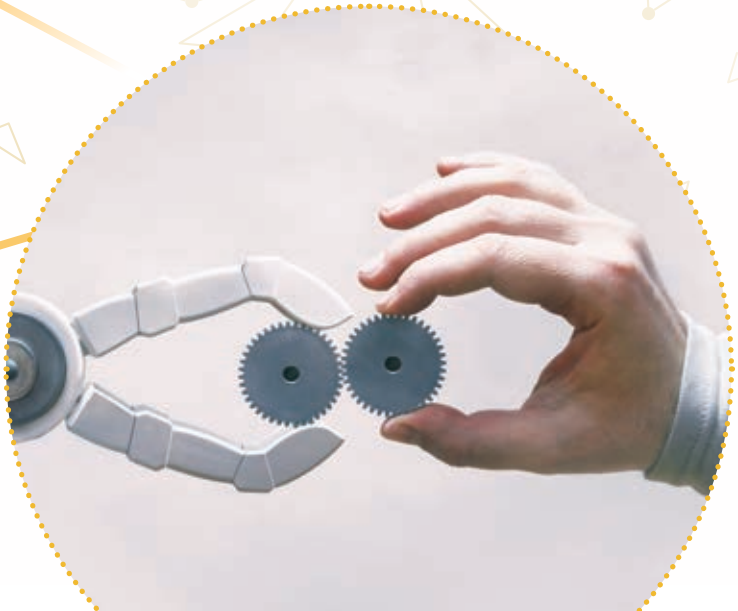
Mission

Creating value for shareholders, customers and employees through collaboration, innovation and being a good corporate citizen



Spirit

Disruptive Innovation,
Confidence, Initiative and
Teamwork



CORPORATE INFORMATION

Board of Directors

Executive Directors

Suxin Zhang (*Chairman*)
Junjun Tang (*President*)

Non-Executive Directors

Guodong Sun
Jing Wang
Jun Ye

Independent Non-Executive Directors

Stephen Tso Tung Chang
Kwai Huen Wong, JP
Long Fei Ye

Company Secretary

Sui Har Lee

Authorized Representatives

Junjun Tang
Sui Har Lee

Audit Committee

Stephen Tso Tung Chang (*Chairman*)
Long Fei Ye
Jun Ye

Remuneration Committee

Kwai Huen Wong, JP (*Chairman*)
Long Fei Ye
Jing Wang

Nomination Committee

Suxin Zhang (*Chairman*)
Kwai Huen Wong, JP
Long Fei Ye

Website

www.huahonggrace.com

Auditor

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

Legal Advisor

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

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
Shanghai, PRC

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

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

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

CORPORATE INFORMATION

Share Registrar

Tricor Investor Services Limited
Level 54, Hopewell Centre
183 Queen's Road East
Hong Kong

Registered Office

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

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

Stock Code

1347

DIRECTORS AND SENIOR MANAGEMENT TEAM



Mr. Suxin Zhang, aged 58, was appointed on 11 March 2016 as the Chairman and an Executive Director of our Company as well as a member of and Chairman of the Nomination Committee. He is currently Chairman and Secretary of the Communist Party of Huahong Group, Chairman of Shanghai Huali, Chairman of Huali Integrated, and legal representative and Chairman of Hua Hong Wuxi. Mr. Zhang has extensive experience in hi-tech strategic development, energy strategy research, and the power equipment industry. Mr. Zhang held various positions, including President of Shanghai Turbine Co., Ltd., Executive Vice President of Shanghai Electric Power Generation Group, Chairman of Siemens Gas Turbine Parts Co., Ltd., Executive Director of Shanghai Electric Group Company Limited, Vice President of Shanghai Electric (Group) Corporation, Secretary of the Communist Party and General Manager of Shanghai Jinqiao (Holdings) Limited, Chairman and Secretary of the Communist Party of Shanghai Jinqiao Export Processing Zone Development Co., Ltd., and Deputy Director of both the Shanghai Municipal Development and Reform Commission and the Administration Commission of Shanghai Zhangjiang Hi-Tech Industrial Development Zone. Mr. Zhang graduated from Tsinghua University with a Bachelor's degree in Engineering and is a professor-level Senior Engineer.



Mr. Junjun Tang, aged 57, has served as the President and Executive Director of the Company since May 2019. 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 Shanghai Huali from February 2010 to March 2019. He was concurrently the President of Huali Integrated 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 HHNEC. Each of Shanghai Huali and Huali Integrated is a connected person of the Company as defined by the Listing Rules, and HHNEC was a wholly-owned subsidiary of the Company prior to its deregistration in August 2018. 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.

DIRECTORS AND SENIOR MANAGEMENT TEAM



Mr. Guodong Sun, aged 45, was appointed as a Non-Executive Director of the Company with effect from 10 December 2020. 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, and Vice Minister and Minister of the Party Committee Organization Department. 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. 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.



Ms. Jing Wang, aged 51, has been a Non-Executive Director of our Company since June 2019. She is currently President and Deputy Secretary of the Communist Party Committee of Huahong Group, Vice Chairman of Shanghai Huali, a Director of Huali Integrated and a Director of Hua Hong Wuxi. Ms. Wang has extensive experience in management and economic development. During the period from December 2003 to December 2007, Ms. Wang was the Deputy Division Director of the Industrial Development Division of Shanghai Municipal Development and Reform Commission and from December 2007 to February 2014, she was the Division Director. From February 2014 to May 2018 she worked as a Deputy Director of China (Shanghai) Free Trade Zone Management Committee (中國(上海)自由貿易試驗區管委會) and was concurrently the Deputy District Head of Shanghai Pudong New Area during the period from July 2015 to May 2018. She had also been employed by Shanghai Investment Consulting Corporation (上海投資諮詢公司), Shanghai Planning Commission (上海市計劃委員會), Shanghai Comprehensive Economics Work Committee (上海市綜合經濟工作委員會) and Shanghai Municipal Development and Planning Commission (上海市發展計劃委) from 1992 to 2003. Prior to joining the Company, Ms. Wang was a Deputy Director at Shanghai Science and Technology innovation Centre Development Office (上海推進科技創新中心建設辦公室) and Shanghai Zhangjiang Hi-tech Industrial Development Zone Management Committee (上海市張江高新技術產業開發區管委會) from May 2018 to May 2019. Ms. Wang graduated from Shanghai Jiao Tong University with a Bachelor's degree in Technical Economics in 1992. She also graduated from Fudan University with a Master's degree in World Economics in 2003. She holds the title of Chief Senior Economist.

DIRECTORS AND SENIOR MANAGEMENT TEAM



Mr. Jun Ye, aged 49, has been a Non-Executive Director of our Company since February 2012. 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 and Deputy General Manager since 1996 and General Manager since May 2018. Mr. Ye is also a Director at Bank of Shanghai, Chairman of Shanghai Zhaoxin Semiconductor Ltd., Sino Therapeutics 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. Stephen Tso Tung Chang, aged 73, is an Independent Non-Executive Director of our Company. Mr. Chang has extensive experience in accounting, auditing and financial management. He 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. Mr. Chang is also a Fellow member of the Institute of Chartered Accountants in England and Wales since January 1983, and he 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 Kerry Properties Limited (stock code: 683.HK), and was formerly an Independent Non-Executive Director of China Cinda Asset Management Co., Ltd. (stock code: 1359.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, BBS, JP, aged 70, is an Independent Non-Executive Director of our Company. 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, the Director of the Hong Kong Mortgage Corporation Limited, and the Independent Non-Executive Director of Vinda International Holdings Limited (stock code: 3331.HK), China Oilfield Services Limited (stock codes: 2883.HK and 601808.SZ), and NWS Holdings Limited (stock code: 659.HK). In addition, he is the Honorary Lecturer, External Examiner, and Professor at The University of Hong Kong, The Chinese University of Hong Kong, City University of Hong Kong 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. Long Fei Ye, aged 80, is an Independent Non-Executive Director of our Company. Mr. Ye held various positions in the Shanghai Municipal Government. Mr. Ye relocated to Hong Kong in 1991, and served until 1995 as the Chief Executive of the “Shanghai Desk”, which was a cooperation arrangement for promoting Shanghai between the Shanghai government and Arthur Andersen & Co. He then joined Kerry Holdings Limited in 1995, and served as the Chairman and Deputy Chairman of Shangri-La Asia Limited from October 2000 to August 2003 and August 2003 to March 2007, respectively. He was an advisor to Shangri-La Asia Limited from March 2007 to February 2018. Mr. Ye obtained a Bachelor’s and a Master’s degree, both in Physics, from Fudan University.



Mr. Daniel Yu-Cheng Wang, aged 59, 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 overseeing finance, information technology, administration and compliance, listed company affairs and overseas human resources. He joined Grace Shanghai in April 2001 and played a central leadership role in each stage of Grace Shanghai’s development and in the preparation for and implementation of the merger and the successful initial public offering of the Company. Prior to joining Grace Shanghai, Mr. Wang worked 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 joining LSI Logic Corporation, Mr. Wang was employed by Franklin Templeton Investments in the U.S. Mr. Wang obtained a Bachelor’s degree in Industrial Engineering and Operations Research from the College of Engineering, University of California, Berkeley, in the U.S. and a Master of Business Administration degree in Finance and Banking from the University of San Francisco. In the list of “All-Asia (Ex-Japan) Executive Team Ranking” published by Institutional Investor, an authoritative international financial magazine, he was named the “Best Chief Financial Officer” in the technology/semiconductor industry in 2018, 2019 and 2021.

DIRECTORS AND SENIOR MANAGEMENT TEAM

Senior Management

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

Mr. Suxin Zhang, aged 58, is an Executive Director and Chairman of our Company. For more information about Mr. Zhang's profile and academic background, see the section headed "Directors and Senior Management Team-Board of Directors".

Mr. Junjun Tang, aged 57, is the President and Executive Director of the Company. For more information about Mr. Tang's profile and academic background, see the section headed "Directors and Senior Management Team-Board of Directors".



Mr. Heng Fan, aged 60, is an Executive Vice President of our Company. Prior to joining the Company at the end of 2014, Mr. Fan was Director and President of Shanghai Huahong Jitong Smart System Co., Ltd. from 2003 to 2014. Before that, he held various positions including Research Analyst/Deputy Director of Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Science, and Vice President of Shanghai Huahong Integrated Circuit Co., Ltd. Mr. Fan received his Bachelor's degree in Microelectronics from the Electronic Engineering Department of Fudan University and his Master's degree in Semiconductor Physics and Semiconductor Device Physics from Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Science. He holds the title of Researcher.

DIRECTORS AND SENIOR MANAGEMENT TEAM



Mr. Weiping Zhou, aged 55, is an Executive Vice President of our Company responsible for marketing. 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 is a professor-level Senior Engineer.



Mr. Lihua Ni, aged 53, is an Executive Vice President of our Company responsible for manufacturing project and security management, and the Factory Director of Fab 7. He joined HHGrace in May 2018. Prior to joining the Company, Mr. Lihua Ni successively worked for Wuxi Huajing Group Co., Ltd. (無錫華晶集團公司), Shanghai Hua Hong Microelectronics Co., Ltd., HHNEC, and acted as a Department Manager at Shanghai Xinjin Semiconductor Fabrication Co., Ltd., the department head at HHNEC and a Deputy Factory Director at Shanghai Huali. Mr. Lihua Ni graduated from Xidian University, with a Bachelor of Engineering degree, and obtained a Master of Engineering degree from Shanghai Jiao Tong University. He is qualified as a Senior Engineer.

Mr. Daniel Yu-Cheng Wang, aged 59, is an Executive Vice President of our Company overseeing finance, information technology, administration and compliance, listed company affairs 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".



Dr. Weiran Kong, aged 58, is an Executive Vice President of our Company and is in charge of technology development and design services. He joined Grace Shanghai in March 2003 and has over 30 years' experience in the semiconductor industry, with a proven track record of driving innovations in the area of NOR Flash, Logic and embedded Flash. Before joining Grace Shanghai, Dr. Kong was based in the U.S. and has worked for Sun Microsystems, Inc., LSI Logic Corporation and ISSI. He obtained a Bachelor's degree in Physics from Nankai University in Tianjin and graduated with a Master's degree in Electrical Engineering and a Doctorate degree in Applied Physics from Oregon Graduate Institute of Science & Technology in the U.S.. Dr. Kong holds 27 U.S. patents, 67 PRC patents and co-authored over 20 technical papers.

DIRECTORS AND SENIOR MANAGEMENT TEAM



Mr. Liang Yao, aged 56, is a Vice President of the Company and responsible for the operation of Fab 2. He has over 30 years of working experience in the semiconductor industry and joined HHNEC in August 1997. Before joining HHNEC, he worked for China Huajing Electronics Group Co., Ltd. from 1987 to October 1996. Mr. Yao received his Bachelor's degree in Metal Materials Studies from Nanjing Institute of Technology; and he is qualified as a Senior Engineer.



Mr. Guangping Hua, aged 55, is a Vice President of the Company and responsible for the operation of Fab 1. He has nearly 30 years of working experience in the semiconductor industry and joined HHNEC in July 2007. Prior to this, Mr. Hua has worked for Chartered Semiconductor Manufacturing Limited (Singapore) and Advanced Semiconductor Manufacturing Corporation Limited. Mr. Hua graduated from Tsinghua University with a Master's degree in Microelectronics Engineering and holds a professional title of Assistant Researcher.



Mr. Bill Lin, aged 53, is a Vice President of our Company and responsible for the operation of Fab 3. He has nearly 30 years of working experience in the semiconductor industry and joined Grace Shanghai in August 2000. Before joining Grace Shanghai, he worked for Texas Instruments-Acer Inc. (later merged with Taiwan Semiconductor Manufacturing Company Limited) from 1995 to August 2000. Mr. Lin received his Master's degree in Chemical Engineering from the National Taiwan University of Science and Technology (previously known as National Taiwan Institute of Technology); and he is qualified as a Senior Engineer.



Ms. Ying Chen, aged 49, is a Vice President of our Company and responsible for general administration, corporate image communication, and compliance. Ms. Chen joined Grace Shanghai in April 2001 and has nearly 30 years of working experience. Prior to this, Ms. Chen worked at Shanghai Fudan Forward Science and Technology Co., Ltd.. Ms Chen graduated from Fudan University with a Bachelor's degree in Law and subsequently obtained a Master's degree in Business Administration from Renmin University of China and holds the title of Senior Economist.

DIRECTORS AND SENIOR MANAGEMENT TEAM



Ms. Li Cheng, aged 50, is a Vice President of our Company and responsible for human resources. Ms. Cheng joined Grace Shanghai in August 2002 and has over 26 years of working experience. Before that, Ms. Cheng worked at Shanghai Zhanxun Communication Co., Ltd. (上海展訊通信有限公司). Ms. Cheng graduated from Charles Sturt University with a Master's degree in Business Administration and holds the title of Senior Economist.



Dr. Steven Lin, aged 60, is a Vice President of the Company, in charge of sales in North America and Japan. He worked in various non-volatile memory technology development roles at several leading semiconductor companies in the U.S. and joined Grace Shanghai in August 2006. Dr. Lin received his Doctorate degree in Electrical Engineering from the California Institute of Technology.



Mr. Mirko Sonntag, aged 45, is a Vice President of our Company and responsible for sales in Europe and sales operation and services. His expertise encompasses demand and supply chain planning and business operations, with a strong foundation in business development. Mr. Sonntag joined Grace Shanghai in October 2008. Prior to that, he worked at Infineon Technologies AG in Germany. Mr. Sonntag obtained a Diploma in Process Engineering and Economics from the University of Applied Sciences Berlin and School of Economics Berlin, Germany.



Mr. Hongbin Yao, aged 49, is a Vice President of our Company and responsible for domestic sales. He joined Shanghai Hua Hong Microelectronics Co., Ltd. in January 1997. Prior to joining the Company, Mr. Hongbin Yao worked for Sino Wealth Electronic (Shanghai) Ltd. (中穎電子(上海)有限公司), Shanghai Hua Hong Microelectronics Co., Ltd. and HHNEC. He was assigned to Japan NEC for a two-year advanced study during his employment with HHNEC. Mr. Hongbin Yao graduated from Shanghai University with a Bachelor's degree in Communication; and he is qualified as an Engineer.



Ms. Hong Li, aged 50, is a Vice President of our Company in charge of procurement logistics. Ms. Li joined HHGrace in August 2020 and has over 30 years of working experience. Prior to that, Ms. Li worked for HHNEC, Shanghai Huali and Huali Integrated. Ms. Li graduated from PLA University of Foreign Language (中國解放軍外國語學院) with a Bachelor of Arts degree and holds the title of Translator.

DIRECTORS AND SENIOR MANAGEMENT TEAM

Company Secretary



Ms. Sui Har Lee, aged 44, 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 15 years of experience in general business practices and corporate financial transactions, such as assisting corporations in listing their shares on the Stock Exchange, merger and acquisitions, capital reorganization, and compliance and regulatory matters in relation to the Listing Rules of the 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 2021.

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 14 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 2021, 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 10 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 2021, 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 eight-member Board currently comprises two Executive Directors, Mr. Suxin Zhang (Chairman) and Mr. Junjun Tang (President); three Non-Executive Directors, Mr. Jun Ye, Ms. Jing Wang and Mr. Guodong Sun; and three Independent Non-Executive Directors, Mr. Stephen Tso Tung Chang, Mr. Kwai Huen Wong, JP, and Mr. Long Fei Ye. More details of the Directors are disclosed on pages 12 to 15 of this annual report. The Company publishes and maintains on its website and on the Stock Exchange 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 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.

During the year ended 31 December 2021, the Board at all times complied with Rules 3.10(1), (2), and 3.10A of the Listing Rules relating to the appointment of at least three Independent Non-Executive Directors representing at least one-third of the Board; at least one of the Independent Non-Executive Directors is required to possess appropriate professional qualifications or accounting or related financial management expertise. 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 meet the independence guidelines set out in Rule 3.13 of the Listing Rules and are independent in accordance with the terms of the guidelines.

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.

CORPORATE GOVERNANCE REPORT

Board Operation

During the year ended 31 December 2021, the Board held five 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	5	N/A	1	N/A	1	0
Junjun Tang	5	N/A	N/A	N/A	1	1
Non-Executive Directors						
Jun Ye	4 ^(Note)	4	N/A	N/A	0	0
Jing Wang	5	N/A	N/A	1	1	1
Guodong Sun	5	N/A	N/A	N/A	0	0
Independent Non-Executive Directors						
Stephen Tso Tung Chang	5	5	N/A	N/A	1	1
Kwai Huen Wong, JP	5	N/A	1	1	1	1
Long Fei Ye	5	5	1	1	1	1

Note: Suxin Zhang attended the Board meeting on 11 November 2021 as a replacement Director of Jun Ye.

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 Article A.1.7 of the Code.

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

CORPORATE GOVERNANCE REPORT

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 A.6.5, 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 2021, 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 2021 is set out below:

Name of Director	Reading related rules and materials and/or attending training
Suxin Zhang (<i>Chairman</i>)	✓
Junjun Tang (<i>President</i>)	✓
Jun Ye	✓
Jing Wang	✓
Guodong Sun	✓
Stephen Tso Tung Chang	✓
Kwai Huen Wong, JP	✓
Long Fei Ye	✓

Remuneration Committee

The Remuneration Committee currently comprises one Non-Executive Director, Ms. Jing Wang, and two Independent Non-Executive Directors, Mr. Kwai Huen Wong, JP and Mr. Long Fei Ye. 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 Stock Exchange's website. The Remuneration Committee shall meet at least once a year.

On 8 September 2021, the Remuneration Committee considered and approved a resolution in writing in relation to the proposed amendment of terms of options and proposed revision of the share option scheme limit. These proposals were accepted by the Board and were approved at the Extraordinary General Meeting on 26 November in the same year. On 11 November 2021, the Remuneration Committee held a meeting with the Nomination Committee and discussed issues such as the Company's remuneration policy and the competitiveness of the Company's salary levels.

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

CORPORATE GOVERNANCE REPORT

Nomination Committee

The Nomination Committee currently comprises one Executive Director, Mr. Suxin Zhang, and two Independent Non-Executive Directors, Mr. Kwai Huen Wong, JP and Mr. Long Fei Ye. The Chairman of the Nomination Committee is Mr. Suxin Zhang. 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 Stock Exchange's website. The Nomination Committee shall meet at least once a year.

On 11 November 2021, the Remuneration Committee held a meeting with the Nomination Committee and discussed issues such as the Company's remuneration policy and the competitiveness of the Company's salary levels.

Pursuant to the articles of association of the Company (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.

Auditor's Remuneration

During the year ended 31 December 2021, 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\$0.68 million and US\$0.08 million, respectively. Details of significant non-audit related services include tax and risk management advisory services.

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, Mr. Jun Ye, and two Independent Non-Executive Directors, Mr. Stephen Tso Tung Chang and Mr. Long Fei Ye. 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 Stock Exchange's website. The Audit Committee shall meet at least twice a year.

During the year ended 31 December 2021, the Audit Committee held five 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 2021 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 2021, reviewing the audited financial statements and final results announcement for the year ended 31 December 2021, 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.

Summary of the Board Diversity Policy

The Board adopted a board diversity policy (the "Policy") in compliance with Code provision A.5.6.

The Policy aims to set out the approach to achieve diversity on the Board and does not apply to diversity in relation to the employees of the Company, nor the board or the employees of any subsidiary of the Company. 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 for 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 Company aims to maintain an appropriate balance of diversity perspectives of the Board that are relevant to the Company's business growth.

CORPORATE GOVERNANCE REPORT

During the year ended 31 December 2021, the Nomination Committee took the view that the measurable objectives were achieved to a large extent. It 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.

Corporate Governance Functions

The Board is responsible for performing the functions set out in provision D.3.1 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.

Investor Relations

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, Shareholder rights and communication policy, corporate governance practices, announcements, circulars and reports released to the Stock Exchange, and other information. Information on the Company's website www.huahonggrace.com will be updated from time to time.

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 apprised 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 2021, 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.

Shareholder Rights

The Company uses several formal channels to ensure fair disclosure and comprehensive and transparent reporting of its performance and activities. These include quarterly, interim and annual reports, announcements, and circulars.

The general meetings of the Company are a primary forum for communication between the Board and the Shareholders. The Company encourages its Shareholders to attend and participate in general meetings to ensure a high level of accountability and to keep Shareholders informed of Company strategy and goals. 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 the Shareholders.

CORPORATE GOVERNANCE REPORT

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

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.

CORPORATE GOVERNANCE REPORT

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.

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	<p>Business Departments</p> <ul style="list-style-type: none"> • 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; <p>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;</p>
2nd Line	<p>Business Supervision and Administration Departments</p> <ul style="list-style-type: none"> • Provide and supplement expertise, play a supportive and supervisory role, help continuously implement and improve the risk management work; <p>Analyze and report on the accuracy and effectiveness of risk management;</p>
3rd Line	<p>Internal Audit Level</p> <ul style="list-style-type: none"> • 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; <p>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;</p> <ul style="list-style-type: none"> • 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 every half year according to the approved auditing scope and in accordance with the provisions in C.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 recognize 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 2021, 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 197 to 204 of this annual report.

On behalf of the Board

Mr. Suxin Zhang

Chairman

DIRECTORS' REPORT

The Board presents the annual report of the Company for 2021 and the audited financial statements of the Company for the period from 1 January 2021 to 31 December 2021 (the "Financial Statements").

Principal Activities

The Company was a pure-play 200mm and 300mm-wafer foundry as at the end of 2021. We focus on providing wafer manufacturing services to our customers based on our own differentiated semiconductor technologies. The Company successfully completed our plans for technology development and 300 mm wafer mass production in 2020 and implemented the plan of accelerating capacity expansion for 300 mm production in 2021, to meet strong market demand. The activities of our principal subsidiaries are set out in note 1 to the Financial Statements (Page 213 to 214).

BUSINESS REVIEW

Revenue Analysis

Revenue of Hua Hong Semiconductor for 2021 was US\$1,630.8 million, representing a significant increase of 69.6% compared to the previous year. As at the end of 2021, the Company has been profitable for 44 consecutive quarters. This good performance was mainly due to the expansion of the Company's production capacity and strong market demand. In 2021, short supply in the semiconductor industry supply chain was due to many factors: a structural increment as a result of the domestic industrial expansion; increased demand related to remote connection arising out of the pandemic; preference for domestic production due to the relocation of supply chains; and more extensive application of Automotive Electronics, Renewable Energy Generation, National Integrated Big-data Center System, Internet of Things, and Smart Healthcare. These factors gave rise to increases in volume and price, contributing to rapid development of Hua Hong Semiconductor. In order to meet the huge and diverse market demand, the Company's 8-inch product portfolio was continuously optimized; production capacity of its 12-inch production line was continuously expanded; and the development of differentiated process technologies for the 12-inch production line was accelerated. In 2021, the Company's Embedded Memory, Discrete, and Logic & RF platforms achieved relatively high growth and will continue to create value for shareholders and markets in 2022.

	Revenue by Service					
	2021	2021	2020	2020	YoY	YoY
	US\$'000	%	US\$'000	%	Change US\$'000	Change %
Semiconductor wafers	1,561,846	95.8%	926,684	96.4%	635,162	68.5%
Others	68,908	4.2%	34,595	3.6%	34,313	99.2%
Total	1,630,754	100.0%	961,279	100.0%	669,475	69.6%

- In 2021, 95.8% of our revenue was generated from the sale of semiconductor wafers.

	Revenue by Customer					
	2021	2021	2020	2020	YoY	YoY
	US\$'000	%	US\$'000	%	Change US\$'000	Change %
Systems and fabless companies	1,496,782	91.8%	814,410	84.7%	682,372	83.8%
Integrated device manufacturers (IDMs)	133,972	8.2%	146,869	15.3%	(12,897)	(8.8)%
Total	1,630,754	100.0%	961,279	100.0%	669,475	69.6%

- Our revenue from systems and fabless companies accounted for 91.8%.

DIRECTORS' REPORT

Revenue by Geography

	2021	2021	2020	2020	YoY	YoY
	US\$'000	%	US\$'000	%	Change	Change
					US\$'000	%
China	1,205,149	73.9%	624,407	64.9%	580,742	93.0%
Other Asia	169,227	10.4%	121,885	12.7%	47,342	38.8%
North America	159,281	9.8%	121,642	12.7%	37,639	30.9%
Europe	70,627	4.3%	66,149	6.9%	4,478	6.8%
Japan	26,470	1.6%	27,196	2.8%	(726)	(2.7)%
Total	1,630,754	100.0%	961,279	100.0%	669,475	69.6%

- In 2021, China was our largest and fastest-growing market by revenue, with a year-on-year increase of 93.0% in revenue.

Revenue by Technology Type

	2021	2021	2020	2020	YoY	YoY
	US\$'000	%	US\$'000	%	Change	Change
					US\$'000	%
eNVM	459,104	28.2%	334,663	34.8%	124,441	37.2%
Standalone Non-Volatile Memory (NVM)	88,796	5.4%	11,711	1.2%	77,085	658.2%
Discrete	557,893	34.2%	353,019	36.8%	204,874	58.0%
Logic & RF	272,053	16.7%	124,952	13.0%	147,101	117.7%
Analog & Power Management (PM)	250,466	15.4%	135,581	14.1%	114,885	84.7%
Others	2,442	0.1%	1,353	0.1%	1,089	80.5%
Total	1,630,754	100.0%	961,279	100.0%	669,475	69.6%

- eNVM technology continued to grow in 2021, with continuous and outstanding growth in the results for MCU products.
- In 2021, there was a year-on-year increase of 58.0% in revenue from Discrete, which remained the Company's largest business segment.
- Revenue from Logic & RF technology platforms increased rapidly by 117.7%, mainly driven by the mass production of 12-inch CMOS image sensor (CIS) products.
- Revenue from Analog & PM increased by 84.7%, mainly attributable to the mass production of 12-inch technology platforms.

DIRECTORS' REPORT

Revenue by Technology Node

	2021	2021	2020	2020	YoY	YoY
	US\$'000	%	US\$'000	%	Change	Change
					US\$'000	%
55nm & 65nm	157,854	9.7%	6,692	0.7%	151,162	2,258.8%
90nm & 95nm	280,235	17.2%	100,315	10.4%	179,920	179.4%
0.11μm & 0.13μm	302,920	18.6%	229,965	24.0%	72,955	31.7%
0.15μm & 0.18μm	164,260	10.1%	141,317	14.7%	22,943	16.2%
0.25μm	22,926	1.4%	16,536	1.7%	6,390	38.6%
≥0.35μm	702,559	43.0%	466,454	48.5%	236,105	50.6%
Total	1,630,754	100.0%	961,279	100.0%	669,475	69.6%

- Revenue from 55nm & 65nm technology nodes increased sharply, primarily due to the contribution of Standalone NVM, CIS, and Logic & RF products.
- Revenue from 90nm & 95nm technology nodes increased rapidly, mainly due to the contribution of image sensors, smart card IC, MCU, and power management IC.
- Revenue from 0.35μm technology nodes increased by 50.6%, mainly due to the contribution of power discrete.

Revenue by End Market

	2021	2021	2020	2020	YoY	YoY
	US\$'000	%	US\$'000	%	Change	Change
					US\$'000	%
Consumer Electronics	1,039,325	63.7%	594,087	61.8%	445,238	74.9%
Industrial & Automotive Electronics	316,194	19.4%	203,890	21.2%	112,304	55.1%
Communications	218,946	13.4%	127,413	13.3%	91,533	71.8%
Computing	56,289	3.5%	35,889	3.7%	20,400	56.8%
Total	1,630,754	100.0%	961,279	100.0%	669,475	69.6%

- All end markets recorded strong growth in revenue in 2021.

DIRECTORS' REPORT

Capacity and Capacity Utilization			
Fab (In thousands of wafers per month)	2021	2020	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)	60	20	40
Capacity Utilization (8-inch wafer equivalent)	107.5%	92.7%	14.8%

- In 2021, capacity utilization (8-inch wafer equivalent) was 107.5%.

Wafer shipments			
In thousands of wafers	2021	2020	YoY Change
Wafer shipments (8-inch wafer equivalent)	3,328	2,191	51.9%

- In 2021, there was a year-on-year increase of 51.9% 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, Discrete, Analog and PM, and Logic & RF. It continues to provide customers with well-featured process technologies and services that meet market demand. In 2021, the “8-inch + 12-inch” strategic endeavour of Hua Hong Semiconductor was more complete, while the “IC + Power Discrete” strategy continued to be implemented in the 12-inch technology platforms.

The eNVM technology platforms remained one of the major revenue sources of Hua Hong Semiconductor in 2021, mainly for two applications: smart card IC and MCUs. With respect to smart card IC, 90nm embedded flash memory technology, with independently developed intellectual property rights, was successfully transferred to the 12-inch fab for production of smart card IC products. Competitiveness of this platform was maintained at a high level, with rapid growth in shipments. With respect to MCUs, double-digit growth in sales of embedded flash MCU continued in 2021 due to the addition of 12-inch capacity, contributing to double-digit growth CAGR in revenue and shipments from 2014 to 2021. Our industry-leading 0.11 μ m technology platform and 90nm low power and ultra-low leakage embedded flash memory technology platform, with independently developed intellectual property rights, were widely recognized by customers around the world. An increasing number of new products were launched on these platforms for general MCU, Type-C interface IC, touch controller, smart meter controller, highly reliable Automotive Electronics, etc. The 90nm embedded flash memory technology platform will also be further optimized to better meet demand in the MCU and smart card IC markets. Meanwhile, the 55nm high-speed MCU embedded flash memory technology platform, with independently developed intellectual property rights, was developed and mass produced. More diversified and detailed applications of the embedded flash memory technology platform help enhance competitiveness and provide customers with better differentiated technology services and capacity support.

DIRECTORS' REPORT

In 2021, the Company's power discrete device technology platform benefited from the explosive growth of new energy vehicles and supporting infrastructure markets, as well as the gradual improvement in the domestic substitution rate in home appliance, communication, and industrial markets. Our proprietary technology, which was in the development pipeline for years, earned fantastic returns. Insulated Gate Bipolar Transistor (IGBT) technology was the most eye-catching, with high growth for the last seven consecutive years. With optimization in terms of high current, high reliability, and small pitch size, the Company's IGBT technology showed competitive strength for electric vehicle inverters and charging piles. In addition, market demand for power devices accelerated due to the development of emerging markets, such as next generation communication, Internet of Things, and new energy promoted by the carbon peaking and carbon neutrality goals. Demand in these markets for energy conversion efficiency improvement boosted our domestic industry-leading development of Double-diffused Metal Oxide Semiconductor/Shielded Gate Trench (DMOS/SGT) technology with smaller pitch size and lower on-resistance. In the consumer field, compatibility of fast charging high-power supplies in mobile phones, laptops, etc. with USB Power Delivery (PD) stimulated the Company's development of Super Junction (SJ) Metal Oxide Semiconductor Field Effect Transistor (MOSFET) technology. The Company accumulated valuable experience in mass production and built a good reputation for the new-generation Deep-Trench technology. This technology was successfully applied to data center power supplies as well as on-board chargers (OBC) and charging piles for new energy vehicles. A new generation of IGBT technology has been successfully developed, and its mass-produced products have entered new energy markets, such as main inverters for new energy vehicles, photovoltaics, and wind energy. The Company's existing four main power discrete technologies (DMOS/SGT/SJ/IGBT) were upgraded from 8-inch to 12-inch and are now in mass production with stable supply. Shipments of IGBT and SJ made outstanding contributions to our financial results, strongly ensuring continuous high-speed growth of the discrete product line and satisfaction of market demand.

With the increasing variety and application scenarios of portable intelligent hardware and demand for increased performance of power management IC, Hua Hong Semiconductor's Analog and PM technology platform developed more rapidly with wider technology portfolios and a larger customer base. In 2021, shipments from the BCD technology platform showed triple-digit growth, including low-medium, high and ultra-high voltage products. For application in analog power ICs and motor drivers, the Company developed a new-generation 8-inch 0.18 μ m BCD process technology platform, with rapid production ramp-up and performance metrics at the most advanced level of the industry. The 12-inch 90nm BCD platform, with better electrical performance, was developed and launched for digital power, digital audio power amplifier, and other IC devices. For ultra-high voltage products, 600-700V BCD technology platforms were developed for lighting control, industrial applications, and household motor drivers. Due to domestic demand and the improvement and maturity of this technology, growth of the 600V BCD technology platform was the most significant.

In addition to the above main technology platforms, Hua Hong Semiconductor continued to expand into new differentiated technology fields. With greater demands on the performance of semiconductor products for smartphones, wearable hardware, Automotive Electronics, etc., the Company continuously strengthened research and development of the radio frequency, standalone memory, image sensor, and other technology platforms, which paid off in 2021. In terms of patents, it applied for 618 patents throughout the year and was granted a total of over 3,800 Chinese and U.S. invention patents. The Company is committed to providing customers with a rich selection of technology platforms and extensive IP support.

While innovating and optimizing existing 8-inch technology, the Company also cooperated with the Government of Wuxi, Jiangsu to establish Hua Hong Wuxi as an important step for Hua Hong Semiconductor's development of its business outside Shanghai and to integrate into and serve the Yangtze River Delta integration strategy. Through efforts in 2021, Phase I production capacity rapidly increased to 60,000 wafers per month; the number of products increased rapidly; the number of talented employees gradually expanded; and the established phased R&D and capacity targets were achieved. This was the most important growth engine for the Company's results in 2021. Excellent performance of the Wuxi project in 2021 fully achieved the strategic positioning of "8-inch + 12-inch" and laid a foundation for further capacity expansion in 2022. The Company will more powerfully meet market demand in the future.

DIRECTORS' REPORT

Outlook

Looking forward to 2022, the global economy is expected to progress while maintaining stability. According to the latest World Economic Outlook released by the International Monetary Fund (IMF), the global gross domestic product (GDP) growth rate is expected to be 4.4% in 2022 and China's GDP is expected to grow 4.8%. Due to emerging markets, including new generation communication, new energy generation, and new energy vehicles, the semiconductor content of end-user applications is increasing and global demand for semiconductor components will remain strong. However, due to limited global production capacity, strained supply is expected to dominate the global semiconductor market in 2022. Benefiting from active pandemic control in China, the local supply chain has gained a good operating environment and market momentum, providing high-quality products to the world with more stability. The Company's performance in the new year will also be more robust.

In 2022, Hua Hong Wuxi's 12-inch production capacity will continue to be expanded. More diversified and advanced differentiated technology will continue to be the growth engine for the results of the Company. As the strained supply of semiconductor components in the world is expected to persist, the Company will fully implement its "8-inch + 12-inch" strategy to increase production capacity, further accelerating optimization of the existing 8-inch platform and capacity expansion of the 12-inch platform to meet market demand. All fabs of the Company are IATF16949 compliant and will continuously improve their Automotive Electronics product lines in 2022 to seize the market opportunity of great demand in the domestic automotive semiconductor component supply chain. In terms of technology research and development, the Company is actively promoting research and development of 40nm basic logic RF technology and advancing early-stage research and development of 40nm eFlash technology, based on mass production of the 55nm eFlash technology platform. The more outstanding performance and power consumption indicators of 40nm eFlash technology will make the eFlash platform more competitive for MCU market applications. In the field of power discrete, with the improvement and optimization of the 12-inch SJ and IGBT technology platform, supporting facilities in the industry have become more mature and performance growth has become more stable. Research, development, and implementation of new generation technologies will strengthen the product competitiveness of our customers and address more end markets. In terms of PMIC, the 12-inch 90nm BCD platform is yielding good results. With the increasing number of customers for mass production and faster capacity expansion, PMIC will be more and more capable of contributing to growth. In terms of other platforms, the 12-inch production platform enhances the Company's development path to smaller nodes, and we will continuously upgrade our differentiated technologies to more advanced nodes.

2022 will be a year of both challenges and opportunities. The Company will unswervingly focus on promoting our differentiation strategy. The "IC+ Power Discrete" product strategy with support of the "8-inch +12-inch" production platforms will meet the needs of global market development. Hua Hong Semiconductor will maintain its position as a wafer foundry enterprise with specialty technology, which is deeply trusted by its customers and highly worthy of investment.

DIRECTORS' REPORT

MANAGEMENT DISCUSSION AND ANALYSIS

FINANCIAL PERFORMANCE

	2021 US\$'000	2020 US\$'000	Change
Revenue	1,630,754	961,279	69.6%
Cost of sales	(1,179,156)	(726,486)	62.3%
Gross profit	451,598	234,793	92.3%
Other income and gains	60,758	57,313	6.0%
Fair value gain on an investment property	183	198	(7.6)%
Selling and distribution expenses	(10,673)	(8,169)	30.7%
Administrative expenses	(198,920)	(261,139)	(23.8)%
Other expenses	(165)	(10)	1,550.0%
Finance costs	(13,226)	(2,968)	345.6%
Share of profit of associates	6,765	26,059	(74.0)%
Profit before tax	296,320	46,077	543.1%
Income tax expense	(65,349)	(12,762)	412.1%
Profit for the year	230,971	33,315	593.3%
Attributable to:			
Owners of the parent	261,476	99,443	162.9%
Non-controlling interests	(30,505)	(66,128)	(53.9)%

Revenue

Revenue was US\$1,630.8 million, an all-time high and an increase of 69.6% over the prior year, due to increased wafer shipments and improved average selling price.

Cost of sales

Cost of sales was US\$1,179.2 million, 62.3% over 2020, primarily due to increased wafer shipments and increased depreciation costs.

Gross profit

Gross profit was US\$451.6 million, an increase of 92.3% compared to 2020, mainly due to improved average selling price, capacity utilization, and product mix, partially offset by increased depreciation expenses.

DIRECTORS' REPORT

Other income and gains

Other income and gains was US\$60.8 million, an increase of 6.0% compared to 2020, primarily due to increased foreign exchange gains.

Selling and distribution expenses

Selling and distribution expenses were US\$10.7 million, an increase of 30.7% from 2020, primarily due to increased labor expenses.

Administrative expenses

Administrative expenses were US\$198.9 million, a decrease of 23.8% from 2020, largely due to decreased research and development expenses, and increased government grants for research and development.

Other expenses

Other expenses were US\$0.2 million, compared to US\$0.01 million in 2020.

Finance costs

Finance costs were US\$13.2 million, an increase of 345.6% from 2020, primarily due to increased bank borrowings.

Share of profit of associates

Share of profit of associates was US\$6.8 million, a decrease of 74.0% from 2020, due to decreased profit realized by the associates.

Income tax expense

Income tax expense was US\$65.3 million, an increase of 412.1% compared to 2020, primarily due to increased taxable profit.

Profit for the year

As a result of the cumulative effect of the above factors, profit for the year increased to US\$231.0 million, from US\$33.3 million in 2020. Net profit margin was 14.2%, compared to 3.5% in 2020.

DIRECTORS' REPORT

FINANCIAL STATUS

	31 December 2021 US\$'000	31 December 2020 US\$'000	Change
Non-current assets			
Property, plant and equipment	3,116,501	2,510,442	24.1%
Investment property	184,883	180,476	(4.9)%
Right-of-use assets	75,331	79,221	2.4%
Investments in associates	122,040	105,218	16.0%
Equity instruments designated at fair value through other comprehensive income	257,788	230,265	12.0%
Other non-current assets	54,364	56,706	(4.1)%
Total non-current assets	3,810,907	3,162,328	20.5%
Current assets			
Inventories	432,917	226,476	91.2%
Trade and notes receivables	181,042	120,952	49.7%
Due from related parties	6,910	4,706	46.8%
Other current assets	157,935	130,979	20.6%
Restricted and time deposits	2,248	359	526.2%
Cash and cash equivalents	1,610,140	922,786	74.5%
Total current assets	2,391,192	1,406,258	70.0%
Current liabilities			
Trade payables	194,385	130,980	48.4%
Interest-bearing bank borrowings	195,024	47,784	308.1%
Due to related parties	7,501	12,647	(40.7)%
Government grants	66,837	58,926	13.4%
Other current liabilities	616,654	414,711	48.7%
Total current liabilities	1,080,401	665,048	62.5%
Net current assets	1,310,791	741,210	76.8%
Non-current liabilities			
Interest-bearing bank borrowings	1,395,279	518,391	169.2%
Lease liabilities	16,137	17,405	(7.3)%
Deferred tax liabilities	25,735	13,621	88.9%
Total non-current liabilities	1,437,151	549,417	161.6%
Net assets	3,684,547	3,354,121	9.9%

DIRECTORS' REPORT

Explanation of items with fluctuation over 10% from 31 December 2020 to 31 December 2021

Property, plant and equipment

Property, plant and equipment increased from US\$2,510.4 million to US\$3,116.5 million, mainly as a result of the capacity expansion of Hua Hong Wuxi.

Investments in associates

Investments in associates increased from US\$105.2 million to US\$122.0 million, primarily due to increased investment in an associate and profit shared from the associates.

Equity instruments designated at fair value through other comprehensive income

Equity instruments designated at fair value through other comprehensive income increased from US\$230.3 million to US\$257.8 million, primarily due to increase of fair value and a purchase of equity instruments.

Inventories

Inventories increased from US\$226.5 million to US\$432.9 million, primarily due to increased customer demand.

Trade and notes receivables

Trade and notes receivables increased from US\$121.0 million to US\$181.0 million, mainly due to increased revenue.

Due from related parties

Due from related parties increased from US\$4.7 million to US\$6.9 million, primarily due to increased receivables from one of our related parties.

Other current assets

Other current assets increased from US\$131.0 million to US\$157.9 million, primarily due to increased prepayments.

Restricted and time deposits

Restricted and time deposits increased from US\$0.4 million to US\$2.2 million, primarily due to increased pledged deposits.

Cash and cash equivalents

Cash and cash equivalents increased from US\$922.8 million to US\$1,610.1 million, mainly due to reasons stated in the cash flow analysis below.

Trade payables

Trade payables increased from US\$131.0 million to US\$194.4 million, primarily due to increased purchase of materials.

Due to related parties

Due to related parties decreased from US\$12.6 million to US\$7.5 million, primarily due to recognition of rental income from one of our related parties.

Government grants

Government grants increased from US\$58.9 million to US\$66.8 million, primarily due to increased receipts of government grants.

DIRECTORS' REPORT

Other current liabilities

Other current liabilities increased from US\$414.7 million to US\$616.7 million, primarily due to increased advances from customers, income tax payables, and payroll payables.

Interest-bearing bank borrowings

Total interest-bearing bank borrowings increased from US\$566.2 million to US\$1,590.3 million, due to drawdowns of bank borrowings.

Deferred tax liabilities

Deferred tax liabilities increased from US\$13.6 million to US\$25.7 million, primarily due to increased withholding tax accrued for dividend distribution.

CASH FLOW

	2021 US\$'000	2020 US\$'000	Change
Net cash flows generated from operating activities	518,471	269,110	92.7%
Net cash flows used in investing activities	(863,059)	(405,661)	112.8%
Net cash flows generated from financing activities	1,014,640	540,427	87.7%
Net increase in cash and cash equivalents	670,052	403,876	65.9%
Cash and cash equivalents at the beginning of the year	922,786	476,286	93.7%
Effect of foreign exchange rate changes, net	17,302	42,624	(59.4)%
Cash and cash equivalents at the end of the year	1,610,140	922,786	74.5%

Net cash flows generated from operating activities

Net cash flows generated from operating activities were US\$518.5 million, an increase of 92.7% from 2020, mainly due to increased revenue, partially offset by (i) increased payments for materials and labor costs, and (ii) decreased receipts of the VAT return.

Net cash flows used in investing activities

Net cash flows used in investing activities were US\$863.1 million, primarily attributed to (i) US\$938.9 million for capital investments, (ii) US\$7.4 million for investment in an associate, and (iii) US\$6.3 million of investment in an equity instrument, offset by (i) receipts of US\$83.6 million of government grants, and (ii) US\$5.9 million of interest income.

Net cash flows generated from financing activities

Net cash flows generated from financing activities were US\$1,014.6 million, including (i) US\$1,070.8 million of proceeds from bank borrowings, and (ii) US\$7.4 million of proceeds from issue of shares, offset by (i) US\$47.9 million of repayments of bank borrowings, (ii) US\$11.7 million of interest payments, and (iii) US\$4.0 million payment of principal portion of lease payments.

Net increase in cash and cash equivalents

As a result of the cumulative effect of the above factors, cash and cash equivalents increased from US\$922.8 million as at 31 December 2020 to US\$1,610.1 million as at 31 December 2021.

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 variable rate debts.

As at 31 December 2021, 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\$7.8 million 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 significant subsidiaries operating in Mainland China in US\$ rather than the subsidiary's functional currency, which is RMB. As at 31 December 2021, if the US dollar had strengthened or weakened against the RMB by five percent, with all other variables held constant, our profit before tax for the year would have been approximately US\$48.2 million lower or higher.

Credit risk

We trade only with recognized 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 restricted and time 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 2021 and the state of affairs as at that date are set out in the Financial Statements on pages 205 to 208 of this report.

Final Dividends

In view of the Company's "8-inch + 12-inch" strategy and the uncertainty in the impact of various factors on the global economy, such as the COVID-19 pandemic, the Company is maintaining a stable, prudent, and responsible policy for our shareholders. Based on the requirements for a sustainable operation and long-term development, the Board does not recommend payment of a dividend for the year ended 31 December 2021 (2020: Nil). The Company will retain sufficient cash to continue its investment activities, in order to maximize benefits for our shareholders.

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.

DIRECTORS' REPORT

Distributable Reserves

As at 31 December 2021, the Company had no distributable reserves available for distribution to our shareholders.

Bank Loans

The particulars of bank loans of the Group as at 31 December 2021 are set out in note 26 to the Financial Statements.

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 324. 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 2021 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

There is no significant subsequent event undertaken by the Group after 31 December 2021.

DIRECTORS' REPORT

Share Capital and Share Option Scheme

Details of movement in the share capital of the Company during the year ended 31 December 2021 are set out in note 30 to the Financial Statements. 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.

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 in a general meeting. No Share Option shall be granted to any person who holds over 5% of Shares which carry voting rights on the Grant Date (as defined in the Share Option Scheme), unless such grant is approved by shareholders in 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 offer.
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 and will expire on 1 September 2022.

As at the date of this report, the total number of shares available for issue under the Share Option Scheme is 29,109,435 shares, representing approximately 2.24% of the total number of shares in issue.

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 up to 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 2.32% of the issued shares of the Company as at 31 December 2021).
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 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 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 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 up to 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 2.65% of the issued shares of the Company as at 31 December 2021)
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

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 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 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 Stock Exchange on the day immediately before the grant date; and (iv) the nominal value of the share.

DIRECTORS' REPORT

On 29 March 2019, the Company granted 500,000 share options (the "March 2019 Options") to subscribe for up to 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 0.04% of the issued shares of the Company as at 31 December 2021)
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, 29 March 2022, 29 March 2023, and 29 March 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 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 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 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 up to 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 0.19% of the issued shares of the Company as at 31 December 2021)
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

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 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 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 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.

DIRECTORS' REPORT

Details of the movements in the share options during the year ended 31 December 2021 are as follows:

Number of share options	Name or category of participants				In aggregate
	Directors	Other employees			
	Mr. Junjun Tang				
Granted at 4 September 2015	–	29,262,000	–	–	30,250,000
Granted at 24 December 2018	–	–	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 during the year 2015	–	–130,000	–	–	–130,000
Cancelled during the year 2016	–	–1,458,000	–	–	–1,458,000
Cancelled during the year 2017	–	–1,353,399	–	–	–1,353,399
Cancelled during the year 2018	–	–754,595	–	–	–754,595
Cancelled during the year 2019	–	–58,000	–1,035,000	–36,000	–1,729,000
Cancelled during the year 2020	–	–	–993,904	–84,000	–1,276,904
Exercised during the period	–	1,196,999	2,155,146	24167	3,376,312
Cancelled during the period	–62,500	–	–5,751,868	–592,993	–6,407,361
Outstanding at 1 January 2021	500,000	5,935,331	30,688,079	2,362,000	39,485,410
Outstanding at 31 December 2021	437,500	4,738,332	22,781,065	1,744,840	29,701,737
Exercise period of share options	Note 1	Note 2	Note 3	Note 4	
Exercise price of share options	HK\$18.400	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\$47.4466	HK\$47.2747	HK\$41.6917	

Note 1 The exercise period of share options is from 29 March 2021 to 28 March 2026

Note 2 The exercise period of share options is from 4 September 2017 to 3 September 2022

Note 3 The exercise period of share options is from 24 December 2020 to 23 December 2025

Note 4 The exercise period of share options is from 23 December 2021 to 22 December 2026

Save as disclosed above, the Company has not adopted any other share option scheme during the year ended 31 December 2021.

Reserves

Details of movements in the reserves of the Group during the year ended 31 December 2021 are set out in the consolidated statement of changes in equity on pages 209 to 210 of this report.

DIRECTORS' REPORT

Continuing Connected Transactions and Connected Transactions

Continuing Connected Transactions

The Group disclosed in the prospectus dated 3 October 2014 the continuing connected transactions with Huahong Zealcore, QST, INESA, Shanghai Huali, 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 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 2021 are as follows:

Transaction	Transaction Date	Parties to the Transaction	Connected Relationship	Transaction	Actual Transaction Amount 2021	Proposed Annual Caps 2021
(1)	1 January 2017	Huahong Zealcore (as purchaser) The Company (as seller)	Huahong Zealcore is 93.02% held by and a subsidiary of Huahong Group, the Company's substantial shareholder.	Sales agreement between the Company (as seller) and Huahong Zealcore (as purchaser) in relation to the sale of IC and other semiconductor products to Huahong Zealcore.	US\$6,404,000	US\$6,500,000
(2)	13 January 2021 ⁽¹⁾	Hongri (as purchaser) The Company (as seller)	Hongri is 51% held by and a subsidiary of Huahong Group, the Company's substantial shareholder.	Sales agreement between the Company (as seller) and Hongri (as purchaser) in relation to the sale of IC and other semiconductor products to Hongri.	US\$3,376,000	US\$3,882,000
(3)	11 January 2021 ⁽¹⁾	ICRD (as purchaser) The Company (as seller)	ICRD is 29.94% held by and a subsidiary of Huahong Group, the Company's substantial shareholder.	Sales agreement between the Company (as seller) and ICRD (as purchaser) in relation to the sale of wafers to ICRD.	US\$8,742,000	see note (2)
(4)	21 January 2021 ⁽¹⁾	SITRI (as purchaser) The Company (as seller)	SITRI is 80% held by and a subsidiary of SAIL, the Company's substantial shareholder.	Sales agreement between the Company (as seller) and SITRI (as purchaser) in relation to the sale of wafers and other semiconductor products to SITRI.	US\$1,224,000	see note (2)
(5)	6 January 2021 ⁽¹⁾	Huahong Zealcore (as seller) The Company (as purchaser)	Huahong Zealcore is 90.66% held by and a subsidiary of Huahong Group, the Company's substantial shareholder.	Purchase agreement between Huahong Zealcore (as seller) and the Company (as purchaser) in relation to the purchase of materials used in the manufacturing process of the Group's semiconductor products.	US\$668,000	US\$1,060,000
(6)	1 February 2021 ⁽¹⁾	Hongri (as seller) The Company (as purchaser)	Hongri is 51% held by and a subsidiary of Huahong Group, the Company's substantial shareholder.	Purchase agreement between Hongri (as seller) and the Company (as purchaser) in relation to the purchase of wafers used in the manufacturing process of the Group's semiconductor products.	US\$18,247,000	US\$38,000,000

DIRECTORS' REPORT

Transaction	Transaction Date	Parties to the Transaction	Connected Relationship	Transaction	Actual Transaction Amount 2021	Proposed Annual Caps 2021
(7)	25 February 2010 (together with the supplemental agreements dated 10 June 2011 and 25 July 2014)	Shanghai Huali (as lessee) The Company (as lessor)	Shanghai Huali is 53.79% owned by Huahong Group, the Company's controlling shareholder.	Lease agreement between Shanghai Huali (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 Shanghai Huali for their 300mm wafer production line. The total gross floor area leased was 96,099.2 square meters.	RMB93,547,000 (approx. US\$14,497,000)	RMB102,000,000 (approx. US\$15,813,000)
(8)	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, our controlling shareholder, and 50% held by HHGrace, a wholly-owned subsidiary of our 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\$1,783,000) ⁽³⁾	RMB12,000,000 (approx. US\$1,860,000)
(9)	1 January 2020 ⁽⁴⁾	Huajin Property Management (as property manager) The Company (as contractor)	Huajin Property Management is a wholly-owned subsidiary of Huahong Technology Development, a company 50% held by and consolidated with Huahong Group, our controlling shareholder, and 50% held by HHGrace, a wholly-owned subsidiary of our Company.	Property management agreement between Huajin Property Management (as property manager) and the Company (as contractor) in relation to the engagement of Huajin Property Management by the Group to provide property management services for the Dormitory Premises.	RMB2,179,000 (approx. US\$338,000)	RMB4,000,000 (approx. US\$620,000)

Notes:

- (1) Represents the date of the first sales or purchase order (as the case may be) in the year of 2021.
- (2) No annual caps were set for these continuing connected transactions during the year of 2021. Please refer to the announcement of the Company dated 2 March 2022 for details.
- (3) 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\$1,783,000 per year. As at 31 December 2021, the balances of those right-of-use assets and lease liabilities were US\$14,573,000 and US\$17,225,000, respectively.
- (4) On 31 December 2020, the Group entered into a management agreement with Huajin Property Management ("2021 Huajin Management Agreement"), pursuant to which Huajin Property Management will continue to provide property management services for the Dormitory Premises for a term of two years from 1 January 2021 to 31 December 2022, subject to an annual cap of RMB4,000,000 for each of the years ending 31 December 2021 and 31 December 2022, respectively. Details of the 2021 Huajin Management Agreement were set out in the announcement of the Company dated 31 December 2020.

DIRECTORS' REPORT

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 2021:

- (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 entered into in 2021:

Unqualified Conclusion

- (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 of directors;
- (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 Group;
- (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.

Qualified Conclusion

With respect to the aggregate amount of each of the continuing connected transactions, based on the procedures performed and the evidence obtained, except for the transactions described in note (2) above which have no annual caps, nothing has come to their attention that causes the auditors to believe that the disclosed continuing connected transactions have exceeded the annual cap as set by the Company.

Related Party Transactions

During the year ended 31 December 2021, 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 2021 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.

DIRECTORS' REPORT

Performance of the Equity Investments

The table below sets out the breakdown of the performance with respect to the Equity Investments during the year ended 31 December 2021.

	Shanghai Huali (USD'000)	QST (USD'000)	Shanghai Awinic (USD'000)
Initial investment cost	229,133	1,704	6,290
Book value at the beginning of the year	227,757	2,508	–
Purchases	–	–	6,290
Changes in fair value	8,152	(331)	7,743
Exchange realignment	5,332	59	277
Book value at the end of the year	241,242	2,236	14,310
Dividends received	–	–	–
Gain on disposals	–	–	–
Subscribed capital contribution/ number of shares held	RMB1,400,000,000	10,377,050	528,000
Percentage of equity interest held	6.3428%	0.6220%	0.32%
Size compared to the total assets of the Company	3.9%	0.0%	0.2%

During the year ended 31 December 2021, the Group did not dispose of any equity interest in Shanghai Huali, QST or Shanghai Awinic. Change in the fair value of the Company's equity investment in Shanghai Huali, QST, and Shanghai Awinic were US\$8,152,000, minus \$331,000, and US\$7,743,000 respectively.

Shanghai Huali was established in 2010. As an industry-leading IC wafer foundry company, Shanghai Huali has advanced process technologies and offers comprehensive solutions. It is devoted to providing one-stop wafer foundry technical services for process technology nodes from 65/55nm to 28/22nm for design companies, IDM companies, and other system companies. Shanghai Huali has two 12-inch fully-automated wafer fabs in China.

During the financial year of 2021, the book value of the Company's equity investment in Shanghai Huali increased by US\$13,484,000, including an increase of US\$8,152,000 in the fair value and a foreign currency statement gain of around US\$5,332,000. Accordingly, the Board is of the view that the performance of Shanghai Huali during the financial year of 2021 has been in line with its expectations.

DIRECTORS' REPORT

QST was founded in September 2012 and has a robust IP portfolio, with over 83 patents issued. QST is a leading sensor platform company engaged in the development and marketing of Innovative MEMS sensors and solutions to simplify advanced perception, measurement, and control in consumer, automotive, and industrial applications.

During the financial year of 2021, the book value of the Company's equity investment in QST decreased by US\$272,000, including a decrease of US\$331,000 in the fair value and a foreign currency statement gain of around US\$59,000. As the business of QST is still in its early development stage, the Board is of the view that the performance and strategic planning of QST during 2021 have been consistent with its expectations.

Shanghai Awinic, founded in June 2008, is a high-tech company focusing on high-quality and high-performance IC design of mixed signal, analog, and RF for mobile phone, AI, Internet of Things, automotive electronics, wearables, and consumer electronics. Shanghai Awinic is a listed company on the STAR Market of the Shanghai Stock Exchange.

During the financial year of 2021, the Company purchased 0.32% shares of Shanghai Awinic. The fair value increased by US\$7,743,000 and there was a foreign currency statement gain of around US\$277,000. The Board considers this as part of a long-term strategic investment, which will see the Group and Shanghai Awinic collaborate in areas such as development of Analog, BCD (including 12-inch 90nm), eFlash, Power Device, RF and IC technologies, and expansion of production capacity, with a view to providing more competitive products with higher performance and quality to customers. The Board is of the view that the performance of Shanghai Awinic during the financial year of 2021 has been in line with its expectation.

The Company confirms that it has complied with the accounting policy of investments and other financial assets (policies under HKFRS 9, applicable since 1 January 2018) as contained in the annual report of the Company for the year ended 31 December 2021.

The Company expects the future prospects of the aforementioned investments to be largely in line with that over the past year. No significant changes in investment strategy or source of funding are expected for the coming year.

Annual General Meeting

The AGM will be held on Thursday, 12 May 2022.

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 5 May 2022
Closure of register of members	6 May to 12 May 2022 (both dates inclusive)
Record date	12 May 2022

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 Level 54, Hopewell Centre, 183 Queen's Road East, 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 up to the date of this report were:

Executive Directors:

Mr. Suxin Zhang (*Chairman*)

Mr. Junjun Tang (*President*)

Non-Executive Directors:

Mr. Guodong Sun

Ms. Jing Wang

Mr. Jun Ye

Independent Non-Executive Directors:

Mr. Stephen Tso Tung Chang

Mr. Kwai Huen Wong, JP

Mr. Long Fei Ye

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 previously terminated in accordance with the terms and conditions of the relevant letter of appointment or director's service contract.

Mr. Junjun Tang, Ms. Jing Wang and Mr. Kwai Huen Wong will retire by rotation from office as Directors at the Annual General Meeting, and Mr. Junjun Tang, Ms. Jing Wang and Mr. Kwai Huen Wong, being eligible, will offer themselves for re-election pursuant to the articles of association of the Company.

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 in accordance with Rule 3.13 of the Listing Rules. The Company considers that all the 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.

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 notes 8 and 9 to the consolidated financial statements in this annual report, respectively.

DIRECTORS' REPORT

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

As at 31 December 2021, save as disclosed below, none of the Directors nor 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 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	500,000	0.04%

Note:

(1) Long position in the underlying shares of the Company under share options granted pursuant to the Share Option Scheme.

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 2021 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 2021.

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.

DIRECTORS' REPORT

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 2021, or during the period from the end of the year 2020 to the date of this report, were as follows:

Name of the Subsidiary	Place of Incorporation	Name of the Director(s)
Grace Semiconductor Manufacturing Corporation ("Grace Cayman")	Cayman Islands	Mr. Suxin Zhang Mr. Jun Ye
Shanghai Huahong Grace Semiconductor Manufacturing Corporation ("HHGrace")	Shanghai, PRC	Mr. Suxin Zhang Mr. Junjun Tang Ms. Jing Wang Mr. Yuchuan Ma Mr. Takayuki Morita Mr. Jun Ye Mr. Stephen Tso Tung Chang Mr. Kwai Huen Wong, JP Mr. Long Fei Ye
Hua Hong Semiconductor (Wuxi) Limited ("Hua Hong Wuxi")	Wuxi, PRC	Mr. Suxin Zhang Mr. Jun Wei Mr. Junjun Tang Mr. Guodong Sun Ms. Jing Wang Mr. Xiaoming Zhu Mr. Xin Jin
Huahong Real Estate (Wuxi) Co., Ltd. ("Huahong Real Estate Wuxi")	Wuxi, PRC	Mr. Weiping Zhou
Global Synergy Technology Limited	Hong Kong, PRC	Mr. Daniel Yu-Cheng Wang Mr. Cheng Fu
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

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

As at 31 December 2021, 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	350,401,100 ⁽¹⁾	26.93%
Huahong Group ⁽²⁾	Interest in a controlled corporation	350,401,100 ⁽¹⁾	26.93%
Sino-Alliance International, Ltd. ("Sino-Alliance International")	Legal and beneficial owner	160,545,541 ⁽¹⁾⁽³⁾	12.34%
Sino-Alliance International	Interest in a controlled corporation	28,415,606 ⁽¹⁾	2.18%
SAIL	Interest in a controlled corporation	188,961,147 ⁽¹⁾⁽⁴⁾	14.52%
Xinxin (Hong Kong) Capital Co., Limited	Legal and beneficial owner	178,705,925 ⁽¹⁾	13.73%
Xun Xin (Shanghai) Investment Co., Ltd.	Interest in a controlled corporation	178,705,925 ⁽¹⁾	13.73%
China IC Fund	Interest in a controlled corporation	178,705,925 ⁽¹⁾	13.73%

Notes:

- (1) Long positions in the shares of the Company.
- (2) Hua Hong International is a wholly-owned subsidiary of Huahong Group.
- (3) Including 3,084 shares held in escrow by Sino-Alliance International pursuant to an escrow arrangement.
- (4) 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 2021, i.e., 1,301,191,585 shares.

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 2021, 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.

DIRECTORS' REPORT

Arrangements to Purchase Shares or Debentures

At no time during the year ended 31 December 2021 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

For the year ended 31 December 2021, the purchases attributable to the Group's five largest suppliers combined were less than 30% of total purchases, and the turnover attributable to the Group's five largest customers combined was less than 30% of total turnover.

Emolument Policy

As at 31 December 2021, the Group had a total of 6,084 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 2021.

Purchase, Sale or Redemption of Securities

For the year ended 31 December 2021, 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 Company's articles of association, or the laws of Hong Kong, which would oblige the Company to offer new shares on a pro-rata basis to existing shareholders.

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 material respects with the relevant laws and regulations that have a significant impact on the business and operation of the Company.

DIRECTORS' REPORT

Environmental and Social Responsibilities

Environmental, social, and governance factors have been deeply integrated into the Company's strategy, management, and long-term development goal, and have been involved in the entire process of our business operations. The Company firmly believes that the effective management of environmental, social, and governance initiatives, which mutually influence each other, can promote the long-term development of our business and help create and share value for all stakeholders. Detailed information on the environmental, social, and governance practices adopted by the Company in 2021 is set out in the 2021 Environmental, Social, and Governance Report.

The Company is committed to reducing the negative impact of its operations on the environment through green products and green production, thereby providing customers with more environment-friendly products. In active response to the Chinese government's "Dual Carbon" goal, the Company continued to increase investment in and implementation of energy conservation and emission reduction, and set emission reduction targets with respect to energy use to strengthen its ability to address climate change risk. In 2021, the Company invested a total of approximately RMB10.08 million to improve energy conservation and emission reduction technologies, and its customers achieved 100% compliance with hazardous substances control. All manufacturing processes of the Company have been verified as meeting the standards and requirements of QC 080000 hazardous substance process management system. In the meantime, the low-energy consumption products developed by the Company are widely applied in clean energy sector, and new light sources, such as LED, to assist other industries in energy conservation and efficient utilization, jointly promoting the realization of environmental protection goals.

In addition, as a responsible corporate citizen, the Company is committed to promoting the construction of a sustainable value chain, strengthening the management of suppliers' conflict minerals, and building up a harmonious industrial ecosystem. During the outbreak of COVID-19 in 2021, the Company has made full effort to protect the safety and health of employees and to guarantee stable and orderly production. We've also contributed to the anti-pandemic activities with practical actions through various community voluntary services.

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

Huahong Group, SAIL, and INESA, 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 2021. 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.

Auditors

A resolution will be submitted at the AGM to re-appoint Ernst & Young as auditors of the Company.

On behalf of the Board

Mr. Suxin Zhang

Chairman

29 March 2022

2021 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

DIRECTORS' DECLARATION

The sustainable development of the Group is driven by our achievements in economic, environmental, and social aspects, which mutually influence and support each other, enabling long-term, sustainable performance. We strictly comply with all local applicable laws and meet social expectations in our operations, and we align our standards for environmental protection to those of the leaders in international industry. We devote ourselves to sustainable cities and communities. In following our corporate vision of Continuous Innovation and Empowering the Future for Global Customers, we actively respond to stakeholders, including customers, employees, investors, communities, and countries where we operate, toward the goal of sustainable development of enterprises and society.

The Group has a top-down environmental, social and corporate governance (ESG) structure, under which the Board undertakes the ESG responsibilities:

- a) to direct and review the ESG management policies and strategies of Hua Hong Semiconductor, and ensure that they are up to date, relevant and in compliance with applicable legal and regulatory requirements;
- b) to direct the identification and prioritization of significant ESG issues of Hua Hong Semiconductor;
- c) to supervise the setting and implementation of ESG goals of Hua Hong Semiconductor, including: setting ESG management performance goals of Hua Hong Semiconductor; monitoring the progress in achieving the goals and advising on actions required to achieve the goals;
- d) to review and approve the Company's annual Environmental, Social, and Governance Report and other ESG related disclosures.

The management and practical progress in relation to ESG issues in the Report were considered and approved at the second meeting of the Board of Directors for 2022, held in March 2022.

2021 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

1 Social Responsibility Management System

1.1 Social Responsibility Management Policy

We believe fulfillment of corporate social responsibility first requires pro-active adherence to and implementation of the highest international standards of business and social ethics, while creating value for and sharing value with all Stakeholders. To this end, in addition to compliance with all laws, regulations, and rules of the state in terms of operation, we also incorporate environmental and social responsibilities directly into our business strategies and operations. We take a prudent approach to manage our environmental and social risks by perfecting our management system, improving supply chain performance, and reducing resource consumption and environmental emissions. We encourage innovation-driven development and foster innovative talents, thereby promoting social harmony.

Through years of efforts, Hua Hong Semiconductor has fully implemented the requirements of the latest ESG Guide of the Hong Kong Stock Exchange and achieved sound management of its social responsibilities. Under the leadership of the Board of Directors, we incorporate them into the Company's daily operations, set ESG goals, and take actions, to continuously improve the Company's performance in meeting our social responsibilities.

Provided by the Board of Directors as the CSR Decision Maker, the following four aspects summarize the social responsibility of the corporate vision, Continuous Innovation and Empowering the Future for Global Customers.



Implementation Concentration of CSR Planning for Hua Hong Semiconductor Limited

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According to the development of its business and its ESG performance in operation, the Company has set goals for water use efficiency, energy use efficiency, GHG emissions, and waste reduction. Every year, the Board of Directors reviews ESG performance and achievement of ESG goals for the previous year and discloses the results in the ESG report, to promote the achievement of ESG performance goals.

Water Consumption Target

The water consumed per unit product (m³ per 8-inch wafer) in 2030 will decrease by **12%** as compared with 2015.

GHG Emissions Target

GHG emissions per unit product (tCO₂e per 8-inch wafer) in 2030 will decrease by **12%** as compared with 2015.

Wastes Reduction Target

Under the philosophy of lean manufacturing management, the Group will take reduction measures to continuously reduce the hazardous waste produced per unit product and the non-hazardous waste produced per unit product.

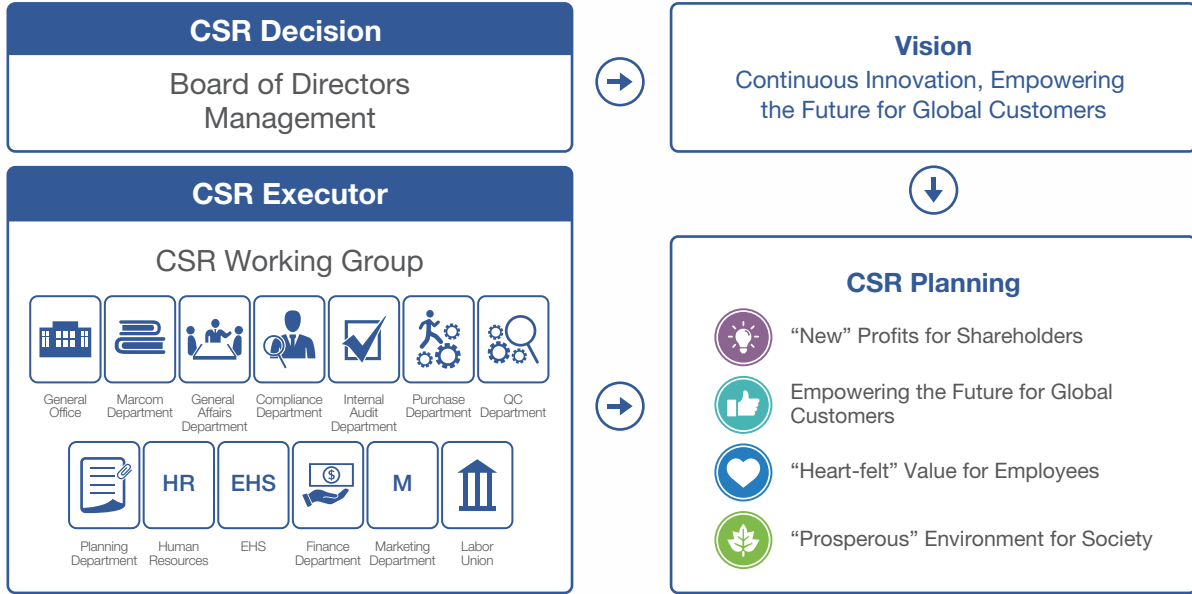
Energy Consumption Target

Comprehensive energy consumption per unit product (MWh per 8-inch wafer) in 2030 will decrease by **7%** as compared with 2015.

1.2 Social Responsibility Management Structure

We believe that ESG management represents the Company's obligation to its investors, the standard of its continuous and sound management, as well as the means for the Company to fulfill its social responsibilities. Effective social responsibility management requires the attention of senior management and full participation of the staff. The Company has a top-down environmental, social, and corporate governance (ESG) structure. The Board, the highest decision-making body in ESG management, is responsible for supervising and evaluating its effectiveness to ensure sound and good ESG governance. Under authorization of the Board, the corporate social responsibility working team assists in implementation of ESG activities and ensures the establishment of appropriate and effective ESG risk management, internal supervision, and control systems.

2021 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



Structure for CSR Management

2021 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

1.3 Involvement of Stakeholders

Based on the business and operational characteristics of our Company and leveraging the experience and practices in industry at home and abroad, we have determined the following to be our Stakeholders: our shareholders; customers; employees; government agencies and regulators; partners; communities; and the public. Our Company actively communicates with all of these Stakeholders via various channels and methods, including websites, media, meetings, reports, and other business and social activities.

Expectations and Responses of Stakeholders

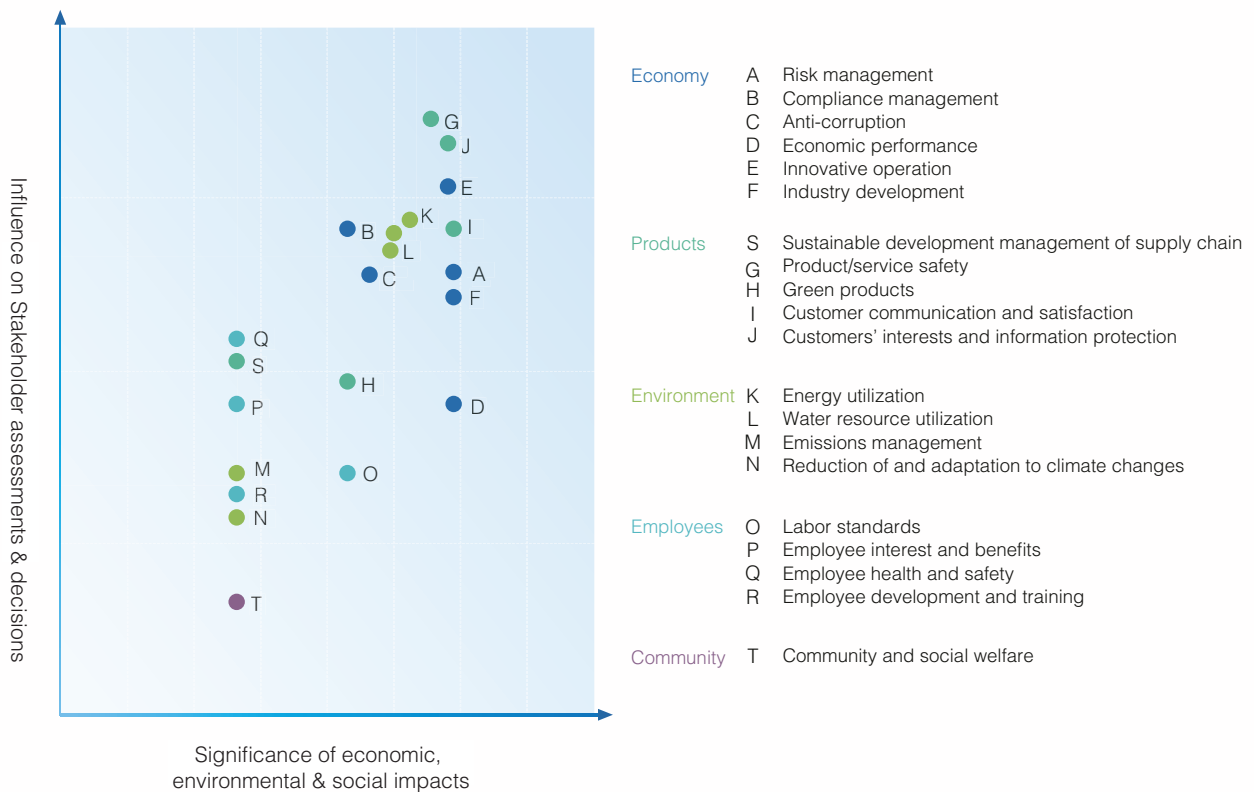
Key Stakeholders	Description	Issues concerned	Communications and responses
Shareholders and senior management	Domestic and foreign investors holding equity and debt investments in our Company, and senior management members of the Company	Risk management, economic performance, industrial development, customer communication, and satisfaction	Shareholders' meetings, financial reports, performance reports, results road shows, etc.
Customers	IDMs, systems and fabless semiconductor companies	Protection of customer rights and information, product and service quality, customer communication, and satisfaction	Product exhibitions, customer research, technical seminars, B2B (such as E-tapeout systems, WIP report, and WAT report, etc.), customer service hotlines and complaints, customer satisfaction surveys, etc.
Employees	Our employees and contract personnel who serve our Company on a continuous basis	Employee interests and welfares, employee health and safety, employee development and training	Employee activities, Employee Representatives Congress, Intranet, training, self-service systems and employee manuals, internal publications, etc.
Government and regulators	Industry, tax, environmental protection, security and other departments, local governments, SFC, and other governmental or regulatory authorities	Compliant operation, green products, emissions management, and energy utilization	On-site visit, official correspondences, policy enforcement, information disclosure, etc.
Partners	Suppliers, research institutions, industry associations, etc.	Industrial development, compliant operation, product and service quality, customer satisfaction and communication	Public tender conferences, strategic cooperation negotiations, exchanges and visits, etc.
Communities and the public	Communities in which we operate, the public and media, etc.	Green products, emissions management, community and public benefit	Community activities, employee volunteer activities, public welfare activities, social cause campaigns, etc.

2021 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

1.4 Identification and Analysis of Substantive Issues

The Board of Directors directs the analysis of substantive issues and identification of important ESG issues of concern to the Company's stakeholders according to the identification, evaluation, and selection procedures, the business and operation characteristics of the Company, and by reference to the domestic and foreign experience of stakeholders in the same industry; determines the materiality analysis and prioritization of the issues based on full consideration of the requirements and concerns of the stakeholders; and discloses them in the Report.

In 2021, we have identified 20 substantial issues based on analysis of internal and external stakeholders, policy research, and peer benchmarks.



2021 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

2. Environmental Responsibilities

Main Progress in 2021

Measures	Achievements
Continuously improving environmental performance of the Company and reducing the footprint of its operations under sound environmental management	Economic benefit of RMB39.0306 million from energy saving and emission reduction Reduction of natural gas consumption by 425.7 thousand m ³ Reduction of electricity consumption by 5,634.3 kWh Reduction of water resource consumption by 41,100 m ³ Reduction of carbon emissions by 6,850.11 tons
Promoting the environmental protection philosophy and actively carrying out training to develop and deepen the environmental protection awareness of all employees	Carrying out all-staff training and online examinations with the average training hours per employee reaching 119.9 hours, representing an increase of 20% compared with 2020

Coping with Climate Change

Climate change mitigation and adaptation has become one of the most urgent issues in the 21st century. Global warming continuously increases the frequency of extreme weather events, results in new policy changes around the world, promotes technological innovation and progress in various industries, and influences the change in the green philosophies of consumers and investors. We recognize that climate change mitigation is of great significance to enterprises and the world. For this purpose, the Company has identified its risks and opportunities of climate change, continuously improved energy use efficiency in production and operation, developed products with low-energy consumption, and assisted in the realization of China carbon peaking and carbon neutrality goals.

2021 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Risks and Opportunities of Climate Change

By reference to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) of the Financial Stability Board (FSB), the Company identified the risks and opportunities in relation to climate change and continuously improved its management based on the results, so as to minimize its carbon footprint from operating activities.

Climate Change Management System

Governance	<ul style="list-style-type: none"> • Make climate change mitigation and adaptation one of the priorities of each business department.
Strategy	<ul style="list-style-type: none"> • Actively take part in relevant work of the Shanghai Municipal Development & Reform Commission for carbon emission trading, so as to cut greenhouse gas emissions and slow down climate change. • Assess the potential operational and financial impact of significant risks and opportunities identified by the Company. • Carry out relevant management actions in low-carbon operation, respond to natural disasters resulting from climate change, and develop products with low power consumption.
Risk Management	<ul style="list-style-type: none"> • Identify potential risks and opportunities for operating activities with reference to the risk analysis framework of TCFD, and incorporate risks and opportunities of climate change in overall operational risk management in the future.
Performance	<ul style="list-style-type: none"> • Disclose GHG emissions and emission intensity in the social responsibility report annually, to assess the Company's management performance in response to climate change and develop improvement plans.

In order to better respond to the potential risks and opportunities of climate change, the Company identified the risks and opportunities of climate change in relation to its operations through policy research, peer benchmarking and taking into consideration of expert advice, and assessed the impact of each risk and opportunity on its finances.

2021 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Identification Matrix of Risks and Opportunities of Climate Change

Results of Identification of Main Risks and Opportunities of Climate Change		Potential Financial Impact	Measure
Risk	Transition risks	Reputational risks With the transition to low-carbon economies, the Chinese government and various stakeholders expect enterprises to implement management actions and improve transparency of information disclosure in terms of climate change response actions. Failure of the Company to respond well to the demands of these stakeholders will have an impact on its reputation.	Decrease in revenue
		Policy and legal risks China has set a carbon neutrality goal and will continuously strengthen the supervision of carbon emissions of enterprises in the future. If the Company fails to meet the regulatory requirements in environmental management, it will be subject to risks including risks of lawsuits and fines, which may lead to default, etc.	Credit risk increase
		Market risks In recent years, customers and consumers have paid more and more attention to the sustainability attributes of products, which is changing the external market environment in which enterprises operate. Failure of the products and services provided by the Company to adapt to these changes in the market environment in an effective and timely manner will affect the operation of the Company.	Decrease in revenue
	Physical risks	Acute physical risks The increase in natural disasters including typhoons and floods resulting from climate change may have an impact on the operation of the Company's fabs and cause economic losses.	Increase in operating costs; Decrease in the value of fixed assets
		Chronic physical risks Sustained higher temperatures and sea level rise resulting from climate change may lead to the interruption of the operation and thus incur financial losses of the Company.	Increase in operating costs; Decrease in the value of fixed assets
			<ul style="list-style-type: none"> • Taking climate change mitigation and adaptation as one of the priorities of each business department. • Actively taking part in relevant work of the Shanghai Municipal Development & Reform Commission for carbon emission trading; in 2021, the Company completed settlement of carbon credits of 457,042 tons for 2020. • Identifying and managing risks and opportunities of climate change with reference to the framework of TCFD. • Taking climate change as a key issue and communicating with stakeholders through social responsibility reports and other channels. • Developing products with low power consumption.
			<ul style="list-style-type: none"> • Developing emergency plans to deal with extreme weather. • Regularly carrying out emergency drills and training for natural disasters and accidents.

2021 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Results of Identification of Main Risks and Opportunities of Climate Change		Potential Financial Impact	Measure
Opportunities	Resource use efficiency Improving efficiency in the use of resources including energy and water resource can help the Company reduce costs in its operation.	Decrease in operating costs	<ul style="list-style-type: none"> Actively adopting green office and operation measures. Incorporating the philosophy of ecological environment protection in the design of newly-built fabs to reduce the use of various resources in construction and operation.
	Energy sources Increasing the use of low-emission energy/clean energy in operating activities will help reduce the risk of future energy price increases.	Increase in the value of fixed assets	
	Products and services In addition, under the background of the transition to low-carbon economies, the demand of customers and consumers for green products and products with low power consumption also increases continuously, which also gives rise to a new market opportunity for us.	Increase in demands for products and services, leading to a rise in revenue	<ul style="list-style-type: none"> Continuously increasing investment in green research and innovation. Continuously improving environmental protection and green attributes of products.

Improvement in the Energy Use Efficiency

Energy consumed by the Company is mainly electric power, heat, natural gas, and a small amount of gasoline and diesel. Based on the principle of energy saving, consumption and waste reduction, the Company has established a sound energy management system and continuously improved energy use efficiency of its operating activities through various technical transformation projects. In 2021, a total of approximately RMB10.078 million was invested in the technical transformation for energy conservation and emissions reduction.

Integrated circuit manufacturing enterprises are supported by the government in terms of power supply guarantee. During the energy transition in China, the Company is less exposed to energy supply risks. Nevertheless, the Company has developed and implemented emergency guarantee plans to actively respond to power supply failures that may occur suddenly. In 2021, the Company developed the Emergency Plan for Emergency Unloading, the Emergency Plan for Emergency Power Cut and the On-site Treatment Plan of the Power Department for Power Cut and carried out emergency plan training and emergency drills in fabs. The power supply is guaranteed through daily inspection, special system investigation, and emergency drills.

2021 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Energy Management System

Philosophy	Policy	Goal	Typical Measure
<ul style="list-style-type: none"> Carry out source control and continuous improvement while satisfying production requirements and improving productivity, and reduce the impact on the environment while reducing production costs. 	<ul style="list-style-type: none"> Resource and Energy Management Procedure 	<ul style="list-style-type: none"> The Company is committed to improving the energy efficiency in production and operation and has set its energy goal that by 2030, its comprehensive energy consumption per unit product will decrease by 7% compared with 2015. 	<ul style="list-style-type: none"> Technical transformation for energy-saving. Regularly engaging third-party agencies to conduct energy audits of the Company.

2021 Energy Saving Work and Achievements

Fab	Measures	Achievements
Fab 1	<ul style="list-style-type: none"> Replacing CDA high-voltage rotors for optimization of system operation 	<p>7,200,000 MWh Annual reduction in electricity consumption</p>
Fab 2	<ul style="list-style-type: none"> Carrying out energy-saving reconstruction of water pumps of the UPW system Recycling heat from HOT UF concentrated water 	<p>4,467,700 MWh Annual reduction in electricity consumption</p> <p>1,088,880 MWh Annual reduction in electricity consumption</p> <p>80,000 m³ Annual reduction in natural gas consumption</p>
Fab 3	<ul style="list-style-type: none"> Replacing fluorescent lamps with LEDs Optimizing the operation of the system of cold and hot water production Optimizing the selection of types of MAU humidifier control valves to reduce steam consumption 	<p>1,421 MWh Annual reduction in electricity consumption</p> <p>816 MWh Annual reduction in electricity consumption</p> <p>35.757 MWh Annual reduction in electricity consumption</p> <p>12,000 m³ Annual reduction in natural gas consumption</p>

2021 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Development of Products with Low Energy Consumption

In the field of professional integrated circuit manufacturing services, the Company is committed to implementing full-life cycle environmental management covering processes from raw material procurement and production to disposal, so as to continuously reduce the environmental impact of the products.

Environmental Management for the Full Life Cycle of Products

Warehousing of Raw Materials	Product Production	Product Transportation	End-user Products	Disposal
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> According to pollution discharge permit management, promote material reduction projects; From the perspective of resource recycling, carry out allocation among systems in waste chemical plants to reduce the use of external resources; Implement water recovery projects to improve the overall recycling rate and reduce the water supply pressure of the pipe network. 	<ul style="list-style-type: none"> Recycle and reuse product packaging materials to reduce the consumption of packaging materials and waste generation. 	<ul style="list-style-type: none"> By helping customers produce products with low energy consumption, reduce the environmental impact of the use of end-user electronic products 	<ul style="list-style-type: none"> The wafers produced by the Company are monitored for harmful substances, which means that the end-user electronic products manufactured by using the wafers have less impact on the environment after disposal.

Meanwhile, by technical innovation, the Company is committed to continuously optimizing its wafer manufacturing technology, reducing product volume, improving the energy efficiency of end-user products, reducing the impact of scientific and technological progress on the environment, while creating competitive advantages in power consumption, efficiency, and chip size optimization for customers, thus contributing to global energy conservation. In 2021, revenue from Hua Hong Semiconductor products for clean energy, energy saving, and emission reduction accounted for 35.9% of its total revenue.

2021 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Actions of Hua Hong Semiconductor	Contribution to Global Energy Conservation
<ul style="list-style-type: none"> • Technical innovation to improve the energy efficiency of products in use by customers and continuous development of products with low power consumption • Continuous reduction of energy consumption and the use of resources in production to reduce the environmental footprint of products 	<p>The Company's semiconductor products are widely used in clean energy, new light source LED, etc., thus assisting in energy conservation and efficient utilization in other industries</p> <ul style="list-style-type: none"> • Power device products with the characteristics of high efficiency and energy saving are used in clean energy application scenarios including new energy vehicles, photovoltaic and wind power generation. • BCD700 technology platform is applied to LED lighting products. When compared with traditional incandescent lamps, LED products feature environmental protection, long life, and high efficiency.

2.1 Environmental Management System

Hua Hong Semiconductor has strictly complied with local environmental laws, regulations, and relevant industry emission standards in its daily operations and continued to improve its own environmental management measures. The Company: gradually shifted its focus from production management to control of product full-life cycles and risks; committed to improving environmental performance at every step of the process, including procurement of raw materials, production, and waste management; and passed the new ISO14001:2015 environmental management system certification. In terms of supervision and management, we added a review and follow-up system to the security management system in the Company's intranet. This system collects and lists matters violating environmental protection regulations, which are identified daily by management, following up and recording subsequent actions through regular system reminders.

As at the end of the reporting period, the Company was not subject to any environmental complaints or penalties, or involved in any environmental pollution incidents.

Certification in Relation to Environmental Responsibilities of Hua Hong Semiconductor in 2021

Name of Certification	Certification Authority	Coverage
Environmental Management		
 ISO 14001:2015 Environmental Management System	British Standards Institutions(BSI)	All factories
Green Building		
 "Leadership in Energy and Environmental Design" (LEED v4) Gold Award	U.S. Green Building Council (USGBC)	Hua Hong Wuxi
 Two-Star Green Building Design Label Certificate	Chinese Society for Urban Studies (中國城市科學研究院)	Hua Hong Wuxi
Green Products		
 QC 080000 Hazardous Substance Process Management System	BSI	All factories

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Overview on Environmental Management Performance

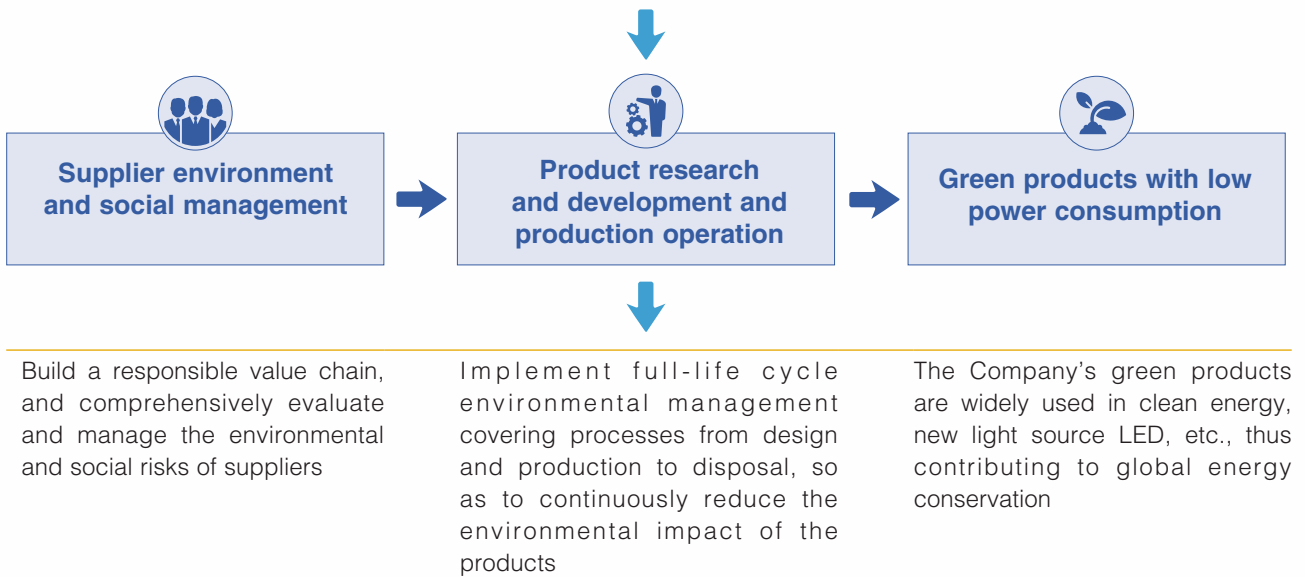
The Company's production and operation requires the use of such resources as energy, water, and other raw materials and generates emissions such as air emission, wastewater, and waste. In addition, we promote suppliers to constantly strengthen environmental management and provide low power consumption green products in an effort to achieve better environmental management performance throughout the value chain.

Analysis Table of Main Environmental Factors of the Company

Main Resources	Main Pollutants
Energy: electric power, heat, natural gas, and a small amount of gasoline and diesel	Air emissions: sulfuric acid mist, hydrogen chloride (HCl), nitric oxide (NOx), ammonia (NH ₃), and volatile organic compounds (VOCs)
Water source: municipal water supply	Wastewater: pH, COD, ammonia, nitrogen, and fluorine ion
Raw materials: silicon slice, quartz, target material, gas, and chemicals	Non-hazardous waste: domestic waste, kitchen garbage, and sludge from wastewater treatment
	Hazardous waste: waste acid, waste isopropanol, waste phosphoric acid, waste glass bottles, 200L chemical barrels, and waste liquid from laboratory, organic waste liquid, waste activated carbon, waste resin, and arsenic-containing waste, etc.

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Water Resources	
Total water consumed	13,207,829 m ³
of which: Water from municipal water supply	8,928,040 m ³
Wastewater reused	4,288,904 m ³
Water consumed per unit product	2.55 m ³ per 8-inch wafer
Volume of recycled water	86,119,337 m ³
Energy	
Total electricity consumed	867,682 MWh
Electricity consumed per unit product	248 kWh per 8-inch wafer
Natural gas consumed	11,456,569 m ³
Natural gas consumed per unit product	3.27 m ³ per 8-inch wafer
Packaging Materials	
Total packaging materials used for finished products	253.5 tons
Total packaging materials recycled for finished products	48.5 tons
Other Raw Materials	
Silicon slice, quartz, target material, gas, chemicals and other raw materials for production	



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Air Emissions	
Total hazardous waste	17,363 tons
Hazardous waste produced per unit product	4.96 kg per 8-inch wafer
Total non-hazardous waste	8,981 tons
Non-hazardous waste produced per unit product	2.57 kg per 8-inch wafer
Waste	
Total air emissions	23,193.07 million m ³
Nitrogen oxide (NO _x) emissions	36,857 kg
Sulfur dioxide (SO ₂) emissions	2,239 kg
Greenhouse Gas	
GHG emissions	713,649 tCO ₂ e
GHG emissions per unit product	0.20 tCO ₂ e per 8-inch wafer
Wastewater	
Total wastewater discharge	7,040,000 m ³

Green Culture

We continuously promote the environmental protection concept inside and outside the Company. We make good use of science and technology in our daily operations to implement the concept of sustainable development and actively cultivate staff's awareness of protecting the environment, saving office resources, and energy.

Practice in Green Culture

Saving paper around the office	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Turning off the power supply when leaving work or for a long time. Reasonably setting air conditioning temperature above 26°C in summer and below 20°C in winter.
Saving water	<ul style="list-style-type: none"> Developing employees' awareness of saving water and posting water saving tips.
Waste disposal	<ul style="list-style-type: none"> Classifying domestic waste in each factory into 4 categories, namely dry, wet, recyclable, and harmful waste, and requiring all employees to answer online waste classification questions. Participating in E-waste recycling activities at alah.com.
Commuting	<ul style="list-style-type: none"> Encouraging employees to commute by public transport. Using new energy vehicles as shuttle buses for the Company.

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2.2 Cleaner Production

Air Emissions Discharge Management

We follow the regulations and relevant requirements related to environmental protection and have formulated improved management measures for the air emissions discharged during production, including sulfuric acid mist, hydrogen chloride, nitric oxide, ammonia, and volatile organic compounds.

Air Emissions Discharge Management

Type		Treatment Method
Air Emissions	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 particulate matters of silicon dioxide)	Removal through a dust-extraction unit

Waste Management

Hazardous wastes generated in the Company's production and operation activities include waste acid and waste isopropanol. We authorized a qualified third-party company for treatment of hazardous wastes, mainly by means of incineration, physical-chemical treatment, and recycling. Non-hazardous solid waste, such as sludge generated in wastewater treatment, was treated by the waste disposal agency using landfill.

The Company maintains consistently high standards and strict requirements in the implementation of the waste management system. The Company has formulated a Waste Management Procedure to standardize waste management operations and recorded and managed waste treatment through the unified environmental protection management system of the government to ensure all transportation records are traceable and controllable. Since 2017, the Company has carried out work to reduce the discharge of various hazardous wastes every year to constantly reduce the impact of hazardous waste emissions on the environment.

In 2021, the Company further standardized the storage and recycling of general wastes and improved the storage sites in the fabs. Storage sites of Fab 1 were divided into three-prevention storage and general temporary storage, and the storage area of the general waste storage sites of Fab 2 was increased, which makes the storage more standardized. According to the new Law on the Prevention and Control of Environmental Pollution by Solid Wastes, the Company carried out all-staff training and online examinations, which were passed by 4,219 employees.

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Management of Waste Discharge

Categories		Treatment Method
Non-hazardous waste	Domestic waste and kitchen garbage Such as sludge	Entrusting municipal environment and sanitation departments for unified disposal on a regular basis. Landfilling
Hazardous waste	Such as waste acid, waste isopropanol, and waste phosphoric acid Such as waste glass bottles, 200L chemical barrels, and waste liquid from laboratory Such as cleaning cloths, plastic bottles, organic waste liquid, waste activated carbon, waste resin, and arsenic-containing waste	Recycling Physical-chemical treatment Incineration

Wastewater Discharge Management

In terms of wastewater discharge, the Company has adopted the Grade B Standard of GBT 31962-2015 (Waste Water Quality Standards for Discharge to Municipal Sewers) since 2017 and reduced the discharge through recycling washing water used for production in the factory.

In terms of pollution discharge and information disclosure, the Company carried out online monitoring of wastewater, with relevant data disclosed on the Environmental Information Disclosure Platform for Shanghai Enterprises and Public Institutions, thus improving transparency of environmental information for the Company.

Wastewater Discharge Management

Categories		Treatment Method
Wastewater	pH, COD, ammonia nitrogen, fluorine ion, etc.	Discharged through a pipeline into a designated urban sewage pipe network after treatment and meeting relevant standards

2021 Cleaner Production Work and Achievements

Measures	Achievements
<ul style="list-style-type: none"> Replacing old BTSATA01~06 ozone destructors 	Daily ozone emission reduction of 50%
<ul style="list-style-type: none"> Using IVT PAD for Mirra ontrack W process qualify 	Wastewater discharge reduction of 8,300 m³ per year
<ul style="list-style-type: none"> Adjusting the allocation and utilization rate of photoresist pipelines in lithography machines, and soaking pipelines that can be disused, to reduce the photoresist discharge. 	Photoresist emission reduction of 56.8L per year

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2.3 Sustainable Water Management

In the semiconductor manufacturing process, the Company uses ultrapure water containing no ions, particles, chlorine or silicon dioxide to manufacture semiconductors free of any impurities. Only after treatment can the used water be properly discharged or recycled. Therefore, the sustainable management of the utilization, recycle, treatment, and discharge of water resources is a top priority for the Company.

Water used by the Company comes from the municipal water supply to a large extent, in addition to a smaller amount of recycled water and air conditioning condensate from the pure water manufacturing process. In order to constantly monitor water risks, the Company assesses water pressure in Shanghai and Wuxi, where we operate through the Aqeduct Water Risk Atlas, an external tool from the World Resources Institute (WRI). According to WRI data, the Company's Shanghai fabs are located in an area with high water stress and the Company's Wuxi fab is located in an area with medium to high water stress.

Management of Water Resources

Target	Monitoring	Assessment and Allocation	Emergency Plan
<ul style="list-style-type: none"> Water consumed per unit of product (m³/8-inch wafers) in 2030 will decrease by 12% as compared with 2015. 	<ul style="list-style-type: none"> 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 of each fab. 	<ul style="list-style-type: none"> The Company records the flow, volume and recycle 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. 	<ul style="list-style-type: none"> The Company has formulated the Emergency Plan for Tap Water Rationing to regulate emergency response in case of any interruption in the municipal tap water supply network, so as to prevent impacts on its production and operation.

The Company is committed to carrying out water-saving technological transformation and wastewater recycling in production and operation as well as constantly improving efficiency in the use of water resources in all fabs. In the Supplier Questionnaires, we require our cooperative direct suppliers to disclose information on sustainable management of water resources use, including water consumption statistics of production and operation, water-saving measures, water-saving goals of the suppliers, etc., so as to continuously reduce the water footprint of products.

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2021 Water Efficiency Measures and Achievements

Measures	Achievements
<ul style="list-style-type: none"> Reducing the use of pure water for BEWAAS05 	Saving of 5,000 tons of water for the year
<ul style="list-style-type: none"> Changing spraying humidification to membrane humidification for FAB1 	Saving of 13,200 tons of water for the year

3. Employee-Related Responsibilities

Main Progress in 2021

Measures	Achievements
Deepening the training of employees at all levels	The average training hours per employee reached 119.9 hours, increased by 20% compared with 2020

3.1 Rights and Benefits of Employees

Employment and Basic Rights and Interests of Employees

We strictly comply with laws and regulations including the Labor Law of the People's Republic of China and the Law on Employment Contracts. 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. Furthermore, we have formulated and follow the guidelines described in Employment Procedures and the Management Procedures for Trainees. We strictly check the identity information of our employees and do not employ adolescents under the age of 16 years. As at the end of the reporting period, the Company had 6,084 regular employees; it did not infringe the rights and interests of its employees; and it was not subject to complaints or penalties by a regulatory authority.

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Overview of Employee Employment and Interests System



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

The Company provides competitive salaries for employees, which are higher than the minimum wage in the place of operation.



Working Hours and Vacation System

The standard working hours system is adopted. The comprehensive working hours system or flexible working hours system is adopted for certain positions with the approval of the labor and personnel authority of the government.

Based on holidays and festivals specified by the government, supplementary annual leaves are provided for employees.



Democratic Participation

Labor union, employee congress, etc.

Employee Communication

An unblocked communication channel and sincere care are vital for the establishment of harmonious labor relations. The Company is committed to building and improving employee communication and feedback mechanisms and has formulated the Employee Communication Rule and encouraged the fair, straight-out, and multi-way communication between the Company and employees, between officers and subordinate officers, and among employees through the creation of multiple communication channels.

In 2021, the Company held an employee luncheon, in which the management listened to the voices of grassroots employees and responded to their concerns, so as to create an open and trusted working environment.

In addition, we established the Employee Assistance Mechanism, under which we provide assistance for needy employees at special festivals such as Spring Festival, Labor Day, and Mid-Autumn Festival, in addition to routine expression of sympathy and solicitude to injured or families of diseased employees; and we give timely care and support to employees who suffer a significant misfortune and help them overcome their plight as soon as possible through multiple forms of assistance including donation, support, care, and nursing. We care for the welfare and development of female employees, annually organizing a special physical examination, continuously improving human-based management of lactating employees, and providing relevant service facilities to ensure convenience for pregnant employees and lactating employees at work.

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3.2 Health, Safety and Employee Welfare

The Company has established an occupational health and safety system that meets the requirements of the ISO45001, defining the occupational health and safety policy, so as to provide its employees with a good working environment and ensure their occupational health.

Occupational Health and Safety Management System

Occupational Health and Safety Management Policy

The Company strictly complies with safety, health, and environmental protection regulations; makes efforts for clean production; carries out continuous improvement; creates a safe, healthy, and comfortable working environment for employees; and strenuously pursues the highest goal of “zero accidents” and sustainable operation, becoming a model corporate citizen in the world.

System Construction	<ul style="list-style-type: none"> The Company has established the Safe Production Committee; implements the Committee's Safe Production Responsibility System; and implemented the regular Safety Meeting System; All employees at all levels are required to sign the Safety Responsibility Letter, so as to implement the Safe Production Responsibility System for the staff. 	Management Items	<ul style="list-style-type: none"> Emergency response to hazards/environmental factors; Special equipment and posts; Chemicals management; Occupational health monitoring and protection.
Internal Audit, Inspection and Hazard Identification	<ul style="list-style-type: none"> Safety technology transformation; Establishing a dual prevention work mechanism of hierarchical control of safety risks and management of hazard identification. 	Construction of Safety Culture	<ul style="list-style-type: none"> Safety awareness and safety training; Emergency drills.

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Safe Production

The Company pursued “zero accidents” in safe production and carried out safety management with a focus on eliminating potential hazards. The Company mainly eliminated or controlled safety risks in production activities of employees from three major aspects, namely, fire-fighting equipment, alarm monitoring system, and emergency measures. With regard to chemicals used on the Company's operation, including nitric acid and ammonia water, we have formulated relevant management policies, including the Chemicals Management Procedure and the Chemical Material Review Procedure. We regularly carry out various emergency drills for safety production accidents. As at the end of the reporting period, the Company had no safety production accidents.

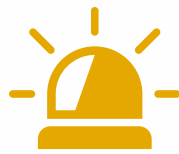
With the theme of “implementing safety responsibilities and promoting safe development”, the Company organized a “safe production month” series of activities to further strengthen safety awareness, implement the entity responsibility for safe production of enterprises, and create a corporate safety culture. We studied the important instructions of General Secretary Xi Jinping on safe production, watched videos of “Life and People First” and “Saving Lives is of Paramount Importance” for the safety month. We carried out activities including 16 June, the national safety consultation day, safety knowledge quiz, VR experience of labor protection and emergency equipment, occupational safety re-education, and emergency response training. Through various themed activities of safety publicity and demonstration, the Company further enhanced the safety awareness of its employees, steadily consolidated the performance of its responsibilities for safe production, and promoted its safe development.

Measures for Prevention of Employee Safety Risks



Fire-fighting Equipment

- A perfect fire-fighting system and an automatic alarm system have been established.



Alarm Monitoring System

- There are toxic, harmful, and inflammable gas warning systems, liquid leakage detectors and ultra-high-sensitivity smoke detectors in the clean workshop.



Emergency Measure

- Establishing an emergency rescue team and formulating emergency plans for different disasters;
- Annually organizing special disaster prevention drills and, in a timely manner, correcting problems identified.

Employee Health

In terms of protecting employees' health, we provide an annual health check-up for all employees, including multiple cancer screenings and other items, and we establish employee health records to systematically track the changes in employees' health status. We provide employees with necessary personal protective equipment and emergency protective equipment and regularly check if there is a complete set of equipment and whether the equipment is effective. In addition, the Company engages external organizations to test its production environment every year, analyze and rectify nonconformities, so as to ensure that the occupational exposure limits for harmful factors are not exceeded in the production environment, and the Company informs all employees of the test results.

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In 2021, the Company carries out various activities to promote healthy lifestyle to employees, such as health lectures on the theme of “cardiovascular doctor’s advice on what to eat for hyperlipemia” and, “on National Hypertension Day, what is a normal blood pressure”, to encourage its employees to live and work in a healthy way.

High-quality Working Environment

The Company is committed to creating better office and service facilities for employees and improving their happiness.



Office

- An air purification system was installed to improve office air quality;
- The green space was increased in office areas.



Diet

- There are staff canteens and coffee shops in factory zones;
- Establishing a food safety supervision team, the mode of centralized purchasing of food materials and qualified supplier management, and inviting employees and department representatives to carry out supervision;
- Publishing the canteen food cooking guideline to manage balanced nutrition, oil and salt control, for the employees' diet in the canteens.



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, HIVE BOX, and other facilities.



Travel

- Providing all employees with travel allowance;
- Providing free commuter bus services between the park, subway stations, and the dormitory;
- Creating a commuting route for employees living in the transit-challenged areas and arranging commuter bus services for departments which need to have such services on weekends.

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3.3 Training and Career Development

Employee Training

The Company has established a sound employee education and training system and formulated the Operating Procedure of Internal Training System Review, the Education and Training Procedure, and department-level training procedures, which are constantly adjusted according to the strategic development and employee needs, to meet the all-round and multi-level training needs of employees in different positions.

The Company has impeccable training facilities (special training rooms and equipment), learning and sharing platforms (including online training registration management platform, training material and position-specific question bank and multimedia learning courseware, etc.), and where necessary, uses external resources for ensuring employees' learning and development.

In 2021, the Company continuously carried out special training projects for newly-hired recent college graduates and further refined corporate culture, professional theory, and practical training into three major series of courses, namely "new era", "new revelation", and "new talents". This helped its new employees quickly integrate into the team and meet the challenges of their future work with full enthusiasm.

Employee Training Programs

Trainees	Training Contents	2021 Performance
Grass-roots managers	Role recognition, self-management, management of others, and working management	100% Percentage of employees trained
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	119.9 hours Average training hours per employee
Front-line employees	Courses about theory and practical training of the semiconductor manufacturing module	

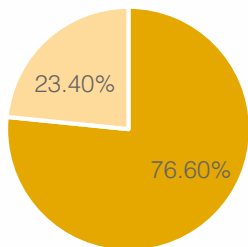
Career Development

The Company provides its employees with clear and transparent promotion channels, as well as personal career plans for their development. According to industrial characteristics, the Company has set three professional categories, namely, management, technology, and functional support and has established corresponding job training. Employees may continuously develop their careers in a single professional title category according to their own specialties, potential, and desires. Moreover, they are able to shift from technology to management.

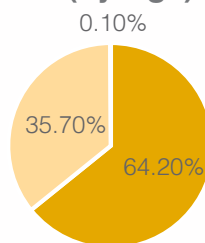
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Under the Company’s career development system, the employee turnover rate in terms of gender, age in 2021 was as follows:

**Employee Turnover Rate
(by Gender)**



**Employee Turnover Rate
(by Age)**



- Turnover rate of male employees
- Turnover rate of female employees
- Turnover rate of employees aged under 30
- Turnover rate of employees aged between 30 and 50
- Turnover rate of employees aged above 50

In addition, the Company has formulated the Implementation Measures for Academic Education Subsidy, which encourages employees to improve their professional and technical knowledge and provides employees with on-the-job academic education subsidies, so as to promote work performance and efficiency improvement, and continuously train high-quality talent that meets the current and future needs of the Company, thus further improving its comprehensive competitiveness.

4 Products and Customers

4.1 Product Responsibility

Main Progress in 2021

Measures	Achievements
Deeply promoting the whole-cycle quality control of products, which integrates industrialization and informatization	Zero complaints on products

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Quality Control

According to the philosophy of “quality is vital for the existence of an enterprise”, the Company has formulated the Quality Management Policy and successfully passed ISO9001 quality management system and IATF 16949 QMS certification for automotive industry. The Company implemented a synthesized quality management model covering five comprehensive departments and sections of quality systems and customer satisfaction, supplier management and raw material analysis, quality assurance, reliability assurance, and failure analysis.

In accordance with the policies, the Company carries out quality management. The Company shall comprehensively implement excellent performance management, and deeply promote the integration of industrialization and informatization. Actively fulfilling corporate social responsibility, the Company strictly adheres to Zero Defects concept and ensures the delivery of green and high-quality products in a timely order, to continuously provide competitive services. Besides, the Company is supposed to fully meet customer requirements and unremittingly improve customer satisfaction, so as to achieve mutual benefits and a win-win situation.

To reduce human error, we established multiple management systems, such as personnel management, equipment management, supply chain management, environment management, systems management, process management, and customer quality control. With these reliable management systems, we are able to achieve real-time monitoring and testing over our entire product cycles from product R&D to production and after-sales feedback; carry out failure analysis on anomalies that may arise during the production and application processes; dig out the nature of problems; and work out corresponding corrective and preventive measures. The Company has established an optimal product recall system, and our customers may return to us within the warranty period products which do not comply with the prescribed functions or fail to meet the management requirements for hazardous substances. As at 2021, the failure rate of the Company's products on the end-user side was less than one in a billion.

Product Responsibility-related Certification

Product Quality	Certification Authority	Date of First Certification
 ISO 9001 Quality Management System	British Standards Institutions (BSI)	6 November 2001
 IATF 16949 Quality Management System for Automotive Industry	British Standards Institutions (BSI)	2 August 2005
Information Security	Certification Authority	Date of First Certification
 ISO 27001 Information Security Management System	British Standards Institutions (BSI)	26 April 2002

Intellectual Property Protection

As a science-oriented enterprise, we advocate independent innovation and respect for intellectual property rights in our research and development of application-specific integrated circuits, including intelligent chips and information security chips. According to the Company's System for the Management of Intellectual Property, we actively filed applications for patents and investigated responsibility for any potential breaches of intellectual property rights. At the same time, we promise that we will never infringe upon the intellectual property rights of any enterprise or individuals and will keep confidential all technological information regarding products of upstream and downstream partners.

To reduce the risk of claims of infringement of third-party intellectual property rights against our manufacturing of semiconductor devices or end-user products, we only accept orders from reputable customers with no known potential risk of infringement. We have entered into several technology licensing agreements with major technology companies.

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Patent Applications in 2021

Total number of patents applied for in the year	618
Total number of patents approved in the year	186
Total number of Chinese and U.S. invention patents obtained	3,848

4.2 Customer Service and Protection of Customers' Interests

Customer Service System

According to the philosophy of “providing customers with more convenient and safer services”, the Company has established an impeccable customer service system, including three main aspects: customer communication; customer complaint; and customer satisfaction.



Customer Communication

- Adopt multiple methods of communication with customers, including customer survey, regular quarterly/annual business reviews, technical seminar, and training.



Customer Complaint

- Establish customer complaint channels and formulate the Customer Complaint Handling Procedure.



Customer Satisfaction Survey

- Carry out satisfaction surveys on a sampling basis annually and formulate an improvement plan according to the survey results.

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The Company attaches great importance to customer feedback. In order to ensure the smooth collection of customer opinions, the Company has formulated the Customer Complaint Handling Rules to standardize customer complaint handling and the implementation of corrective and preventative measures. Customers may make a complaint and give feedback to the Company through e-mail, hotline, letter, fax, and other channels.



Occurrence of a Complaint

Normally, communicate and confirm with the customer within 24 hours after the occurrence of a complaint and give a preliminary reply.



Investigation into Failure Causes

Complaints requiring product failure analysis will be submitted to relevant departments for handling. Corrective and preventative measures will be proposed according to the investigation results and a reply will be given to customers.



Correction and Prevention

Relevant departments are required to implement corrective and preventative measures, and the corrective action is supervised and evaluated by regularly sorting out and analyzing relevant information given in customer complaints.

Protection of Customer Information

The Company attaches great importance to maintaining customer information security and safeguarding the interests of customers. The Company has established an ISMS information security management system, which controls information security risks from information asset management, personnel security, physical control, logic control, and other aspects to ensure information security and is ISO27001 certified.

An Information Security Committee was established within the Company with main responsibilities including: responding to and making decisions on major emergency safety accidents; regularly reviewing the information security management system; auditing our photomask partners to ensure the security of their data management and storage; returning to customers or destroying waste masks generated during the production process, thus preventing to the utmost disclosure of customer information on such waste masks. In order to improve employees' awareness of information security and reduce the risk of customer information leakage, the Company arranged and carried out Information Security Week activities including security awareness tests, online training, and offline demonstration, in accordance with laws and regulations, including the *Cyber Security Law*, the *Information Security Law*, and the *Personal Information Protection Law*, thus greatly improving the overall information security awareness in the Company. No incidents of infringement against laws or regulations concerning customer privacy occurred within the Company during the year.

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5 Compliance in Business Operation

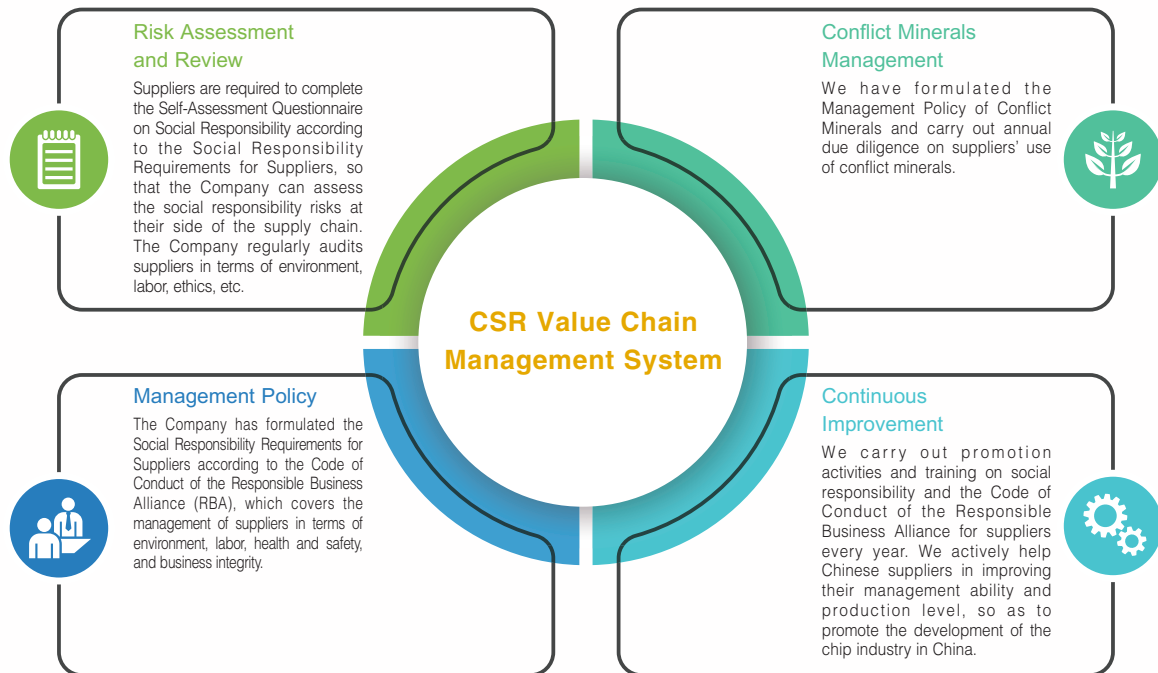
Main Progress in 2021

Measures	Achievements
Carrying out an annual comprehensive risk assessment covering Shanghai and Wuxi	All major risks were at a reasonable level, and the Company maintained stable operation.

5.1 Responsible Value Chain

Supply Chain Management

Strengthening the supply chain management and creating the CSR value chain is an important strategy for long-term development of the Company. It has established an excellent value chain management system and has conducted comprehensive assessment, management, and control of the environmental and social risks of suppliers. It is committed to supporting the growth of suppliers to promote development of the chip industry in China.








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Management Policy

The Company has formulated the Social Responsibility Requirements for Suppliers according to the Code of Conduct of the Responsible Business Alliance (RBA), which covers five requirements for suppliers in terms of labor, health and safety, environmental protection, business integrity, and management system. In addition to the Social Responsibility Requirements for Suppliers, which shall be complied with by all suppliers, the Company also requires its upstream suppliers to recognize and implement management measures according to the Social Responsibility Requirements for Suppliers.

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

 Labor	<ul style="list-style-type: none"> • Free choice of occupation • Youth employees • Working hours 	<ul style="list-style-type: none"> • Salaries and benefits • Humane treatment • Non-discrimination 	<ul style="list-style-type: none"> • Free association
 Occupation and Health	<ul style="list-style-type: none"> • Occupational safety • Emergency plan • Occupational injuries and diseases 	<ul style="list-style-type: none"> • Hygiene management • Physically demanding work • Machine-related protection 	<ul style="list-style-type: none"> • Public health, canteen, and dormitories • Communication of health and safety
 Environmental Protection	<ul style="list-style-type: none"> • Environment-related permits and reports • Preventing pollution and saving resources • Hazardous substances 	<ul style="list-style-type: none"> • Solid waste • Air emissions • Material restrictions 	<ul style="list-style-type: none"> • Management of water resources • Energy consumption and greenhouse gas emissions
 Business Integrity	<ul style="list-style-type: none"> • Operation with integrity • No illegitimate interests • Information disclosure 	<ul style="list-style-type: none"> • Intellectual property rights • Fair trade, advertisement, and competition • Confidentiality on identities 	<ul style="list-style-type: none"> • Responsible procurement of minerals • Privacy
 Management System	<ul style="list-style-type: none"> • Duties and responsibilities of management • Legal and customer requirements • Risk assessment and management 	<ul style="list-style-type: none"> • Performance indicators for implementation plans and measures • Training • Communication 	<ul style="list-style-type: none"> • Employee feedback, participation, and complaints • Review and assessment • Corrective measures

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Conflict Minerals Management

These metals are obtained by local armed militias by way of long-time forced labor, child labor, and damaging the environment and ecology. Such metals are also the main capital source of illegal armed organizations. According to the Dodd-Frank Wall Street Reform and Consumer Protection Act and research reports of certain international non-governmental organizations, such minerals are likely to be used for electronic and electrical products, such as mobile phones and computers, in ICT industries. In order to effectively reduce the Company's risk in relation to conflict minerals, the Company has formulated the Conflict Minerals Management Policy, requiring all suppliers to commit to purchasing conflict-free minerals to ensure the effective management of responsible minerals.

Conflict Minerals Management Policy

The Company has always taken global social and environmental responsibility as our goal and carried out green procurement and has promised to undertake the following responsibilities in its metal supply chain:

- 1) We undertake to assume social and environmental responsibilities.
- 2) Suppliers whose products contain gold (Au), tantalum (Ta), tungsten (W), and tin (Sn) are required to purchase materials according to the Responsible Minerals Policy, while suppliers whose products contain cobalt (Co) and natural mica (Mica) are required to disclose the smelters of cobalt and natural mica, so as to ensure the legality of these minerals.
- 3) We undertake to cause our product suppliers to provide the declaration that they do not use gold (Au), tantalum (Ta), tungsten (W), tin (Sn), and cobalt (Co) from “conflict minerals”, and to carry out an investigation into conflict minerals, and complete the Conflict Minerals Reporting Template (CMRT) and the Extended Minerals Report (EMRT) under the Responsible Minerals Initiative (RMI).

The Company has conducted due diligence on the use of conflict minerals by suppliers and requires suppliers to disclose information on sources of minerals and smeltery, so as to ensure that our suppliers comply with the Company's management policies for conflict minerals. According to our review, we have found no use of conflict minerals by suppliers in 2021. The Company carries out promotion activities and training on social responsibility and the Code of Conduct of the Responsible Business Alliance for suppliers every year. In 2021, such training was completed as planned.

In addition, we proactively support growth and development of our suppliers in China and constantly assist suppliers in improving their management capabilities and production levels. Meantime, we proactively encourage small and medium-sized enterprises to participate in the local supply of key raw materials, including gases, chemicals, and silicon wafers. Therefore, we've cultivated a growing group of local raw material and equipment suppliers, thereby significantly promoting the development of the chip design industry in China.

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5.2 Anti-corruption and Business Ethics

The Company is committed to the development of a business ethics culture and has formulated the Undertaking System on Anti-Corruption and Business Ethics, explicitly specifying that companies having business dealings with the Company (including all suppliers) shall sign the Undertaking Against Commercial Bribery and that relevant internal personnel shall sign the Undertaking on Business Ethics, whether for external customers, manufacturers and stakeholders, or for employees, cadres, and key personnel.

The Company carries out audits on anti-corruption and business ethics on a regular basis. In 2021, the Company has completed audits of internal management on anti-corruption and business ethics, and found no violation. In addition, the Company is committed to creating a sound business ethics culture by regularly introducing warning articles and cases in internal publications and providing training activities on anti-corruption and business ethics for all employees.

Anti-Corruption and Anti-bribery Policy of Hua Hong Semiconductor

All employees (including part-time employees), senior management, and Board members are required to abide by relevant laws and regulations 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 finances that may cause a negative influence on work.

Complaint and Reporting Management

The Company has set up convenient reporting channels and handled reported cases in a standardized and orderly manner and provides defined reporting channels, including E-mail, hotline, and mailbox, to encourage employees to make real-name or anonymous complaints and reporting. The Company can receive and properly handle reporting calls and letters at any time to achieve early detection, resolution, and control. The Company properly carries out the reporting procedures, classified acceptance, investigation, and treatment. In addition, the Company takes measures to protect whistleblowers, and all information related to whistleblowers will be kept strictly confidential. The whistleblowers will not suffer any form of retaliation or adverse treatment.

Business Ethics Supervision and Report Handling Procedures

Immediately record any individual case reported and received.



Arrange special personnel or establish a special team to understand the situation, carry out an investigation and obtain evidence.



Complete the investigation and evidence collection within the specified time limit, draw preliminary conclusions and report to management.



Hold a special meeting to review the contents of the report and investigation results, and come up with a solution.



Give feedback to the whistleblower.

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5.3 Risk Management

The Company continuously improves its risk management system, conducts an audit covering the entire operation process every three years, and continuously upgrades relevant processes and policies, so as to effectively enhance its risk management. Since 2016, the Company has established procedures for risk management through the Internal Audit Department, which issued the guideline “Rules about Comprehensive Control of Risks” and launched related projects.

In 2021, the Company upgraded the existing risk management system to ensure that the design of the system is more realistic, thereby effectively improving the level of risk management. The Company carried out an annual comprehensive risk assessment covering Shanghai and Wuxi; interviewed management with regard to risks through risk questionnaires; identified major risk areas; and formed an annual risk management report. In addition, the Company carried out risk management training including discussing typical risk events.

Key Operational Risks and Countermeasures

Risk Category	Content	Countermeasures
Strategy	Strategic planning	The Company formulated strategic objectives from top to bottom and appropriately deconstructed and implemented such objectives in specific business models of corporate operation, to ensure the accomplishment of strategic objectives
	Supervising and management system	We continue to improve the risk management system based on the three-line model to efficiently ensure accomplishment of strategic objectives
Operation	Reserve of talents	We set up the talent resume database, carried out a talent inventory, continuously explored recruitment channels, optimized the salary structure, and comprehensively enhanced the Company's attraction and employee satisfaction by combining the synergies of brand building and cultural promotion
	Supply chain	The Company enhances its right to speak in the industry chain through its technological advantages, signs medium- and long-term strategic agreements with suppliers, sets a safe inventory level for each production material, regularly reviews the rationality of the safe inventory level, and continuously evaluates suppliers' capacity and product quality to ensure stability of the supply chain.
	Information security	The Company has established its information security framework and management policy; implements the risk evaluation procedure for information security every year; and continuously monitors various key information through the DLP data protection system, to maintain the optimal interests of the Company, its shareholders, its customers, its suppliers, and its employees
	Research and development	The structured R&D closed-loop mechanism conducts comprehensive monitoring on R&D initiation, implementation, and post-evaluation and helps develop new products with commercial value continuously in a timely fashion

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Risk Category	Content	Countermeasures
Finance	Cash flow	Monthly cash flow statements record cash flows and dispatch the same to relevant departments for follow-up actions
	Exchange fluctuations	Transactions denominated in foreign currencies are settled in the same foreign currency whenever possible to reduce the need for foreign currency exchange, thus reducing risks arising from exchange rate fluctuations
Environment and Safety	Environment	We design management procedures based on our observation, assessment, and control of environmental factors and list major environmental factors
	Safety check	Safety checks focusing on troubleshooting and fault diagnosis are carried out continuously
	Occupational health	We have developed the goals, indicators, and program management forms for our environmental and occupational health and safety programs, in accordance with the Company's established goals, indicators, and program management procedures for health, safety, and environment ("HSE")

6 Community and Charity

Main Progress in 2021

Measures	Achievements
Organizing a volunteer team to actively participate in pandemic prevention and control	A total of 1,324 employees participated in volunteer service, with a total of 1,986 hours of service, increasing by 340% compared with 2020

Volunteer Service

We encourage our employees to serve the local community and express their solicitude, and we have established a volunteer team with a total of 1,324 volunteer services and 95 activities in 2021.

In 2021, the Company consolidated the "four protections" and continued to strictly implement the normalized pandemic prevention and control measures. During the 14-day quarantine for communities listed as intermediate-risk areas, employees actively responded to the call, and took the courage to assume their responsibilities to actively join the volunteer service team. Acting as volunteers, they helped maintain the order on the spot, delivered residents' living materials, and participated in pandemic prevention and control. The company has received many letters of appreciation for its contribution to the community's anti-pandemic work.

In addition, for a decade volunteers from the Company have persisted in regularly visiting the elderly in the nursing home every year, to chitchat, make wontons, and carry out activities, so as to entertain and care the elderly.

2021 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Joint Construction of Communities

In order to enhance the safety awareness of community residents, the Company has provided the “First Aid Course for Accidents” in the community where the headquarters operates, including First Aid knowledge and cardiopulmonary resuscitation, for four years. The Company is enthusiastic in public welfare undertaking, and persists in organizing voluntary blood donation every year. In 2021, there were a total of 219 blood donors from the Company.

Rural Revitalization

In response to the call of Huahong Group for partner assistance, the Company established a partner assistance relationship with Youqiao Village, Shuxin Town, Chongming District. We visited local villagers regularly to understand its progress in people’s livelihood, Party building, and comprehensive governance and to define the focus of our partner assistance work, so as to establish a long-term, stable, and comprehensive partner assistance relationship to effectively promote Youqiao Village’s development in all respects. The Company supports rural revitalization, cares for children in mountainous areas, and helps consolidate the achievements of poverty alleviation through public welfare education. The Company carried out the “Xinguang (芯光)” reading plan in Yangbi County, Yunnan Province, in which it donated the “Chinese Rainbow” library and actively carried out a “Xinyuedu (芯閱讀)” series of activities, with a total of 838 books donated.

7 Appendix

Social Recognitions

2021 Social Recognitions

No. Awards

No.	Awards
	National
1	Jiangsu May Day Labor Award Certificate
	Shanghai
2	First Prize for Shanghai Science and Technology Award
3	First Prize for 2021 Shanghai Key Product Quality Improvement Achievement Award
6	Shanghai IPR Innovation Award
5	2019-2020 Shanghai Role Model in Ethical and Cultural Progress
6	Shanghai May Day Labor Award Certificate
7	2020 Excellent Academician Workstation in Shanghai
8	Shanghai Model Enterprise for Corporate Social Responsibility Report
9	Shanghai March 8 Red Flag Collective

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Quantitative Performance

Environment

Performance Indicators	Unit	2019	2020	2021 ⁸
Emissions				
Total air emissions	10,000 m ³	1,257,074	1,773,740	2,319,307
Nitrogen oxide (NOx) emissions ¹	Kg	19,383	19,688	36,857
Sulfur dioxide (SO ₂) emissions ²	Kg	72.5	338	2,239
Total wastewater discharge	10,000 m ³	431	603	704
GHG emissions ³	Ton of CO ₂ equivalent	449,343	448,614	713,649
of which: Direct GHG emissions ⁴	Ton of CO ₂ equivalent	16,954	18,135	24,803
Indirect GHG emissions ⁵	Ton of CO ₂ equivalent	432,389	430,479	697,899
GHG emissions per unit output	Ton of CO ₂ equivalent/ 8-inch wafers	0.23	0.23	0.20
Total hazardous waste	Ton	5,013	9,262	17,363
Hazardous waste produced per unit output	Kg/8-inch wafers	2.57	3.96	4.96
Total non-hazardous waste ⁶	Ton	3,595	6,143	8,981
Non-hazardous waste produced per unit output	Kg/8-inch wafers	1.80	2.67	2.57
Use of Resources				
Total electricity consumed	MWh	528,044	720,840	867,682
Electricity consumed per unit product	kWh/8-inch wafers	271	313	248
Natural gas consumed	m ³	8,138,435	10,312,006	11,456,569
Natural gas consumed per unit product	m ³ /8-inch wafers	4.18	4.49	3.27
Total water consumed	m ³	7,724,830	9,907,631	13,207,829
of which: Water from municipal water supply	m ³	4,791,336	7,035,272	8,928,040
Wastewater reused	m ³	2,933,494	2,872,359	4,288,904
Water consumed per unit product ⁷	m ³ /8-inch wafers	2.46	2.89	2.55
Recycled/reused water	m ³	2,823,278	4,042,020	86,119,337
Total packaging materials used for the shipment of finished products	Ton	110	128	253.5
Packaging materials used for the shipment of per unit finished product	Kg/8-inch wafers	0.06	0.06	0.07
Total recycled packaging materials used for the shipment of finished products	Ton	8	22	48.5

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Notes:

- 1 NOx emissions come from the gasoline and diesel consumption by vehicles of the Company and are calculated in accordance with the Reporting Guidance on Environmental KPIs published by the Hong Kong Stock Exchange.
- 2 SOx emissions come from the gasoline and diesel consumption by vehicles of the Company and are calculated in accordance with the Reporting Guidance on Environmental KPIs published by the Hong Kong Stock Exchange.
- 3 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.
- 4 Sources of direct GHG emissions include natural gas, electric power, and diesel. The natural gas emission factor is determined in accordance with the Guideline for Calculation of Green Credit Energy Saving and Emission Reduction: If the energy saved is natural gas, the carbon dioxide emission factor is 2.17kg of carbon dioxide per standard cubic meter. The carbon dioxide emission factors of diesel and gasoline are determined in accordance with the Guideline for Calculation of Green Credit Energy Saving and Emission Reduction.
- 5 Sources of indirect GHG emissions include electricity and steam.
- 6 Non-hazardous waste is sludge produced in wastewater treatment.
- 7 In calculation, water consumed per unit product only includes water from the municipal water supply.
- 8 Due to the operation of all production bases of the Company at full capacity in the year and the inclusion of the information on Wuxi company, all environmental data, such as, the number of total air emissions, GHG emissions, total hazardous waste, total non-hazardous waste and total packing materials used for the shipment of finished products, increased in 2021, compared with 2020.

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Employment and Labor Practice

Performance Indicators	Unit	2019	2020	2021
Employment				
Total number of employees	Person	5,138	5,682	6,084
Including: Number of male employees	Person	3,720	4,164	4,426
Number of female employees	Person	1,418	1,518	1,658
Number of employees working under a labor contract with the employer	Person	5,138	5,682	6,084
Number of employees working under a labor contract with a labor dispatch company	Person	130	113	85
Part-time employees	Person	0	0	0
Number of employees aged under 30	Person	2,354	2,542	2,676
Number of employees aged between 30 and 50	Person	2,676	3,018	3,271
Number of employees aged above 50	Person	108	122	137
Number of employees from Mainland China	Person	5,129	5,673	6,075
Number of foreign employees	Person	9	9	9
Health and Safety				
Occupational disease incidence	%	0	0	0
Number of work-related fatalities	Person	0	0	0
Percentage of work-related fatalities	%	0	0	0
Lost days due to work injury	Day	23	235	367
Employee Training				
Average training hours completed per employee	Hour	99.5	100.1	119.9
Including: Average training hours completed per non-management employee	Hour	100.5	101.4	121.5
Average training hours completed per management member	Hour	33.6	18.3	23.5
Average training hours completed per female employee	Hour	87.7	96.8	123.8
Average training hours completed per male employee	Hour	104	101.3	118.5
Percentage of employees trained	%	100	100	100
Including: The percentage of non-management employees trained	%	100	100	100
Percentage of management member trained	%	100	100	100
Percentage of female employees trained	%	100	100	100
Percentage of male employees trained	%	100	100	100

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Product Responsibility and Customer Service

Performance Indicators	Unit	2019	2020	2021
Product Responsibility and Customer Service				
Product return rate	%	0.05	0.07	0.05
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	3	8	0
Percentage of customer complaints resolved	%	100	100	/

Supply Chain Management

Performance Indicators	Unit	2019	2020	2021
Supply Chain Management				
Total number of suppliers	Supplier	520	535	545
Total number of local suppliers	Supplier	393	399	410
Total number of foreign suppliers	Supplier	127	133	136
Number of suppliers assessed ¹	Supplier	112	110	115
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	%	26	28	29

Notes:

- 1 The number of suppliers which were assessed by the Company in terms of labor, health and safety, environment, and business ethics.
- 2 Raw materials purchased include silicon slices, quartz, target materials, gases, chemicals, and other raw materials for production.

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Anti-corruption

Performance Indicators	Unit	2019	2020	2021
Anti-corruption				
Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period	Case	0	0	0

Community Investment

Performance Indicators	Unit	2019	2020	2021
Community Investment				
Number of employees participating in volunteer services	Person	245	449	1,324
Total hours of volunteer activities	Hour	659	450	1,986

List of Regulations Observed by the Company

Fields	Names of Laws and Regulations
Environmental Responsibility	
Environmental Protection	<i>Environmental Protection Law of the People's Republic of China, Law of the People's Republic of China on Prevention and Control of Atmospheric Pollution, Urban and Rural Planning Law of the People's Republic of China, Marine Environment Protection Law of the People's Republic of China, Energy Conservation Law of the People's Republic of China, etc.</i>
Product Responsibility	
Product and Service	<i>Cyber Security Law of the People's Republic of China, Cryptography Law of the People's Republic of China, Accounting Law of the People's Republic of China, Regulation on the Administration of Commercial Cipher Codes, Company Law of the People's Republic of China, Constitution of the People's Republic of China, Law of the People's Republic of China on Product Quality, Customs Law of the People's Republic of China, Metrology Law of the People's Republic of China, Foreign Trade Law of the People's Republic of China, Anti-Unfair Competition Law of the People's Republic of China, Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals ("REACH"), Waste Electrical and Electronic Equipment (WEEE), Restriction of Hazardous Substances ("RoHS"), etc.</i>
Intellectual Property Protection	<i>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, etc.</i>
Responsibility for Employees	
Employee Employment	<i>Law of the People's Republic of China on Employment Contracts, Law of the People's Republic of China on Protection of Women's Rights and Interests, Employment Promotion Law of the People's Republic of China, Social Insurance Law of the People's Republic of China, Civil Code of the People's Republic of China, Labor Law of the People's Republic of China, Criminal Law of the People's Republic of China, Measures for the Administration of Health Insurance, Measures for Application for and Payment of Unemployment Insurance Money, etc.</i>
Occupational Health and Safety	<i>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, Regulation on Work-Related Injury Insurances, etc.</i>

2021 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Preparation of the Report

In the Environmental, Social, and Governance Report of Hua Hong Semiconductor Limited 2021 (the “Report”), key issues and opportunities of concern to stakeholders are identified through materiality analysis, and the Company’s actions and achievements in economic, social, and environmental aspects are disclosed to various stakeholders.

Scope of the Report

Organizational Scope: The Report covers Hua Hong Semiconductor Limited and its subsidiaries and is consistent with the scope of the annual consolidated financial statements of the Company.

Reporting Period: From 1 January 2021 to 31 December 2021

Basis of the Report

- Environmental, Social, and Governance Reporting Guide (2019) published by The Stock Exchange of Hong Kong Limited

Source

There are no material changes in the methods of obtaining and calculating the information in the Report, compared with annual reports for previous years. Data and cases in the Report originate from original records and financial reports of the Company generated in actual operations. In case of any inconsistency, data in the financial reports shall prevail. Unless otherwise specified, all the monetary amounts in the Report are denominated in RMB.

Reporting Principles

- **Materiality principle.** In the Report, important ESG issues affecting the sustainable development of the Company are identified and addressed, through online surveys of stakeholders, information analysis, etc. For details of the process and results of the materiality analysis, see *1.4 Identification and Analysis of Substantive Issues* in the Report.
- **Quantitative principle.** The Report discloses the basis of calculating the quantitative ESG KPIs and emissions of the Company. For details, see *Appendix Quantitative Performance* to the Report.
- **Consistency principle.** In the Report, the indicators used in different reporting periods are consistent as far as possible, and the changed indicators are explained, so as to reflect the trend of performance level.
- **Balance principle.** The Report reflects the objective facts and discloses positive and negative indicators.

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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」	本公司擬於二零二二年五月十二日舉行的股東週年大會；
「審核委員會」	董事會審核委員會；
「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；
「中國」	中華人民共和國，但僅就本年報及作地理參考而言，除文義另有所指，否則，本年報中對「中國」的提述不包括台灣、澳門特別行政區及香港；
「本公司」	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；
「公司秘書」	本公司公司秘書；
「董事」	本公司董事；
「EPS」	每股盈利；
「執行董事」	本公司執行董事；
「股東特別大會」	本公司股東特別大會；
「GDP」	國內生產總值；
「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；
「上海宏力」	上海宏力半導體製造有限公司，一家於二零零零年十二月二十日在中國註冊成立的公司，為本公司的全資子公司。已經於二零一八年八月三日註銷；

釋義

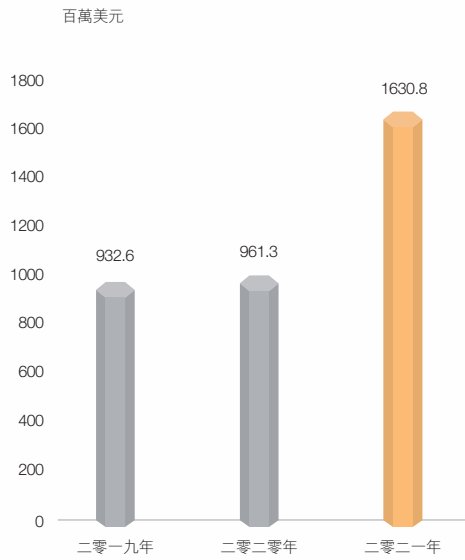
「本集團」	本公司及我們的子公司，或如文義所指為本公司成為我們現有子公司的控股公司之前期間(或成為本公司的該等聯營公司)，則指由該等子公司或其前身公司(視乎情況而定)所經營的業務；
「華虹宏力」	上海華虹宏力半導體製造有限公司，一家於二零一三年一月二十四日在中國註冊成立的公司，為本公司的全資子公司；
「華虹NEC」	上海華虹NEC電子有限公司，一家於一九九七年七月十七日在中國註冊成立的公司，為本公司的全資子公司。已經於二零一八年八月三日註銷；
「港元」	香港法定貨幣港元；
「虹日」	上海華虹虹日電子有限公司，前稱為上海虹日國際電子有限公司(直至二零二一年十二月十六日)，一家由華虹集團擁有51%的公司，為本公司關連人士；
「香港」	中華人民共和國香港特別行政區；
「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，為本公司重要股東；
「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；
「華力集成」	上海華力集成電路製造有限公司，一家於二零一六年八月八日在中國註冊成立的公司，股東為上海華力微電子有限公司、上海集成電路產業投資基金股份有限公司、國家集成電路產業投資基金股份有限公司；
「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。華虹無錫於註冊成立時由本公司的全資子公司華虹宏力擁有100%的權益。於合營協議及增資協議項下進行的交易完成後繼續由本集團持有51.0%的權益，其中22.2%由本公司直接持有及28.8%由本公司透過華虹宏力間接持有，而國家集成電路產業基金及無錫錫虹聯芯分別持有華虹無錫29.0%權益和20.0%權益；
「集成電路研發」	上海集成電路研發中心有限公司，一家於二零零二年在中國註冊成立的公司，為本公司關連人士；
「獨立非執行董事」	本公司獨立非執行董事；
「儀電集團」	上海儀電(集團)有限公司，前身為上海儀電控股(集團)有限公司，一家於一九九三年十二月在中國註冊成立的國有公司，於二零二零年十二月十七日之前為本公司控股股東；

釋義

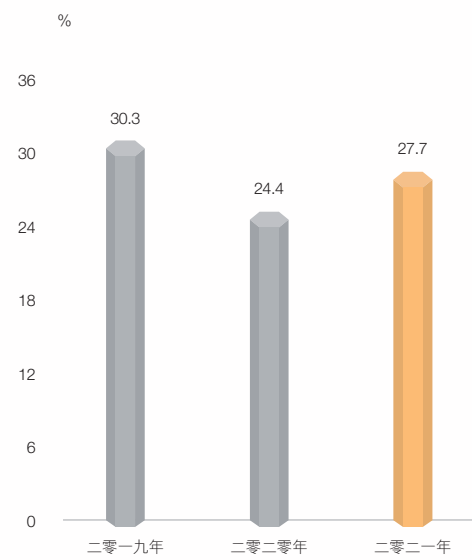
「合營協議」	本公司、華虹宏力、華虹無錫、國家集成電路產業基金及無錫錫虹聯芯於二零一八年一月三日訂立的合營協議；
「上市規則」	《香港聯合交易所有限公司證券上市規則》(經不時修訂或補充)；
「合併」	Grace Cayman與本公司在開曼群島組建的Hua Hong Semiconductor (Cayman) Inc.進行的合併；
「NEC」	NEC Corporation，一家於一八九九年在日本註冊成立及創立名為Nippon Electric Company, Limited的公司；
「提名委員會」	董事會提名委員會；
「非執行董事」	本公司非執行董事；
「矽睿科技」	上海矽睿科技有限公司，一家於二零一二年九月十三日在中國註冊成立的公司，於二零二零年九月一日之前為本公司的關連人士；
「薪酬委員會」	董事會薪酬委員會；
「人民幣」	中國法定貨幣人民幣；
「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)；
「上海艾為」	上海艾為電子技術股份有限公司，一家於二零零八年六月十八日在中國註冊成立的公司，其股份在上海證券交易所科創板上市(股份代號：688798)；
「上海華力」	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；
「股東」	本公司股本中普通股持有人；
「新微」	上海新微技術研發中心有限公司，一家於二零一三年五月在中國註冊成立的公司，為本公司關連人士；
「聯交所」	香港聯合交易所有限公司；及
「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。

主要財務指標

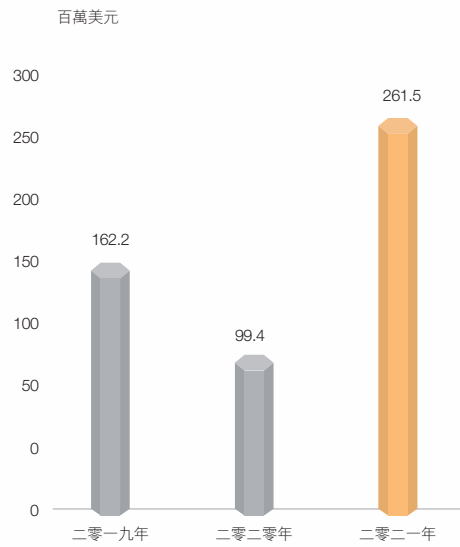
銷售收入



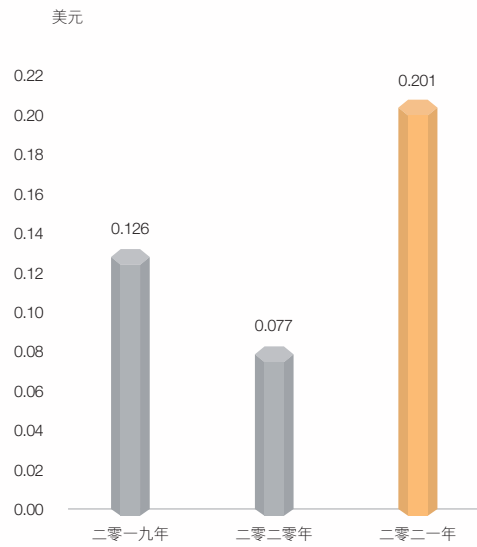
毛利率



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：

二零二一年是半導體行業大發展的一年，全球半導體銷售額首次突破5,000億美元，創歷史新高，中國仍是全球最大的半導體市場。由於全球經濟劇烈起伏、局部疫情反覆、供應鏈瓶頸以及汽車電子、新能源發電、東數西算、物聯網、智慧醫療等新興市場迎來全面增長等因素，導致芯片需求持續增高；國內優秀的設計公司初露鋒芒，同時也對本土製造的產能供應提出了更高要求。憑藉「IC + Power Discrete」正確清晰的發展戰略，華虹半導體在缺芯浪潮中把握發展機遇、加速擴產，綜合實力正在從量的積累邁向質的飛躍，深度滲透全球產業鏈，行業引領力顯著提升。

本報告期內，公司銷售收入創歷史新高，達16.308億美元，較二零二零年度增長69.6%。在原材料成本上漲和12英寸產線折舊計提的雙重壓力下，公司通過降本增效管理、產品價值升級等努力，實現了全年27.7%的毛利率，較上年度上升3.3個百分點。其中華虹半導體位於上海的三座8英寸生產線持續發揮傳統優勢，於第四季度首次超過了40%的毛利水平，展現出不可估量的商業價值。二零二一年，母公司擁有人應佔溢利2.615億美元，較上年度上升162.9%；淨資產收益率達9.7%，同比上升5.5個百分點。

二零二一年是華虹無錫12英寸晶圓廠投入運營的第三年，自二零二一年十月起，月投片量超6.5萬片，全年產能利用率均維持在100%以上。公司不斷將嵌入式非易失性存儲器、功率器件、模擬及電源管理和邏輯及射頻等技術平台從8英寸拓展到12英寸。作為全球第一條12英寸功率器件代工生產線，公司的功率器件產品在12英寸已通過IATF 16949汽車質量管理體系認證，各項電性參數均保持優異水平，為共同迎接電動化、智能化時代、汽車電子市場「芯」機遇時刻準備著。得益於12英寸工藝的穩定性，90納米BCD產品良率優異，為電機驅動、數字電源、數字音頻功放等芯片應用提供了更具競爭力的製造解決方案。

公司致力於先進特色工藝技術的持續創新，著眼於行業重點領域的專利佈局，以知識產權為抓手，圍繞嵌入式非易失性存儲器、功率器件、模擬及電源管理、邏輯及射頻等特色工藝平台打造研發核心競爭力。二零二一年，華虹半導體全資子公司上海華虹宏力半導體製造有限公司（「華虹宏力」）於第十八屆上海知識產權國際論壇，從眾多參評單位中脫穎而出，喜獲「第三屆上海知識產權創新獎（創造）」。截至二零二一年末，公司累計申請中國專利6,593項，獲得國家發明專利授權3,575件、國際專利授權147件。

致股東的信

二零二一年，公司研發的具有完全自主知識產權的NORD-Flash閃存單元重磅入市，再次證明了公司在嵌入式非易失性存儲器製造工藝領域的領先地位。該技術採用共享式選擇柵方式，大幅縮小了單元面積，且光刻層數極具業界競爭力。憑藉其在微控制器應用領域的突出優勢，該技術榮獲了由《中國電子報》頒發的「2021高可靠型MCU優秀(工藝)解決方案獎」。目前已有多款產品量產，為汽車電子、通信、物聯網、智慧醫療等熱點應用的快速發展提供有力的技術支持。

展望「十四五」，我國未來5年以及更長時期的發展對加快科技創新提出了更為迫切的要求。在「國內大循環、國內國際雙循環」相互促進的新發展格局下，二零二二年，我們將繼續致力於華虹無錫12英寸生產線的產能擴充，力爭於今年年底將總產能釋放至超過9萬片/月；同時做大做強「8英寸+12英寸」，加大先進特色工藝平台的研發投入，進一步升級技術節點、提升性能，打造差異化的先進「特色IC」；創新器件結構、建立車規級工藝，打造領先的「先進Power Discrete」。相信二零二二年會是公司駛入高質量發展快車道、跑出加速度的一年。

志之所趨，無遠弗屆。面向集成電路世界級產業集群建設，我們將不斷提升公司的領導力、穩定力和執行力，感謝長期以來一直關心、支持華虹半導體「芯」事業的投資人、客戶、及各界朋友，期待在新的發展征程中能繼續與您同行，攜手奮進，再創輝煌。

張素心先生
主席兼執行董事

唐均君先生
總裁兼執行董事

中國上海
二零二二年三月二十九日

公司資料

企業文化

願景

持續創新，
為全球客戶製造
「芯」夢想



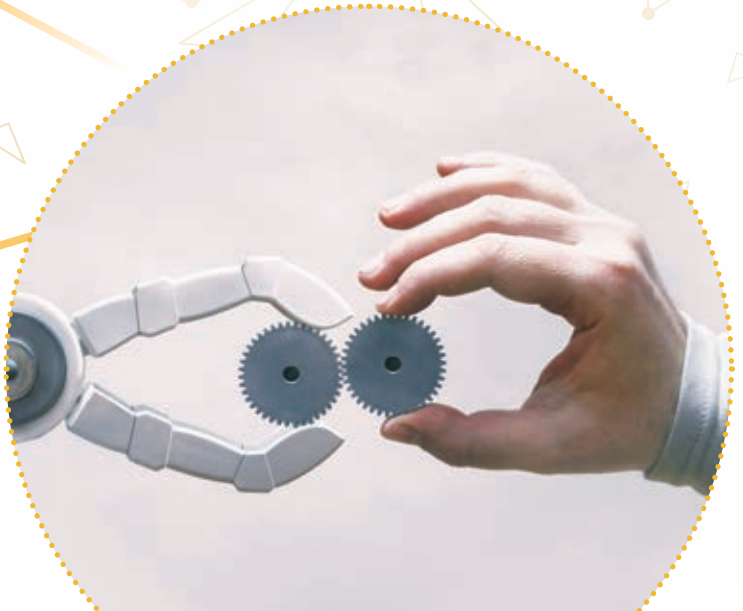
使命

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



企業精神

革新，自信
進取，團結



公司資料

董事會

執行董事

張素心 (主席)
唐均君 (總裁)

非執行董事

孫國棟
王靖
葉峻

獨立非執行董事

張祖同
王桂壘, 太平紳士
葉龍蜚

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)
葉龍蜚
葉峻

薪酬委員會

王桂壘, 太平紳士 (主席)
葉龍蜚
王靖

提名委員會

張素心 (主席)
王桂壘, 太平紳士
葉龍蜚

網址

www.huahonggrace.com

核數師

安永會計師事務所
執業會計師
香港
鰂魚涌英皇道979號
太古坊一座27樓

法律顧問

史密夫斐爾律師事務所
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
浦明路68號

中國建設銀行股份有限公司香港分行
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
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

公司資料

股份過戶登記處

卓佳證券登記有限公司
香港
皇后大道東183號
合和中心54樓

註冊辦事處

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

股份代號

1347

董事及高級管理層



張素心先生，58歲，於二零一六年三月十一日獲委任為本公司董事會主席兼執行董事及提名委員會成員兼主席。現擔任華虹集團董事長及黨委書記、上海華力董事長、華力集成董事長、華虹無錫法定代表人及董事長。張先生擁有豐富的高新技術產業戰略發展、能源戰略研究及發電設備製造業經驗，曾歷任上海汽輪機有限公司總裁、上海電氣電站集團執行副總裁、上海西門子燃氣輪機部件有限公司董事長、上海電氣集團股份有限公司執行董事、上海電氣(集團)總公司副總裁、上海金橋(集團)有限公司黨委書記、總經理、上海金橋出口加工區開發股份有限公司董事長及黨委書記、上海市發展和改革委員會副主任、上海市張江高新技術產業開發區管委會副主任等職務。張先生畢業於清華大學，擁有工學學士學位，為教授級高級工程師。



唐均君先生，57歲，於二零一九年五月起獲委任為本公司總裁兼執行董事。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上海華力黨委書記、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華力集成總裁。二零零八年七月至二零一零年二月期間，擔任華虹NEC黨委副書記、工會主席兼行政與政府關係總監。上海華力及華力集成均為上市規則所界定之本公司關連人士，華虹NEC於二零一八年八月撤銷註冊前為本公司全資子公司。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。

董事及高級管理層



孫國棟先生，45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，以及黨委組織部副部長及部長。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。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。



王靖女士，51歲，自二零一九年六月起為本公司非執行董事，現擔任華虹集團總裁及黨委副書記、上海華力副董事長、華力集成董事及華虹無錫董事。王女士擁有豐富的管理及經濟開發經驗。於二零零三年十二月至二零零七年十二月期間，王女士擔任上海市發展和改革委員會產業發展處副處長及自二零零七年十二月至二零一四年二月，彼擔任處長。自二零一四年二月至二零一八年五月，彼擔任中國（上海）自由貿易試驗區管委會副主任，同時於二零一五年七月至二零一八年五月期間擔任上海浦東新區副區長。彼自一九九二年至二零零三年亦曾任職於上海投資諮詢公司、上海市計劃委員會、上海市綜合經濟工作委員會及上海市發展計劃委。於加入本公司前，王女士自二零一八年五月至二零一九年五月擔任上海推進科技創新中心建設辦公室及上海市張江高新技術產業開發區管委會副主任。王女士於一九九二年畢業於上海交通大學，取得技術經濟專業學士學位。彼亦於二零零三年畢業於復旦大學，取得世界經濟專業碩士學位；正高級經濟師職稱。

董事及高級管理層



葉峻先生，49歲，自二零一二年二月起為本公司非執行董事。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、總經理助理及副總經理等職位，並於二零一八年五月起任上海聯和總經理。葉先生亦為上海銀行的董事，上海兆芯集成電路有限公司、上海宣泰醫藥科技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。



張祖同先生，73歲，為本公司獨立非執行董事。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。張先生亦為嘉里建設有限公司(股票代碼：683.HK)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)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。



王桂堦先生，70歲，銅紫荊星章獲得者，太平紳士，為本公司獨立非執行董事。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，香港按揭證券有限公司董事，維達國際控股有限公司(股票代碼：3331.HK)、中海油田服務股份有限公司(股票代碼：2883.HK及601808.SZ)及新創建集團有限公司(股票代碼：659.HK)的獨立非執行董事；並於香港大學、香港中文大學、香港城市大學及香港樹仁大學擔任名譽講師、校外評核委員及教授。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



葉龍蜚先生，80歲，為本公司獨立非執行董事。葉先生曾於上海市政府擔任多個職位；於一九九一年獲調派往香港，擔任「Shanghai Desk」(上海市政府與安達信公司為推廣上海而達成的一項合作安排)行政總裁至一九九五年；於一九九五年加入嘉里控股有限公司，並分別於二零零零年十月至二零零三年八月及二零零三年八月至二零零七年三月出任香格里拉(亞洲)有限公司的董事會主席及副主席；於二零零七年三月至二零一八年二月，擔任香格里拉(亞洲)有限公司顧問一職。葉先生畢業於上海復旦大學，獲物理學學士及碩士學位。



王鼎先生，59歲，於二零一二年二月起獲委任為公司董事會秘書。王先生亦為本公司執行副總裁，負責財務、信息科技、行政與合規、上市公司工作及外籍人事。王先生於二零零一年四月加入上海宏力，在公司的各個發展階段、合併的籌備與實施及本公司成功上市中起到核心領導作用。加入上海宏力之前，王先生於一九九五年八月至二零零一年三月在加利福尼亞硅谷聖何塞的LSI Logic Corporation擔任寬帶娛樂部部門主管。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；後於舊金山大學獲財務及銀行專業工商管理碩士學位。在國際權威財經雜誌Institutional Investor《機構投資者》所發佈的「亞洲(日本除外)執行團隊獎」榜單中，於2018年、2019年、2021年被評為科技／半導體行業版塊「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：

張素心先生，58歲，為本公司董事會主席兼執行董事。有關張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。

唐均君先生，57歲，為本公司總裁兼執行董事。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。



范恒先生，60歲，為本公司執行副總裁。范先生於二零一四年底加入本公司，此前，范先生於二零零三年至二零一四年擔任上海華虹計通智能系統股份有限公司董事及總經理。在此之前，范先生歷任中科院上海微系統與信息技術研究所研究員／副室主任、上海華虹集成電路有限責任公司副總經理等多項職務。范先生畢業於上海復旦大學，獲電子工程系微電子專業學士學位；後於中科院上海微系統與信息技術研究所獲半導體物理與半導體器件物理專業碩士學位；研究員職稱。

董事及高級管理層



周衛平先生，55歲，為本公司執行副總裁，負責市場銷售。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。



倪立華先生，53歲，為本公司執行副總裁，負責製造工程與安全管理，並兼任七廠廠長。倪先生於二零一八年五月加入華虹宏力。在加入公司之前，倪立華先生曾先後任職於無錫華晶集團公司，上海華虹微電子有限公司，華虹NEC，上海新進半導體製造有限公司部經理，華虹NEC部長，上海華力副廠長。倪立華先生畢業於西安電子科技大學，獲工學學士學位；後於上海交通大學獲工程碩士學位；高級工程師職稱。

王鼎先生，59歲，為本公司執行副總裁，負責財務、信息科技、行政與合規、上市公司工作及外籍人事。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。



孔蔚然博士，58歲，為本公司執行副總裁，負責技術研發與設計服務。孔博士於半導體領域擁有逾30年經驗，於二零零三年三月加入上海宏力，在推動NOR閃存、邏輯及嵌入式閃存領域的創新方面有良好往績。在加入上海宏力之前，孔博士在美國工作，先後任職於Sun Microsystems, Inc., LSI Logic Corporation及ISSI。孔博士畢業於天津南開大學，獲物理學士學位；後於美國俄勒岡科學理工研究學院獲電機工程學碩士及應用物理博士學位。孔博士擁有27項美國專利、67項中國專利，共同發表逾20篇技術論文。

董事及高級管理層



姚亮先生，56歲，為本公司副總裁，負責二廠運營。姚先生於半導體行業擁有逾30年工作經驗，於一九九七年八月加入華虹NEC。此前，姚先生自一九八七年至一九九六年十月效力於中國華晶電子集團公司。姚先生畢業於南京工學院，獲金屬材料工學學士學位；高級工程師職稱。



華光平先生，55歲，為本公司副總裁，負責一廠運營。華先生於半導體行業擁有近30年工作經驗，於二零零七年七月加入華虹NEC。此前，華先生先後效力於新加坡特許半導體製造有限公司和上海先進半導體製造股份有限公司。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。

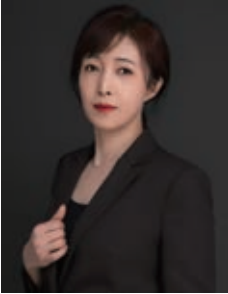


林俊毅先生，53歲，為本公司副總裁，負責三廠運營。林先生於半導體行業擁有近30年工作經驗，於二零零零年八月加入上海宏力。此前，林先生自一九九五年至二零零零年八月效力於台灣德基半導體製造有限公司（後與台灣集成電路製造股份有限公司合併）。林先生畢業於國立台灣科技大學（前稱國立台灣工業技術學院），獲化學工程學碩士學位；高級工程師職稱。



陳瑛女士，49歲，為本公司副總裁，負責綜合行政事務、企業形象傳播和合規工作。陳女士於二零零一年四月加入上海宏力，擁有近30年工作經驗。此前，陳女士任職於上海復華實業股份有限公司。陳女士畢業於復旦大學，獲法學學士學位；後於中國人民大學獲管理學碩士學位；高級經濟師職稱。

董事及高級管理層



程莉女士，50歲，為本公司副總裁，負責人力資源。程女士於二零零二年八月加入上海宏力，擁有逾26年工作經驗。此前，程女士曾任職上海展訊通信有限公司。程女士畢業於查爾斯·斯德特大學，獲工商管理碩士學位；高級經濟師職稱。



林宏哲博士，60歲，為本公司副總裁，負責北美及日本銷售。林博士曾於美國幾家領先的半導體公司擔任多個非易失性內存技術開發職務，於二零零六年八月加入上海宏力。林博士於美國加州理工學院獲電機工程學博士學位。



Mirko Sonntag先生，45歲，為本公司副總裁，負責歐洲銷售及銷售營運與服務。Sonntag先生擁有需求及供應鏈規劃及業務營運等方面的專業知識，在業務發展方面具備紮實基礎，於二零零八年十月加入上海宏力。此前，Sonntag先生任職於德國英飛凌科技公司。Sonntag先生畢業於德國柏林應用技術大學和柏林經濟學院，獲程序工程及經濟學文憑。



姚洪斌先生，49歲，為本公司副總裁，負責國內銷售，於一九九七年一月加入上海華虹微電子有限公司。在加入公司之前，姚洪斌先生曾先後任職於中穎電子(上海)有限公司、上海華虹微電子有限公司、華虹NEC，在華虹NEC期間曾被委派到日本NEC研修兩年。姚洪斌先生畢業於上海大學，獲通信專業學士學位；工程師職稱。



李鴻女士，50歲，為本公司副總裁，負責採購物流。李女士於二零二零年八月加入華虹宏力，擁有逾30年工作經驗。此前，李女士曾任職華虹NEC、上海華力、華力集成。李女士畢業於中國解放軍外國語學院，獲文學學士學位；翻譯職稱。

董事及高級管理層

公司秘書



李瑞霞女士，44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(如協助企業股份於聯交所上市、併購、資本重組及聯交所上市規則相關合規及監管事務)擁有約15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二零二一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十四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

截至二零二一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十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二零二一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。

董事會現時共有八名董事，當中包括兩名執行董事張素心先生（主席）及唐均君先生（總裁），三名非執行董事葉峻先生、王靖女士、孫國棟先生以及三名獨立非執行董事張祖同先生、王桂壩先生、太平紳士及葉龍蜚先生。有關各董事的更多詳情在本年度報告第113至116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。

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。

截至二零二一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(1)、(2)條及第3.10A條的規定，委任最少三名獨立非執行董事，獨立非執行董事佔董事會成員人數至少三分之一；其中至少一名獨立非執行董事必須具備適當的專業資格，或具備適當的會計或相關的財務管理專長。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符合上市規則第3.13條所載的獨立性指引，根據指引條款均屬於獨立人士。

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。

企業管治報告

董事會的運作

截至二零二一年十二月三十一日止年度，董事會曾舉行五次董事會會議。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	5	不適用	1	不適用	1	0
唐均君	5	不適用	不適用	不適用	1	1
非執行董事						
葉峻	4 (附註)	4	不適用	不適用	0	0
王婧	5	不適用	不適用	1	1	1
孫國棟	5	不適用	不適用	不適用	0	0
獨立非執行董事						
張祖同	5	5	不適用	不適用	1	1
王桂壘, 太平紳士	5	不適用	1	1	1	1
葉龍蜚	5	5	1	1	1	1

附註：張素心作為葉峻的替補董事出席了二零二一年十一月十一日的董事會。

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A.1.7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。

企業管治報告

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A.6.5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。截至二零二一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。

截至二零二一年十二月三十一日止年度，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
張素心(主席)	✓
唐均君(總裁)	✓
葉峻	✓
王靖	✓
孫國棟	✓
張祖同	✓
王桂壘, 太平紳士	✓
葉龍蜚	✓

薪酬委員會

薪酬委員會現時成員包括一名非執行董事王靖女士及兩名獨立非執行董事王桂壘先生，太平紳士及葉龍蜚先生。薪酬委員會主席為王桂壘先生，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。

二零二一年九月八日，薪酬委員會以書面決議方式審議通過了一份關於建議修訂期權的條款及建議更新股票期權計劃限額的決議，這些建議獲董事會接納並於同年十一月二十六日的股東特別大會上通過。二零二一年十一月十一日，薪酬委員會與提名委員會一起召開了一次會議，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。

各董事的薪酬詳情已列於財務報表附註8。

企業管治報告

提名委員會

提名委員會現時成員包括一名執行董事張素心先生及兩名獨立非執行董事王桂壘先生，太平紳士及葉龍蜚先生。提名委員會主席為張素心先生。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。

二零二一年十一月十一日，薪酬委員會與提名委員會一起召開了一次會議，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。

根據本公司的組織章程細則（「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。

核數師的薪酬

截至二零二一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68萬美元及8萬美元。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

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葉峻先生及兩名獨立非執行董事張祖同先生及葉龍蜚先生。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。

截至二零二一年十二月三十一日止年度，審核委員會已舉行五次會議，成員均出席會議。審核委員會於截至二零二一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、審查截至二零二一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、審查截至二零二一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。

董事會成員多元化政策概要

董事會採納董事會成員多元化政策（該「政策」），以遵守守則條文第A.5.6條。

該政策旨在列載本公司董事會為達致成員多元化而採取的方針，並不適用於本公司僱員，或本公司的子公司的董事會或僱員的多元化。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。本公司致力在與業務增長有關的董事會多元化範疇，維持適當平衡。

於截至二零二一年十二月三十一日止年度，薪酬委員會認為在相當程度上達致可計量目標。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。

企業管治報告

企業管治職能

董事會負責執行該守則內第D.3.1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。

投資者關係

本公司提供網站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、股東權益及通訊政策、企業管治常規、向香港聯交所發放的公告、通函及報告，以及其他資訊。本公司網站www.huahonggrace.com上的資訊將不時更新。

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。

截至二零二一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。

股東的權利

本公司以多種正式渠道，確保其業績及活動獲公平及全面而透明的披露。該等渠道包括季度報告、中期報告、年度報告、公告及通函。

本公司的股東大會是董事會與股東之間的主要溝通渠道。本公司鼓勵其股東出席及參與股東大會，以確保高問責水平，以及使股東保持對本公司的策略及目標的了解。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。

企業管治報告

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二十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
電子郵箱：IR@hhgrace.com

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。

企業管治報告

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。

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	<p>業務部門</p> <ul style="list-style-type: none"> • 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; <p>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;</p>
第二線	<p>業務監督管理部門</p> <ul style="list-style-type: none"> • 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; <p>對風險管理的準確性和有效性進行分析和報告;</p>
第三線	<p>內部審計條線</p> <ul style="list-style-type: none"> • 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; <p>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;</p> <ul style="list-style-type: none"> • 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C.2條款規定，每半年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。在編製截至二零二一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197至204頁的獨立核數師報告內。

代表董事會
張素心先生
主席

董事會報告

董事會謹提呈本公司二零二一年年度報告和二零二一年一月一日至二零二一年十二月三十一日經審核的財務報表（「財務報表」）。

主要業務

截止二零二一年底，華虹半導體是一家兼具200毫米與300毫米的純晶圓代工企業，主要基於自有的半導體差異化技術為客戶提供晶圓製造服務。本公司於二零二零年順利完成技術研發計劃與300毫米晶圓量產，並於二零二一年實現加速擴大300毫米生產產能計劃，以適應強勁的市場需求。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213至214頁）。

業務回顧

營收分析

華虹半導體二零二一年度營業收入為16.308億美元，較上一年度有較大幅度增長，達到69.6%。截至二零二一年末，公司已連續四十四個季度保持盈利。良好的業績表現主要受益於公司的產能擴充及強勁的市場需求。二零二一年，產業升級帶來的結構性增量，疫情帶來的遠程連接相關的更多需求，供應鏈轉移帶來本地化的生產偏好，汽車電子、新能源發電、東數西算、物聯網、智慧醫療等應用的迅猛崛起，導致了半導體產業鏈的供不應求和量價齊升，促成了華虹半導體的高速發展。為滿足龐大且多樣的市場需求，公司八英寸產品組合持續優化、十二英寸產線持續擴產，差異化工藝技術開發在十二英寸產線上加速運行。二零二一年，公司嵌入式存儲器、分立器件、邏輯及射頻平台均表現出了較高的增長，他們將在二零二二年繼續為股東及市場創造價值。

按服務劃分營業收入

	二零二一年 千美元	二零二一年 %	二零二零年 千美元	二零二零年 %	同比變化 千美元	同比變化 %
半導體晶圓	1,561,846	95.8%	926,684	96.4%	635,162	68.5%
其他	68,908	4.2%	34,595	3.6%	34,313	99.2%
合計	1,630,754	100.0%	961,279	100.0%	669,475	69.6%

- 二零二一年，公司95.8%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

	二零二一年 千美元	二零二一年 %	二零二零年 千美元	二零二零年 %	同比變化 千美元	同比變化 %
系統公司和無廠芯片設計公司	1,496,782	91.8%	814,410	84.7%	682,372	83.8%
整合器件製造商(IDMs)	133,972	8.2%	146,869	15.3%	(12,897)	(8.8)%
合計	1,630,754	100.0%	961,279	100.0%	669,475	69.6%

- 公司來自系統公司和無廠芯片設計公司客戶類型的營業收入佔比91.8%。

董事會報告

按區域劃分營業收入

	二零二一年 千美元	二零二一年 %	二零二零年 千美元	二零二零年 %	同比變化 千美元	同比變化 %
中國	1,205,149	73.9%	624,407	64.9%	580,742	93.0%
亞洲其他區域	169,227	10.4%	121,885	12.7%	47,342	38.8%
北美區	159,281	9.8%	121,642	12.7%	37,639	30.9%
歐洲區	70,627	4.3%	66,149	6.9%	4,478	6.8%
日本區	26,470	1.6%	27,196	2.8%	(726)	(2.7)%
合計	1,630,754	100.0%	961,279	100.0%	669,475	69.6%

- 二零二一年中國是公司營收最大、營收增速最快的市場，營收同比增長93.0%。

按技術類型劃分營業收入

	二零二一年 千美元	二零二一年 %	二零二零年 千美元	二零二零年 %	同比變化 千美元	同比變化 %
嵌入式非易失性存儲器	459,104	28.2%	334,663	34.8%	124,441	37.2%
獨立式非易失性存儲器(NVM)	88,796	5.4%	11,711	1.2%	77,085	658.2%
分立器件	557,893	34.2%	353,019	36.8%	204,874	58.0%
邏輯與射頻	272,053	16.7%	124,952	13.0%	147,101	117.7%
模擬與電源管理(PM)	250,466	15.4%	135,581	14.1%	114,885	84.7%
其他	2,442	0.1%	1,353	0.1%	1,089	80.5%
合計	1,630,754	100.0%	961,279	100.0%	669,475	69.6%

- 二零二一年嵌入式非易失性存儲器技術保持增長，其中MCU產品持續表現亮麗的業績成長。
- 二零二一年，分立器件營收同比增長58.0%，仍是公司第一大業務板塊。
- 邏輯與射頻工藝平台營收快速增長117.7%，主要得益於12英寸CMOS圖像傳感器(CIS)產品規模量產。
- 模擬與電源管理營收增長84.7%，主要得益於12英寸技術平台規模量產。

董事會報告

按工藝節點劃分營業收入

	二零二一年 千美元	二零二一年 %	二零二零年 千美元	二零二零年 %	同比變化 千美元	同比變化 %
55納米及65納米	157,854	9.7%	6,692	0.7%	151,162	2,258.8%
90納米及95納米	280,235	17.2%	100,315	10.4%	179,920	179.4%
0.11微米及0.13微米	302,920	18.6%	229,965	24.0%	72,955	31.7%
0.15微米及0.18微米	164,260	10.1%	141,317	14.7%	22,943	16.2%
0.25微米	22,926	1.4%	16,536	1.7%	6,390	38.6%
≥0.35微米	702,559	43.0%	466,454	48.5%	236,105	50.6%
合計	1,630,754	100.0%	961,279	100.0%	669,475	69.6%

- 來自55納米及65納米工藝節點的營收高速增長，主要由於獨立式非易失性存儲器、CIS和邏輯與射頻產品的貢獻。
- 來自90納米及95納米工藝節點的營收快速增長，主要由於圖像傳感器、智能卡芯片、MCU和電源管理芯片的貢獻。
- 來自0.35微米工藝節點的營收增長50.6%，主要由於功率分立器件的貢獻。

按終端市場劃分營業收入

	二零二一年 千美元	二零二一年 %	二零二零年 千美元	二零二零年 %	同比變化 千美元	同比變化 %
消費電子	1,039,325	63.7%	594,087	61.8%	445,238	74.9%
工業和汽車電子	316,194	19.4%	203,890	21.2%	112,304	55.1%
通信	218,946	13.4%	127,413	13.3%	91,533	71.8%
計算	56,289	3.5%	35,889	3.7%	20,400	56.8%
合計	1,630,754	100.0%	961,279	100.0%	669,475	69.6%

- 二零二一年公司的營業收入中各終端市場均呈現較好的增長。

董事會報告

晶圓廠(千片晶圓每月)	產能及產能利用率		
	二零二一年	二零二零年	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)	60	20	40
產能利用率(折合8英寸晶圓)	107.5%	92.7%	14.8%

- 二零二一年度折合8英寸晶圓產能利用率107.5%。

千片晶圓	付運晶圓		
	二零二一年	二零二零年	同比變化
付運晶圓(折合8英寸晶圓)	3,328	2,191	51.9%

- 二零二一年公司付運晶圓同比上升51.9%。

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，主要聚焦於嵌入式非易失性存儲器、分立器件(Discrete)、模擬(Analog)和電源管理、及邏輯(Logic)與射頻等差異化技術，持續為客戶提供滿足市場需求的特色工藝技術和服務。二零二一年，華虹半導體「8英寸+12英寸」戰略部署更加完善，「IC + Power Discrete」戰略繼續在12英寸工藝平台繼續延伸。

嵌入式非易失性存儲器相關的技術平台依然是華虹半導體二零二一年主要營收來源之一，主要包括智能卡芯片和微控制器兩大類芯片應用。智能卡方面，具有自主知識產權的90納米嵌入式閃存技術在相關智能卡產品領域順利轉移到12英寸工廠，平台競爭力保持在較高水平，出貨量增長迅猛。在微控制器方面，受益於12英寸產能的加入，二零二一年嵌入式閃存MCU銷售額繼續兩位數增長，二零一四年至二零二一年銷售額年複合增長率與出貨量年複合增長率均保持兩位數增長。行業領先的0.11微米及具備自主知識產權的90納米低功耗及超低漏電嵌入式閃存工藝平台受到全球客戶的廣泛認可，新產品導入數量持續強勁增長，可應用在通用型MCU、Type-C接口控制芯片、觸控芯片、智能電表控制芯片、高可靠性汽車電子等領域。90納米嵌入式閃存工藝平台也將進一步優化，以更好的滿足各式MCU及智能卡芯片市場的需求。同時，具備自主知識產權的55納米高速MCU嵌入式閃存工藝平台順利完成開發並進入量產。更加豐富且細化的嵌入式閃存工藝平台佈局，提升競爭力的同時並提供客戶更好的差異化工藝服務及產能支持。

董事會報告

二零二一年，公司功率分立器件工藝平台受益於新能源車及配套基礎設施市場的爆發式增長，家電、通訊及工業領域國產替代率的逐步提高，功率器件下各分支產品線均表現出了極強的增長潛力。持續耕耘多年的特色技術獲得了豐厚回報，其中以絕緣柵雙極型晶體管(IGBT)技術最為亮眼，已連續七年保持高增長。其在大電流、高可靠性、小尺寸等各方面全力優化之下，在電動車主逆變器以及配套充電樁相關領域展示出了極強的競爭力。另一方面，下一代通信市場、物聯網以及雙碳經濟推升的新能源等新興市場領域也已進入發展期，其對功率器件的需求也加速增長。相關應用對轉換效率的高要求則推動了公司雙擴散金屬氧化物半導體／屏蔽柵(DMOS/SGT)技術向更小線寬、更低導通電阻的方向發展，目前為國內行業領先地位。在消費類領域，手機與筆記本電腦等大功率快充對USB Power Delivery(PD)的兼容助推了公司在Super Junction(SJ)超級結金屬氧化物半導體場效應晶體管(MOSFET)技術的發展，特色的新一代深溝槽(Deep-Trench)技術積累了豐富的量產經驗和良好的客戶口碑，成功進入數據中心電源以及新能源車車載充電機(OBC)與充電樁等應用領域。新一代IGBT技術研發順利，量產產品亦進入新能源車主逆變器以及光伏、風能等新能源市場。在12英寸功率器件方面，已完成公司現有四大功率分立器件技術(DMOS/SGT/SJ/IGBT)從8英寸到12英寸的技術升級，並實現批量穩定供貨，其中IGBT及SJ出貨量對財務業績的貢獻尤為突出，為分立器件產品線持續高速增長、滿足市場需求提供了有力保障。

隨著便攜智能硬件種類與應用場景的不斷增多，移動應用對電源管理芯片供應與性能需求的不斷增強，華虹半導體模擬與電源管理技術平台在技術佈局與客戶積累方面加速發展。二零二一年BCD工藝平台出貨量實現三位數增長，工藝範圍涵蓋中低壓、高壓及超高壓產品。在模擬電源與電機驅動等芯片應用領域，公司開發的8英寸0.18微米新一代BCD工藝技術平台，快速上量，性能指標匹配業界先進水平。在數字電源、數字音頻功放等芯片領域，推出了更佳電性參數的12英寸90納米BCD平台，成功進入量產階段。超高壓品類，在照明控制與工業及家用電機驅動芯片領域，則開發有600-700伏BCD工藝平台，受到本土需求的強勁牽引及工藝的成熟與完善，以600伏BCD工藝平台增長最為顯著。

除上述主要技術平台之外，華虹半導體仍不斷拓展新的差異化技術領域。隨著智能手機、可穿戴硬件、汽車電子等應用對半導體產品性能要求不斷提高，公司持續加強了射頻、標準式存儲器、圖像傳感器等工藝平台的研發，並在二零二一年取得豐碩回報。專利方面，公司全年申請618項，累計獲得中美發明授權專利超過3,800件。公司承諾持續創新並為客戶提供豐富的特色工藝平台選擇、廣泛的IP支持。

在創新和優化現有8英寸技術的同時，作為華虹半導體走出上海，融入和服務長三角一體化戰略的重要一步，與江蘇省無錫市合作成立華虹無錫。經過二零二一年的努力，一期項目產能快速提高，月產能達到6萬片；導入產品快速增長，人才儲備加速擴充，全面完成了既定的階段性研發與產能建設目標，成為二零二一年公司業績最為重要的增長引擎。無錫項目於二零二一年的優異表現全面回應了「8英寸+12英寸」戰略定位，也為二零二二年的繼續擴產提供了基礎，公司將在未來向市場提供更強大的供應保障。

董事會報告

展望

展望二零二二年，全球經濟將穩中求進。根據國際貨幣基金組織(IMF)發佈《世界經濟展望報告》的最新預測，二零二二年全球國內生產總值(GDP)增長率預計為4.4%，中國GDP增速預計達到4.8%。受到新一代通信、新能源和新能源汽車等新興市場有力牽引，終端應用半導體含量不斷提高，全球半導體零部件需求仍將保持旺盛。但受限於全球晶圓製造產能，半導體市場供應緊張情況預期仍將主導二零二二年全球半導體市場。受惠於中國積極的疫情管控政策，讓本土供應鏈獲得了良好的運行環境與市場動能，並最終以更加穩健的姿態為全球提供優質的產品，公司新一年的業績增長也將更加強勁。

二零二二年，華虹半導體(無錫)有限公司12英寸生產平台將持續擴增產能。更加豐富，先進的特色工藝將持續成為公司業績的增長引擎。產能方面，由於全球半導體零部件供應緊張仍將持續，公司將發揮好「8英寸+12英寸」戰略，進一步加快現有8英寸平台優化及12英寸平台擴產，全力保障市場需求。產品方面，公司全部晶圓廠均已覆蓋IATF16949質量體系認證，將在二零二二年繼續深化推動汽車電子產品線，抓住本土汽車市場供應鏈對半導體零部件需求爆發的市場機遇。工藝研發方面，積極推進40納米基礎邏輯射頻工藝研發，並在55納米eFlash工藝平台量產基礎上，推進40納米eFlash工藝前期研發，其更加優秀的性能與功耗指標使得eFlash平台應對MCU市場應用更具競爭力。功率分立器件領域，隨著12英寸超級結與IGBT工藝平台的完善與優化，行業配套愈加成熟，業績增長越加穩健，新一代技術的研發與落實將強化客戶產品競爭力以及覆蓋更多終端市場。電源管理IC領域，12英寸90納米BCD平台進入收穫期，隨著量產客戶增多，產能擴充節奏加快，業績貢獻能力也將越來越強。其他平台領域，12英寸生產平台擴展了公司在更小節點上的發展通路，我們將把差異化特色工藝向更先進節點持續推進。

二零二二年，對公司來說仍將是挑戰與機遇並存的一年。公司仍將堅定不移地專注於推進差異化戰略，原有「IC+Power Discrete」的產品佈局將在「8英寸+12英寸」生產平台的助力下更加枝繁葉茂，應對全球市場發展的需求。華虹半導體將繼續保持客戶深度信任、高度投資價值的特色工藝晶圓代工企業地位。

董事會報告

管理層討論及分析

財務表現

	二零二一年 千美元	二零二零年 千美元	變動
銷售收入	1,630,754	961,279	69.6%
銷售成本	(1,179,156)	(726,486)	62.3%
毛利	451,598	234,793	92.3%
其他收入及收益	60,758	57,313	6.0%
投資物業的公平值收益	183	198	(7.6)%
銷售及分銷費用	(10,673)	(8,169)	30.7%
管理費用	(198,920)	(261,139)	(23.8)%
其他費用	(165)	(10)	1,550.0%
財務費用	(13,226)	(2,968)	345.6%
分佔聯營公司溢利	6,765	26,059	(74.0)%
稅前溢利	296,320	46,077	543.1%
所得稅開支	(65,349)	(12,762)	412.1%
年內溢利	230,971	33,315	593.3%
下列人士應佔：			
母公司擁有人	261,476	99,443	162.9%
非控股權益	(30,505)	(66,128)	(53.9)%

銷售收入

銷售收入創歷史新高，達16.308億美元，較上年度增長69.6%，乃由於付運晶圓增加及平均銷售價格上漲所致。

銷售成本

銷售成本為11.792億美元，較二零二零年增長62.3%，主要由於付運晶圓及折舊費用增加所致。

毛利

毛利為4.516億美元，較二零二零年增長92.3%，主要由於平均銷售價格上漲，產能利用率提升以及產品組合優化，部分被折舊費用增加所抵銷。

董事會報告

其他收入及收益

其他收入及收益為6,080萬美元，較二零二零年增加6.0%，主要由於外匯匯兌收益增加所致。

銷售及分銷費用

銷售及分銷費用為1,070萬美元，較二零二零年增加30.7%，主要由於人工費用增加所致。

管理費用

管理費用為1.989億美元，較二零二零年下降23.8%，主要由於研發開支下降以及研發活動政府補助增加所致。

其他費用

其他費用為20萬美元，二零二零年為1萬美元。

財務費用

財務費用為1,320萬美元，較二零二零年增加345.6%，主要由於銀行借款增加所致。

分佔聯營公司溢利

分佔聯營公司溢利為680萬美元，較二零二零年減少74.0%，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6,530萬美元，較二零二零年增加412.1%，主要由於應課稅溢利增加所致。

年內溢利

在上述因素的累計影響下，年內溢利由二零二零年的3,330萬美元增至2.310億美元。淨利率為14.2%，而二零二零年為3.5%。

董事會報告

財務狀況

	二零二一年 十二月三十一日 千美元	二零二零年 十二月三十一日 千美元	變動
非流動資產			
物業、廠房及設備	3,116,501	2,510,442	24.1%
投資物業	184,883	180,476	(4.9)%
使用權資產	75,331	79,221	2.4%
於聯營公司的投資	122,040	105,218	16.0%
指定按公平值計入其他全面收益的權益工具	257,788	230,265	12.0%
其他非流動資產	54,364	56,706	(4.1)%
非流動資產總額	3,810,907	3,162,328	20.5%
流動資產			
存貨	432,917	226,476	91.2%
貿易應收款項及應收票據	181,042	120,952	49.7%
應收關聯方款項	6,910	4,706	46.8%
其他流動資產	157,935	130,979	20.6%
已凍結及定期存款	2,248	359	526.2%
現金及現金等價物	1,610,140	922,786	74.5%
流動資產總額	2,391,192	1,406,258	70.0%
流動負債			
貿易應付款項	194,385	130,980	48.4%
計息銀行借款	195,024	47,784	308.1%
應付關聯方款項	7,501	12,647	(40.7)%
政府補助	66,837	58,926	13.4%
其他流動負債	616,654	414,711	48.7%
流動負債總額	1,080,401	665,048	62.5%
流動資產淨額	1,310,791	741,210	76.8%
非流動負債			
計息銀行借款	1,395,279	518,391	169.2%
租賃負債	16,137	17,405	(7.3)%
遞延稅項負債	25,735	13,621	88.9%
非流動負債總額	1,437,151	549,417	161.6%
資產淨額	3,684,547	3,354,121	9.9%

董事會報告

就二零二零年十二月三十一日至二零二一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25.104億美元增至31.165億美元，主要由於華虹無錫產能擴充所致。

於聯營公司的投資

於聯營公司的投資由1.052億美元增至1.220億美元，主要由於增加對一家聯營公司的投資及分佔聯營公司溢利所致。

指定按公平值計入其他全面收益的權益工具

指定按公平值計入其他全面收益的權益工具由2.303億美元增至2.578億美元，主要由於公平值上升及購置權益工具所致。

存貨

存貨由2.265億美元增至4.329億美元，主要由於客戶需求增加所致。

貿易應收款項及應收票據

貿易應收款項及應收票據由1.210億美元增至1.810億美元，主要由於銷售收入增加所致。

應收關聯方款項

應收關聯方款項由470萬美元增至690萬美元，主要由於一家關聯方的應收款項增加所致。

其他流動資產

其他流動資產由1.310億美元增至1.579億美元，主要由於預付款項增加所致。

已凍結及定期存款

已凍結及定期存款由40萬美元增至220萬美元，主要由於已抵押存款增加所致。

現金及現金等價物

現金及現金等價物由9.228億美元增至16.101億美元，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1.310億美元增至1.944億美元，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1,260萬美元減少至750萬美元，主要由於確認一家關聯方的租金收入所致。

政府補助

政府補助由5,890萬美元增至6,680萬美元，主要由於獲得的政府補助增加所致。

董事會報告

其他流動負債

其他流動負債由4.147億美元增至6.167億美元，主要由於客戶預收款、應付所得稅及應付職工薪酬增加所致。

計息銀行借款

計息銀行借款總額由5.662億美元增至15.903億美元，乃由於提取銀行借款所致。

遞延稅項負債

遞延稅項負債由1,360萬美元增至2,570萬美元，主要由於預估分派股息之代扣代繳稅金增加所致。

現金流量

	二零二一年 千美元	二零二零年 千美元	變動
經營活動所得現金流量淨額	518,471	269,110	92.7%
投資活動所用現金流量淨額	(863,059)	(405,661)	112.8%
融資活動所得現金流量淨額	1,014,640	540,427	87.7%
現金及現金等價物增加淨額	670,052	403,876	65.9%
年初現金及現金等價物	922,786	476,286	93.7%
外匯匯率變動影響，淨額	17,302	42,624	(59.4)%
年末現金及現金等價物	1,610,140	922,786	74.5%

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5.185億美元，較二零二零年增加92.7%，主要由於銷售收入增加，部分被(i)材料及人工費用支出增加，及(ii)收到增值稅退稅款減少所抵銷。

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8.631億美元，主要由於(i)資本投資9.389億美元，(ii)於一家聯營公司投資740萬美元，及(iii)權益工具投資630萬美元，被(i)收到政府補助8,360萬美元，及(ii)利息收入590萬美元所抵銷。

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10.146億美元，包括(i)銀行借款所得款項10.708億美元，及(ii)發行股份所得款項740萬美元，被(i)償還銀行借款4,790萬美元，(ii)利息付款1,170萬美元，及(iii)支付租賃付款的本金部份400萬美元所抵銷。

現金及現金等價物增加淨額

在上述因素的累計影響下，現金及現金等價物由截至二零二零年十二月三十一日的9.228億美元增至截至二零二一年十二月三十一日的16.101億美元。

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。

於二零二一年十二月三十一日，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780萬美元，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。於二零二一年十二月三十一日，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4,820萬美元。

信用風險

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凍結及定期存款的賬面值。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

本集團截至二零二一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205至208頁的財務報表。

末期股息

鑒於本公司「8英寸+12英寸」的戰略規劃及全球經濟受新冠肺炎疫情等多重因素影響的不確定性，本公司秉承穩健、謹慎、對股東負責的態度，以及立足可持續經營、長遠發展的原則，董事會不建議派付截至二零二一年十二月三十一日止年度之任何股息（二零二零年：無）。本公司將保持足夠的現金來持續其投資活動，為股東謀取最大利益。

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

截至二零二一年十二月三十一日，本公司並無可供分派儲備可供分派予股東。

銀行貸款

本集團截至二零二一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。

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324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二零二一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及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

董事會報告

報告期後重大事項

本集團於二零二一年十二月三十一日後概無發生任何重大期後事項。

股本及購股權計劃

本公司截至二零二一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。

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。
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至二零二二年九月一日止的七(7)年。

於本報告日期,購股權計劃項下可供發行的股份總數為29,109,435股,佔已發行股份總數的約2.24%。

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（佔本公司截至二零二一年十二月三十一日止已發行股份的2.32%）。
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（佔本公司截至二零二一年十二月三十一日止已發行股份的2.65%）
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

每股行使價15.056港元為以下各項的較高者：(i)於授出日期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。

董事會報告

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（佔本公司截至二零二一年十二月三十一日止已發行股份的0.04%）
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、二零二二年三月二十九日、二零二三年三月二十九日及二零二四年三月二十九日歸屬

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（佔本公司截至二零二一年十二月三十一日止已發行股份的0.19%）
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

每股行使價17.952港元為以下各項的較高者：(i)於授出日期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。

董事會報告

購股權於截至二零二一年十二月三十一日止年度的變動詳情如下：

購股權數目	參與者姓名或類別				總數
	董事		其他僱員		
	唐均君先生				
於二零一五年九月四日授出	-	29,262,000	-	-	30,250,000
於二零一八年十二月二十四日授出	-	-	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	-	-130,000	-	-	-130,000
於二零一六年註銷	-	-1,458,000	-	-	-1,458,000
於二零一七年註銷	-	-1,353,399	-	-	-1,353,399
於二零一八年註銷	-	-754,595	-	-	-754,595
於二零一九年註銷	-	-58,000	-1,035,000	-36,000	-1,729,000
於二零二零年註銷	-	-	-993,904	-84,000	-1,276,904
期內行使	-	1,196,999	2,155,146	24,167	3,376,312
期內註銷	-62,500	-	-5,751,868	-592,993	-6,407,361
於二零二一年一月一日尚未行使	500,000	5,935,331	30,688,079	2,362,000	39,485,410
於二零二一年十二月三十一日 尚未行使	437,500	4,738,332	22,781,065	1,744,840	29,701,737
購股權之行使期	附註1	附註2	附註3	附註4	
購股權之行使價	18.400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		47.4466港元	47.2747港元	41.6917港元	

附註1 購股權之行使期為二零二一年三月二十九日至二零二六年三月二十八日

附註2 購股權之行使期為二零一七年九月四日至二零二二年九月三日

附註3 購股權之行使期為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

附註4 購股權之行使期為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

除上文披露者外，本公司於截至二零二一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

本集團截至二零二一年十二月三十一日止年度的儲備變動詳情載於本報告第209至210頁之綜合權益變動表。

持續關連交易及關連交易

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華虹摯芯、矽睿科技、儀電集團、上海華力、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二零二一年期間執行的其他一些持續性的關聯交易詳情如下:

交易	交易日期	交易雙方	關連關係	交易	二零二一年 實際交易金額	二零二一年 建議年度上限
(1)	二零一七年一月一日	華虹摯芯(買方) 本公司(賣方)	華虹摯芯為本公司主要股東華虹集團持有93.02%權益的子公司。	本公司(賣方)與華虹摯芯(買方)簽署的銷售協議,有關向華虹摯芯銷售集成電路及其他半導體產品。	6,404,000美元	6,500,000美元
(2)	二零二一年 一月十三日 ⁽¹⁾	虹日(買方) 本公司(賣方)	虹日為本公司主要股東華虹集團持有51%權益的子公司。	本公司(賣方)與虹日(買方)簽署的銷售協議,有關向虹日銷售集成電路及其他半導體產品。	3,376,000美元	3,882,000美元
(3)	二零二一年 一月十一日 ⁽¹⁾	集成電路研發(買方) 本公司(賣方)	集成電路研發為本公司主要股東華虹集團持有29.94%權益的子公司。	本公司(賣方)與集成電路研發(買方)簽署的銷售協議,有關向集成電路研發銷售晶圓。	8,742,000美元	見附註(2)
(4)	二零二一年 一月二十一日 ⁽¹⁾	新微(買方) 本公司(賣方)	新微為本公司主要股東上海聯和持有80%權益的子公司。	本公司(賣方)與新微(買方)簽署的銷售協議,有關向新微銷售晶圓及其他半導體產品。	1,224,000美元	見附註(2)

董事會報告

交易	交易日期	交易雙方	關連關係	交易	二零二一年 實際交易金額	二零二一年 建議年度上限
(5)	二零二一年一月六日 ⁽¹⁾	華虹摺芯(賣方) 本公司(買方)	華虹摺芯為本公司主要股東華虹集團持有90.66%權益的子公司。	華虹摺芯(賣方)與本公司(買方)簽署的採購協議,有關採購本集團半導體產品生產過程中所用的原料。	668,000美元	1,060,000美元
(6)	二零二一年二月一日 ⁽¹⁾	虹日(賣方) 本公司(買方)	虹日為本公司主要股東華虹集團持有51%權益的子公司。	虹日(賣方)與本公司(買方)簽署的採購協議,有關採購本集團半導體產品生產過程中所用的晶圓。	18,247,000美元	38,000,000美元
(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)	上海華力(承租人) 本公司(出租人)	上海華力53.79%的權益為本公司控股股東華虹集團持有。	上海華力(承租人)與本公司(出租人)簽署的租賃協議,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上海華力,供其設置300mm晶圓生產線。總出租建築面積為96,099.2平方米。	人民幣93,547,000元 (約14,497,000美元)	人民幣102,000,000元 (約15,813,000美元)
(8)	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,華虹科技發展為由我們控股股東華虹集團持有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,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1,783,000美元) ⁽³⁾	人民幣12,000,000元 (約1,860,000美元)
(9)	二零二零年一月一日 ⁽⁴⁾	華錦物業管理 (作為物業管理公司) 本公司(作為承包商)	華錦物業管理為華虹科技發展的全資子公司,華虹科技發展為由我們控股股東華虹集團持有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(作為承包商)訂立的物業管理協議,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2,179,000元 (約338,000美元)	人民幣4,000,000元 (約620,000美元)

附註:

- 指二零二一年度的首次銷售或採購訂單(視情況而定)日期。
- 二零二一年並未就該等持續關連交易設定年度上限。有關詳情請參閱本公司日期為二零二二年三月二日的公告。
- 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預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1,783,000美元。於二零二一年十二月三十一日,該等使用權資產及租賃負債的結餘分別為14,573,000美元及17,225,000美元。
- 於二零二零年十二月三十一日,本集團與華錦物業管理訂立管理協議(「二零二一年華錦管理協議」),據此,華錦物業管理將於二零二一年一月一日至二零二二年十二月三十一日止兩年年期內繼續為宿舍物業提供物業管理服務,截至二零二一年十二月三十一日及二零二二年十二月三十一日止年度各年的年度上限分別為人民幣4,000,000元。二零二一年華錦管理協議的詳情載於本公司日期為二零二零年十二月三十一日的公告。

董事會報告

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二零二一年持續進行:

- (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,認為就上文所述於二零二一年訂立之持續關連交易:

無保留結論

- (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遵守本集團的定價政策;
- (iii) 核數師並不知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。

保留結論

就各持續關連交易之總額而言,基於所執行的工作程序及獲取的證據,除上文註(2)所述並無年度上限的交易外,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已超出本公司設定的年度上限。

關聯方交易

於截至二零二一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。本集團於截至二零二一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。

董事會報告

股權投資之表現

下表載列截至二零二一年十二月三十一日止年度有關股權投資之表現詳情。

	上海華力 (千美元)	矽睿科技 (千美元)	上海艾為 (千美元)
初始投資成本	229,133	1,704	6,290
於年初之賬面值	227,757	2,508	–
購買	–	–	6,290
公平值變動	8,152	(331)	7,743
匯兌調整	5,332	59	277
於年末之賬面值	241,242	2,236	14,310
已收股息	–	–	–
出售之收益	–	–	–
認購出資額／持有股數	人民幣1,400,000,000元	10,377,050	528,000
所持股權百分比	6.3428%	0.6220%	0.32%
與本公司資產總值比較之規模	3.9%	0.0%	0.2%

於截至二零二一年十二月三十一日止年度，本集團並未出售於上海華力、矽睿科技或上海艾為之任何股權。本公司於上海華力、矽睿科技及上海艾為股權投資之公平值變動分別為8,152,000美元、負331,000美元及7,743,000美元。

上海華力起步於二零一零年。作為行業內領先的集成電路晶圓製造企業，上海華力擁有先進的工藝制程和完備的解決方案，專注於為設計公司、IDM公司及其他系統公司提供66/55納米至28/22納米不同技術節點的一站式晶圓製造技術服務。上海華力在中國有兩座12英寸全自動晶圓工廠。

於二零二一年財政年度，本公司於上海華力的股權投資賬面值增加13,484,000美元，包括公平值增加8,152,000美元及外幣報表收益約5,332,000美元。因此，董事會認為，上海華力於二零二一年財政年度之表現符合預期。

董事會報告

矽睿科技成立於二零一二年九月，具有全面的知識產權組合，擁有逾83項授權專利。矽睿科技為一家領先的傳感器平台公司，致力於創新型MEMS傳感器及解決方案的開發及營銷，以簡化先進感知、測量及於消費者、汽車的控制及工業應用。

於二零二一年財政年度，本公司於矽睿科技的股權投資賬面值減少272,000美元，包括公平值減少331,000美元及外幣報表收益約59,000美元。由於矽睿科技業務仍處於早期發展階段，董事會認為矽睿科技於二零二一年的業績表現及戰略規劃符合預期。

上海艾為創立於二零零八年六月，為一家專注於為手機、人工智能、物聯網、汽車電子、可穿戴和消費類電子提供高品質及高性能的數模混合、模擬、射頻IC設計的高科技公司。上海艾為是上海證券交易所科創板上市公司。

於二零二一年財政年度，本公司購買上海艾為0.32%股份。公平值增加7,743,000美元且外幣報表收益約277,000美元。董事會將此視為長期戰略投資的一部分，本集團將與上海艾為在模擬、BCD(包括12英寸90納米)、eFlash、功率器件、射頻和IC技術開發、擴大產能等領域合作，以期為客戶提供更具競爭力、更高性能和質量的產品。董事會認為上海艾為於二零二一年財政年度的業績表現符合預期。

本公司確認，其已遵守本公司截至二零二一年十二月三十一日止年度的年報所載的投資及其他金融資產之會計政策(自二零一八年一月一日起適用的香港財務報告準則第9號項下的政策)。

本公司預期上述投資的未來前景將與去年基本一致，且投資策略或資金來源預計於來年不會發生重大變動。

股東週年大會

股東週年大會將於二零二二年五月十二日(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

二零二二年五月五日下午四時三十分

暫停辦理股份過戶登記手續

二零二二年五月六日至五月十二日(包括首尾兩日)

記錄日期

二零二二年五月十二日

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，地址為香港皇后大道東183號合和中心54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：

張素心先生(主席)

唐均君先生(總裁)

非執行董事：

孫國棟先生

王靖女士

葉峻先生

獨立非執行董事：

張祖同先生

王桂壘先生，太平紳士

葉龍蜚先生

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。

唐均君先生、王靖女士及王桂壘先生將於股東週年大會上輪席退任董事職務，唐均君先生、王靖女士及王桂壘先生符合資格並願按照本公司的組織章程膺選連任。

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113至121頁。

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8及9。

董事會報告

董事及最高行政人員於本公司股份及相關股份的權益

於二零二一年十二月三十一日，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	500,000	0.04%

附註：

(1) 按購股權計劃授出的購股權項下於本公司相關股份的好倉。

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二零二一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，董事確認他們於二零二一年整個年度一直遵守公司守則及標準守則。

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。

董事會報告

子公司的董事

於截至二零二一年十二月三十一日止年度或於二零二零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
Grace Semiconductor Manufacturing Corporation (「Grace Cayman」)	開曼群島	張素心先生 葉峻先生
上海華虹宏力半導體製造有限公司(「華虹宏力」)	中國上海	張素心先生 唐均君先生 王靖女士 馬玉川先生 森田隆之先生 葉峻先生 張祖同先生 王桂壘先生，太平紳士 葉龍蜚先生
華虹半導體(無錫)有限公司(「華虹無錫」)	中國無錫	張素心先生 韋俊先生 唐均君先生 孫國棟先生 王靖女士 朱小明先生 金新先生
華宏置業(無錫)有限公司(「華宏置業無錫」)	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
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

主要股東及其他人士於本公司股份和相關股份的權益

於二零二一年十二月三十一日，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	350,401,100 ⁽¹⁾	26.93%
華虹集團 ⁽²⁾	受控制法團權益	350,401,100 ⁽¹⁾	26.93%
Sino-Alliance International, Ltd. (「Sino-Alliance International」)	法定及實益擁有人	160,545,541 ⁽¹⁾⁽³⁾	12.34%
Sino-Alliance International	受控制法團權益	28,415,606 ⁽¹⁾	2.18%
上海聯和	受控制法團權益	188,961,147 ⁽¹⁾⁽⁴⁾	14.52%
鑫芯(香港)投資有限公司	法定及實益擁有人	178,705,925 ⁽¹⁾	13.73%
巽鑫(上海)投資有限公司	受控制法團權益	178,705,925 ⁽¹⁾	13.73%
國家集成電路產業基金	受控制法團權益	178,705,925 ⁽¹⁾	13.73%

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) 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。
- (4) 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二零二一年十二月三十一日已發行的股份總數(即1,301,191,585股股份)計算。

除上文披露者外，就本公司董事及最高行政人員所知，於二零二一年十二月三十一日，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。

董事會報告

購買股份或債權證的安排

於截至二零二一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

於截至二零二一年十二月三十一日止年度，本集團五大供應商合共應佔的採購額低於總採購額的30%，本集團五大客戶合共應佔的營業額低於總營業額的30%。

薪酬政策

截至二零二一年十二月三十一日，本集團僱用合共6,084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二零二一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

截至二零二一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

本公司的組織章程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。

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。

董事會報告

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

本公司已將環境、社會及管治深刻融入到戰略、管理和長期發展目標中，貫穿企業運營的全過程。本公司堅信環境、社會及管治三方面之間互相影響，促進其有效管理能夠推動我們業務的長遠發展，並為所有的利益相關方創造和分享價值。有關本公司二零二一年度所採納的環境、社會及管治常規的詳細資料，載於2021年度環境、社會及管治報告。

本公司聚焦綠色產品與綠色生產，降低運營對環境的負面影響，為客戶提供更加環保的產品。本公司積極響應中國政府提出的「雙碳」目標，持續提高節能減排的投入與落實，並制定能源使用減排目標，加強應對氣候變化風險應對能力。二零二一年，本公司在節能減排技術改造上共投入約1,008萬元，客戶有害物質調查符合率達100%，所有製造過程均被認為符合QC 080000有害物質過程管理體系的標準和要求。同時，公司開發的低能耗產品廣泛應用於清潔能源領域、新型光源LED等領域，協助其他產業的能源節約和高效利用，協同促進環保目標實現。

此外，本公司作為負責任的企業公民，致力於推動可持續價值鏈的建設，加強對供貨商衝突礦產的管理，構建和諧的產業生態系統。於二零二一年新冠疫情期間，本公司全力保障員工安全健康和生產平穩有序，並通過開展各類小區志願服務，以實際行動貢獻社區抗疫事業。

遵守不競爭契據及優先購買權契據

華虹集團、上海聯和及儀電集團（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。本公司於截至二零二一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。

核數師

股東週年大會上將提呈一項決議案，續聘安永會計師事務所為本公司的核數師。

代表董事會

張素心先生

主席

二零二二年三月二十九日

2021年度環境、社會及管治報告

董事會聲明

我們在經濟、環境及社會三個方面取得的成就，推動了集團的可持續發展，它們彼此互相影響、互相支持，以發揮永續而長遠的績效。我們在公司運營中嚴格遵守當地所有適用法律及社會期望，在環境準則上與國際領先行業標準一致，並致力於推動可持續城市與社區建設。我們秉承公司願景：持續創新，為全球客戶製造「芯」夢想，積極響應客戶、員工、投資人、所處國家和社區之人群等利益相關方，實現企業與社會的共同可持續發展。

本集團成立了自上而下的環境、社會及公司治理(ESG)管治架構，由董事會對ESG承擔以下職責：

- a) 指導及檢討華虹半導體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；
- b) 指導華虹半導體重要ESG議題的識別和排序；
- c) 監督華虹半導體ESG目標的制定和實施，包括：制定華虹半導體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；
- d) 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。

本報告中有關ESG議題上的管理與實踐進展，均經本公司2022年3月召開的董事會2022年度第2次會議審議通過。

2021年度環境、社會及管治報告

1 社會責任管理體系

1.1 社會責任管理政策

我們認為企業履行社會責任的重點在於堅持高標準的國際商業及社會道德準則，為所有的利益相關方創造和分享價值。為此，除了在運營上遵守國家所有的法律法規和規章制度以外，我們亦將環境與社會責任融入企業的戰略經營活動中，審慎地管理我們的環境和社會風險，完善管理體系，改善供應鏈表現，降低資源消耗及環境排放，創新驅動發展，培養創新人才，共促社會和諧。

通過歷年的努力，華虹半導體已經全面落實香港聯交所最新ESG指引要求，形成了完善的社會責任管理。在董事會的領導下，我們將其融入公司的日常運營、制定ESG目標並積極採取行動，不斷完善公司社會責任表現。

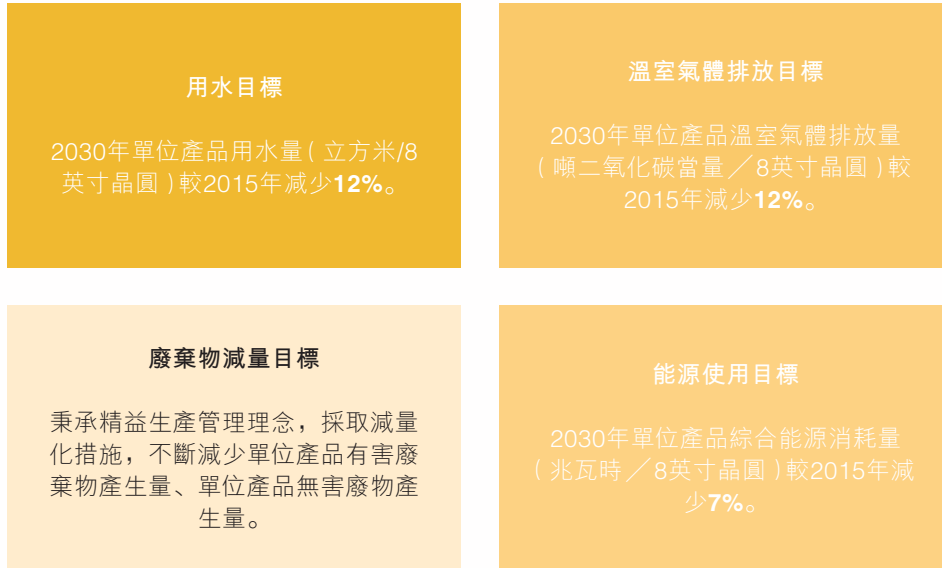
在社會責任決策層董事會制定了公司願景——持續創新，為全球客戶製造「芯」夢想的規劃下，我們將社會責任劃分為以下四個方面：



華虹半導體社會責任規劃實施重點

2021年度環境、社會及管治報告

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、減少溫室氣體排放及減少廢棄物目標，董事會每年審視公司上一年度ESG績效及ESG目標達成情況，並在ESG報告中披露，從而推動ESG績效目標的實現。



1.2 社會責任管理架構

我們認為ESG管理既是公司對投資者的應盡義務，是公司持續健全管理的標準，也是公司履行社會責任的內核。有效的社會責任管理離不開高層的重視及全員的參與，公司成立了自上而下的環境、社會及公司治理(ESG)管治架構。董事會是ESG管理的最高決策機構，負責監督及評估成效，確保健全及良好的ESG治理。企業社會責任工作小組在董事會的授權下，協助開展及落實ESG工作，確保設立合適及有效的ESG風險管理及內部監管系統。



責任管理架構

2021年度環境、社會及管治報告

1.3 利益相關方參與

根據公司自身業務和運營特點，並對標國內外行業的經驗和實踐，我們將主要利益相關方確定為股東、客戶、員工、政府及監管機構、合作夥伴、社區及公眾，並通過網站、媒體、會議、報告、活動等渠道和方式積極與之溝通。

利益相關方的期望與回應

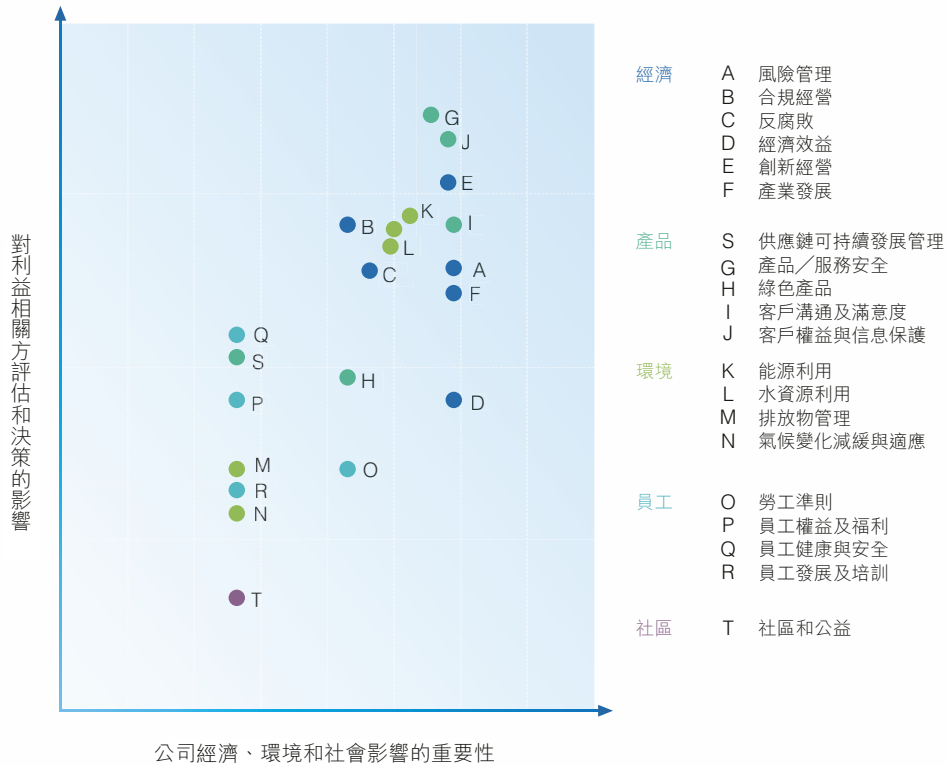
關鍵利益相關方	相關方說明	關注的議題	溝通與回應
股東及高級管理層	對公司進行股權、債權投資的國內外投資人及公司高級管理層員工	風險管理，經濟績效，產業發展，客戶溝通及滿意度	股東會、財務報告、業績報告、路演等
客戶	集成器件製造商、系統及無長半導體公司	客戶權益與信息保護，產品與服務品質，客戶溝通及滿意度	產品展覽、客戶調研、技術研討會，B2B（例如E-tapeout系統、WIP報告、WAT報告等），客服熱線、客戶滿意度調查等
員工	公司員工，以及常年服務於公司業務的人員	員工權益及福利，員工健康與安全，員工發展及培訓	員工活動、職代会活動、企業內網、員工培訓、員工自助系統、員工手冊、企業內部刊物等
政府及監管機構	工業、稅務、環保、安全等部門、地方政府、證監會等政府或監管機構	合規經營，綠色產品，排放物管理，能源利用	機構考察、公文往來、政策執行、信息披露等
合作夥伴	供應商、研究院校、行業協會等	產業發展，合規經營，產品與服務品質，客戶滿意度與溝通	公開招投標會議、戰略合作談判、交流互訪等
社區及公眾	運營所在地社區、社會公眾、媒體等	綠色產品，排放物管理，社區和公益	社區活動、員工志願者活動、公益活動、社會事業支持項目等

2021年度環境、社會及管治報告

1.4 實質性議題識別與分析

董事會按照識別、評估和篩選的程序，根據公司業務和運營特點，借鑑國內外利益相關方的同行經驗，指導開展實質性議題分析，識別公司利益相關方關注的重要ESG議題，在充分考慮利益相關方要求和關注重點的基礎上確定議題重要性分析和排序，並在本報告中予以披露。

2021年，我們結合內外部利益相關方關注重點、政策調研與同業對標分析等，識別出20項實質性議題。



2021年度環境、社會及管治報告

2 環境責任

2021年主要進展

具體舉措	取得成效
以完善的環境管理，持續改善公司環境表現，減少運營環節足跡	節能減排經濟效益3,903.06萬元 減少42.57萬立方米天然氣 減少5,634.3千瓦時用電量 減少41,100立方米水資源消耗 減少6,850.11噸碳排放
推廣環保觀念，積極培養深化員工環境保護意識培訓，覆蓋全部員工	開展全員培訓及線上考試人均培訓119.9小時，較2020年增長為原來的1.2倍

應對氣候變化

氣候變化的減緩與適應已成為21世紀最緊迫的問題之一。全球變暖持續加劇了極端天氣發生的頻率，並在全球範圍內帶來新的政策變化、推動各行業技術創新和進步、影響消費者和投資者綠色理念的轉變。我們認識到減緩氣候變化對於企業自身和全球都具有重要意義。為此，公司識別自身氣候變化風險與機遇，在生產、經營過程中不斷提高能源使用效率，開發低能耗產品，同時也助力「雙碳」目標的實現。

氣候變化風險與機遇

公司參考金融穩定委員會(Financial Stability Board, FSB)的氣候相關財務信息披露工作組(Task Force on Climate-related Financial Disclosures, TCFD)的建議識別氣候變化相關的風險及機遇，並依據結果不斷完善管理，最大化減少運營活動產生的碳足跡。

氣候變化管理體系

治理	<ul style="list-style-type: none"> 將氣候變化減緩與適應作為各業務部門的工作重點之一。
戰略	<ul style="list-style-type: none"> 積極參與到上海市發改委碳排放交易相關工作中，以促進溫室氣體減排、減緩氣候變化。 針對鑑別的重大風險與機會，評估對公司帶來的潛在營運與財務影響。 在低碳運營、應對氣候變化自然災害、開發低功耗產品等方面開展相關的管理行動。
風險管理	<ul style="list-style-type: none"> 參照TCFD的風險分析架構識別運營活動潛在的風險與機會，未來計劃把氣候變化的風險與機遇納入整體運營風險管理的一部份。
績效	<ul style="list-style-type: none"> 每年在社會責任報告中披露溫室氣體排放量與排放密度，以此評估公司應對氣候變化管理績效水平，制定改進方案。

為更好應對氣候變化的潛在風險與機遇，公司通過開展政策調研、同業對標，並結合專家意見，識別出與自身運營相關的氣候變化相關風險與機遇，並評估各項風險與機遇對自身財務的影響。

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氣候變化風險與機遇識別矩陣

氣候變化主要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，中國政府以及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。如果公司無法很好的回應這些利益相關方的訴求，會對自身的聲譽產生影響。	營業收入減少	<ul style="list-style-type: none"> 將氣候變化減緩與適應作為各業務部門的工作重點之一。 積極參與到上海市發改委碳排放交易相關工作中，2021年公司已完成2020年度的碳額度履約量457,042噸。 參考TCFD框架識別並管理氣候變化風險與機遇。 將氣候變化作為重點議題通過社會責任報告等渠道與利益相關方溝通。 開發低功耗產品。 	
		政策法律風險 中國已制定碳中和目標，未來對企業的碳排放的監管力度也將不斷提升。如果公司在環境管理方面無法滿足監管的要求，將面臨訴訟與罰金等風險，可能導致違約等現象發生。	信用風險增加		
		市場風險 近年來客戶以及消費者愈加關注產品的可持續性屬性等，這在不斷改變企業運營的外部市場環境。如果公司提供的產品與服務無法有效、及時的去面對這些市場環境的變化，將會對其運營產生影響。	營業收入減少		
	實體風險	急性實體風險 氣候變化導致的颱風、洪水等自然災害增加可能會影響公司晶圓廠運營活動，造成經濟損失。	營運成本增加；固定資產價值降低		<ul style="list-style-type: none"> 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、海平面上升等可能會導致公司業務運營中斷，造成財務損失。	營運成本增加；固定資產價值降低		
機遇	資源使用效率 提高資源使用效率，包括能源、水資源等的使用效率，能夠幫助公司降低運營過程中的成本。	營運成本降低	<ul style="list-style-type: none"> 積極採用綠色辦公與綠色運營措施。 新建廠房在設計階段融入生態環保理念，降低建造與運營環節中的各類資源使用量。 不斷提高綠色研發創新投入。 不斷提升產品的環境友好與綠色屬性。 		
	能源來源 在運營活動中提高對低排放能源／清潔能源的使用，有利於降低未來能源價格上漲風險。	固定資產價值增加			
	產品與服務 此外，低碳經濟轉型背景下，客戶以及消費者在綠色、低功耗產品等方面的需求也在不斷增加，這對於我們來說也是新的市場機遇。	產品和服務需求增加，帶來的收入增長			

提高能源使用效率

公司能源消耗主要是電力、熱力、天然氣（及少量汽油、柴油）。本着節能降耗減廢的原則，公司建立了完善的能源管理體系，並通過開展各類技改項目，持續提升運營活動能源使用效率。2021年在節能減排技術改造上共投入約1,007.8萬元。

集成電路製造企業在電力供應保障方面受到了政府的支持。在國家能源轉型期間，公司面臨的能源供應方面風險較小。即便如此，公司依然制定並實施應急保障方案，積極應對可能的突發電力供應故障。2021年，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》並在各廠區開展應急預案培訓及應急演練。通過日常檢查、專項系統排查，配合應急演練，保障電力供應無虞。

2021年度環境、社會及管治報告

能源管理體系

理念	政策	目標	典型措施
<ul style="list-style-type: none"> 在滿足和提高生產率的同時進行源頭控制、持續改善，在降低生產成本的同时減少對環境的影響。 	<ul style="list-style-type: none"> 《資源、能源管理程序》 	<ul style="list-style-type: none"> 公司致力於提高生產經營過程的能源效率並制定能源目標，到2030年，公司單位產品綜合能源消耗較2015年減少7%。 	<ul style="list-style-type: none"> 開展節能技改。 定期委託第三方機構對公司進行能源審計。

2021年能源節約工作及成果

工廠	具體措施	取得成效
華虹一廠	<ul style="list-style-type: none"> CDA高壓轉子更換優化系統運行 	720萬兆瓦時 全年節約用電
華虹二廠	<ul style="list-style-type: none"> UPW系統水泵節能改造 HOT UF濃水熱能回收利用 	446.77萬兆瓦時 全年節約用電 108.888萬兆瓦時 全年節約用電 8萬立方米 全年節約天然氣
華虹三廠	<ul style="list-style-type: none"> 日光燈LED改造 冷熱水聯產系統運行優化 MAU加濕器控制閥選型優化，減少蒸汽消耗 	1,421兆瓦時 全年節約用電 816兆瓦時 全年節約用電 35.757兆瓦時 全年節約用電 1.20萬立方米 全年節約天然氣

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開發低能耗產品

在專業集成電路製造服務領域，公司致力於實施覆蓋從原材料採購及生產到廢棄環節的全生命周期環境管理，不斷減少產品的環境影響。

產品全生命周期環境管理

原材料入庫	產品生產	產品運輸	終端產品使用	產品廢棄
<ul style="list-style-type: none"> 對原材料進行有害物質審查與系統管控； 對供應商開展資格、環境合規情況的審查，並要求供應商簽署《環保承諾書》。 	<ul style="list-style-type: none"> 按照排污許可證管理，推動物料減用項目； 從資源回收角度，對廢棄化學品廠內系統之間調配，減少對外部資源獲取； 實施水資源回收項目，提升整體回用率，減少管網水資源供應壓力。 	<ul style="list-style-type: none"> 對產品包裝材料進行回收與重複利用，減少包裝材料用量及廢棄物產生量。 	<ul style="list-style-type: none"> 通過幫助客戶生產低能耗產品，減少終端電子產品的使用對環境的影響。 	<ul style="list-style-type: none"> 公司生產的晶圓均通過有害物質監測，意味着使用其晶圓製造的終端電子產品在廢棄後能減少對環境的影響。

同時，公司致力於通過技術創新不斷優化其晶圓製造技術、降低產品體積，提高產品在終端運用的能效，為客戶創造功耗、效能以及芯片尺寸優化的競爭優勢的同時，降低科技進步對環境所造成的衝擊，貢獻全球的能源節約。2021年，華虹半導體服務清潔能源和節能減排的產品營業收入佔總營業收入的35.9%。

華虹半導體的行動

- 技術創新提高產品在終端使用的能效、持續開發低功耗產品
- 不斷降低生產過程的能源消耗與資源使用，降低產品環境足跡

貢獻全球能源節約

- 公司半導體產品廣泛應用於清潔能源領域、新型光源LED等領域，從而協助其他產業的能源節約和高效利用
- 功率器件產品具有高效節能的特點，運用於新能源車輛、光伏和風力發電等清潔能源應用場景。
 - BCD700工藝平台應用於LED照明產品，而LED產品相較傳統白熾燈，具有環保、長壽、高效的特點。

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2.1 環境管理體系

華虹半導體在日常運營活動中嚴格遵守當地相關的環境法律法規及相關行業排放標準，並持續完善自身環境管理措施。公司以生產管理為主逐漸向產品全生命周期管控、風險管控過渡，致力於提升從原材料入廠、生產製造到廢棄物管理全過程中每一環節的環境表現，並通過了新版環境管理體系ISO14001:2015認證。在監督管理上，我們在公司內網的安全管理系統中增設審核追蹤系統，對在日常管理中發現的不符合環保規定的事項進行整理、列出清單，並通過系統定時提醒的方式，進行後續整改的跟踪記錄。

截至報告期末，公司未受到有關環境方面的投訴或處罰，未發生任何環境污染事件。

2021年華虹半導體環境責任相關認證

認證名稱	認證單位	覆蓋範圍
環境管理		
 ISO 14001: 2015環境管理體系	British Standards Institutions (BSI)	所有工廠
綠色建築		
 「能源與環境設計先鋒」 (LEED v4)金獎	美國綠色建築委員會 (USGBC)	華虹無錫
 二星級綠色建築設計標識證書	中國城市科學研究院	華虹無錫
綠色產品		
 QC 080000有害物質過程管理體系	BSI	所有工廠

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環境管理績效概覽

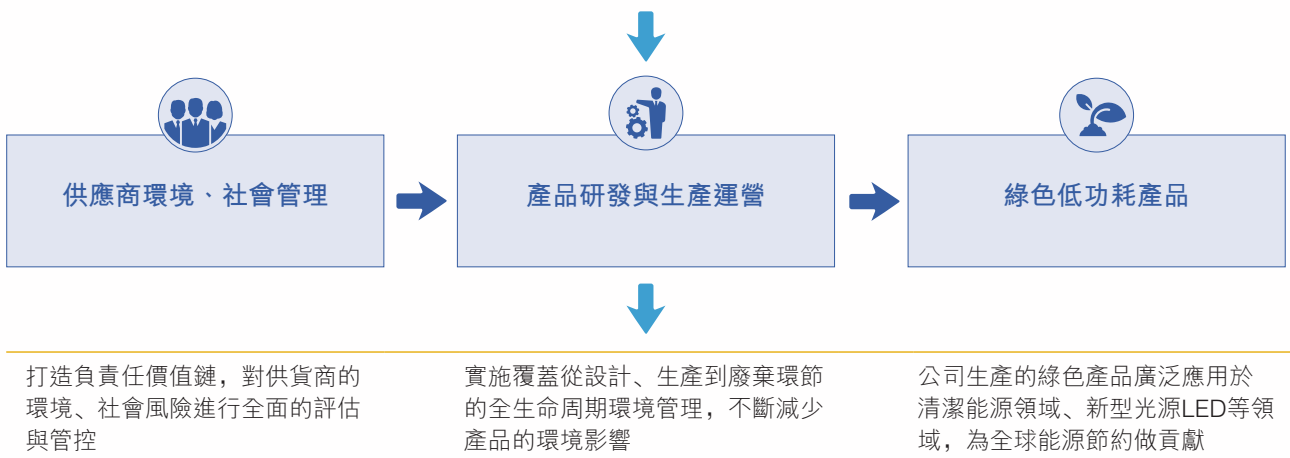
公司的生產運營活動要使用能源、水及其他原材料等資源，並產生廢氣、廢水、廢棄物等排放。此外，我們也督促供應商不斷加強環境管理，並提供低功耗綠色產品，努力在價值鏈上下游都有更好的環境管理績效。

公司主要環境因素分析表

主要資源	主要污染物
能源：電力、熱力、天然氣及少量汽油、柴油 水源：市政供水 原材料：硅片、石英、靶材、氣體、化學品	廢氣：硫酸霧、氯化氫(HCl)、氮氧化物(NO _x)、氨(NH ₃)、揮發性有機物(VOCs) 廢水：pH，COD，氨氮，氟離子 無害廢棄物：生活垃圾、廚余垃圾、廢水處理污泥 有害廢棄物：廢酸液、異丙醇、廢磷酸、廢玻璃瓶、200L化學桶、實驗室廢液等有機廢液、廢活性炭、廢樹脂、含砷廢物等

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水資源	
用水總量	13,207,829立方米
其中，市政用水	8,928,040立方米
廢水回用	4,288,904立方米
單位產品用水量	2.55立方米／8英寸晶元
循環用水量	86,119,337立方米
能源	
用電總量	867,682兆瓦時
單位產品用電量	248千瓦時／8英寸晶元
天然氣用量	11,456,569立方米
單位產品天然氣用量	3.27立方米／8英寸晶元
包裝材料	
製成品包裝材料使用總量	253.5噸
製成品包裝材料回收總量	48.5噸
其他原材料	
硅片、石英、靶材、氣體、化學品等生產原材料	



打造負責任價值鏈，對供貨商的環境、社會風險進行全面的評估與管控

實施覆蓋從設計、生產到廢棄環節的全生命周期環境管理，不斷減少產品的環境影響

公司生產的綠色產品廣泛應用於清潔能源領域、新型光源LED等領域，為全球能源節約做貢獻

廢氣	
有害廢棄物總量	17,363噸
單位產品有害廢棄物產生量	4.96克／8英寸晶元
無害廢棄物總量	8,981噸
單位產品無害廢棄物產生量	2.57克／8英寸晶元
廢棄物	
廢氣排放總量	2,319,307萬立方米
氮氧化物(NO _x)排放量	36,857千克
二氧化硫(SO ₂)排放量	2,239千克
溫室氣體	
溫室氣體排放量	713,649噸二氧化碳當量
單位產品溫室氣體排放量	0.20噸二氧化碳當量／8英寸晶元
廢水	
廢水排放總量	704萬立方米

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綠色文化

我們持續在公司內外推廣環保觀念，在日常運營中善用科技來踐行可持續發展的理念，積極培養員工環境保護、節約使用辦公資源和能源的意識。

綠色文化實踐

節約辦公用紙	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 培養員工的節約意識，張貼節約用水貼士。
廢棄物處置	<ul style="list-style-type: none"> 對各廠區的生活垃圾進行干、濕、可回收、有害垃圾4類分類，並要求全體員工參與垃圾分類的線上答題。 參加阿拉環保的電子廢棄物回收活動。
員工出行	<ul style="list-style-type: none"> 鼓勵員工使用公共交通上下班。 公司班車使用新能源汽車。

2.2 清潔生產

廢氣排放管理

公司貫徹落實環保法規及相關要求，針對生產過程中包括硫酸霧、氯化氫(HCl)、氮氧化物(NO_x)、氨(NH₃)、揮發性有機物(VOCs)等廢氣排放，制定了完善的管理措施。

廢氣排放管理

類型	處理方式
酸性廢氣	通過預處理和洗滌塔集中處理去除絕大部份成份後，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(主要為二氧化矽的細小顆粒物)	通過除塵裝置去除

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廢棄物管理

公司生產運營活動中所產生的危險廢棄物包括廢酸、廢異丙醇等。對於有害廢棄物我們已委託有處理資質的第三方公司進行處理，處理方式主要包括焚燒、物化，以及再利用。對於在廢水處理中產生的污泥等無害廢棄物，由廢棄物處理廠商採取填埋的方式處理。

公司在廢棄物管理制度執行方面保持一貫的高標準嚴要求。公司制定了《廢棄物管理程序》，對廢棄物管理操作進行了規範，並通過政府統一的環保管理系統對廢棄物處理進行登記和管理，確保每一筆運輸記錄都可追溯、受控。公司自2017年開始每年開展針對各類危險廢棄物的削減排放工作，不斷減少危險廢棄物排放對環境的影響。

2021年，公司進一步規範了一般廢棄物的儲存和回收，改進廠區儲存場所。其中一廠的儲存場所區分了三防存儲和一般暫存的管理類別，二廠一般廢物存儲場所增設了存儲面積，使得存儲放置更加規範。針對新《固體廢物污染防治法》，公司開展全員培訓及線上考試，合格人數4,219人。

廢棄物排放管理

類型	處理方式	
無害廢棄物	生活垃圾、廚余垃圾 污泥等	交由市政環衛部門定期對進行統一清運 填埋
危險廢棄物	廢酸液、異丙醇、廢磷酸等 廢玻璃瓶、200L化學桶、實驗室廢液等 抹布、塑料瓶、有機廢液、廢活性炭、廢樹脂、 含砷廢物等	利用 物化 焚燒

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廢水排放管理

在廢水排放方面，公司已於2017年開始執行GBT 31962-2015(污水排入城鎮下水道水質標準)B級標準，並通過廠內生產製造清洗水的回收，減少排放。

在排污監控和信息公示方面，公司執行廢水在線監控，相關數據在上海企事業單位環境信息公開平台上公示，增加公司環境信息的透明性。

廢水排放管理

類型	處理方式
廢水	pH, COD, 氨氮, 氟離子等 經處理達標後通過管道排入指定城市污水管網

2021年清潔生產工作及成果

具體措施	取得成效
• BTSATA01~06老舊臭氧破壞器更換	日均減少臭氧排放量 50%
• Mirra ontrack W process qualify全部用IVT PAD	減少廢水排放 8,300 立方米／年
• 整理光刻機台光阻管路的配置和利用率，對可進行減少的管路進行泡管，減少光阻排放量	減少光刻膠排放 56.8 升／年

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2.3 可持續用水管理

在半導體製造工藝中，公司使用不含任何離子、顆粒、氯或二氧化硅的超純水來製造不含任何雜質的半導體。使用過之後，廢水必須經處理後正確排放或再生。因此，水資源的使用、再生、處理和排放的可持續管理對公司來說是重中之重。

公司的用水主要來源是市政供水，此外還有少部份來源於純水製造過程中的回收用水和空調冷凝水。公司持續開展用水風險的監測，通過使用外部工具——世界資源研究所(WRI)「輸水道水源風險地圖」(Aqueduct Water Risk Atlas)，對上海與無錫兩大運營地的用水壓力進行評估。根據WRI的數據顯示，公司在上海的晶圓廠位於用水高壓地區，無錫的晶圓廠位於用水中高壓地區。

水資源管理

目標	監測	評估與調配	應急預案
<ul style="list-style-type: none"> 2030年單位產品用水量（立方米／8英寸晶圓）較2015年減少12%。 	<ul style="list-style-type: none"> 各個晶圓廠區建立了用水監測點，定期開展水平衡測試，計算廠內制程用水、回收水、廢水、生活用水等。 	<ul style="list-style-type: none"> 掌握用水流向、流量與回收再利用情形，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。 	<ul style="list-style-type: none"> 制定了《自來水限水緊急應變計劃》，對出現市政環網自來水供應異常時的應急處置進行了規範，防止對生產運營造成影響。

公司致力於在生產運營中開展節水技改與廢水回用，不斷提升所有工廠的水資源使用效益。我們在《供應商問卷》中要求合作的主要供應商披露在水資源使用可持續管理方面的信息，包括供應商生產以及運營的耗水量統計、節水措施、供應商的節水目標等，以此不斷降低產品水足跡。

2021年水資源節約工作及成果

具體措施	取得成效
<ul style="list-style-type: none"> BEWAAS05純水使用量降低 	全年節水 5,000噸
<ul style="list-style-type: none"> FAB1水噴淋加濕改為膜加濕 	全年節水 13,200噸

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3. 員工責任

2021年主要進展





具體舉措	取得成效
深化員工培訓，覆蓋各層級員工	人均培訓119.9小時，較2020年增長為原來的1.2倍

3.1 員工權益與福利

員工僱傭與基本權益

公司嚴格遵守《中華人民共和國勞動法》《中華人民共和國勞動合同法》等法律法規，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。此外，我們制定了《僱傭規程》和《實習生管理規程》，嚴格核查員工身份信息，不招聘未滿16周歲的員工。截止報告期末，公司擁有正式員工6,084人，公司未發生任何侵犯員工權益行為，也未受到監管部門的投訴或處罰。

員工僱傭與權益制度概覽

	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，高於運營地最低工資標準。
	工時與休假制度 標準工時制度，部份崗位經政府勞動人事部門批准，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，為員工提供補充年假。
	民主參與 工會、職工代表大會等。

2021年度環境、社會及管治報告

員工溝通

通暢的溝通渠道和真誠的關懷對打造和諧的勞動關係至關重要。公司致力於建設和完善員工溝通與反饋機制，制定了《員工溝通規程》，通過創建多樣的溝通渠道，鼓勵公司與員工之間、主管與下屬之間、員工相互之間的公平坦誠的多向溝通。

2021年，公司舉辦員工午餐會，管理層傾聽基層員工的聲音，回應員工關切的問題，營造開放、信任的工作環境。

我們亦建立員工幫扶機制，除了日常傷病慰問外，在特殊節日如春節、五一、中秋等，為困難職工提供慰問扶持；對遭遇重大變故的同事，第一時間送去關心和支持，通過愛心捐款、愛心幫困、愛心關懷、愛心護理多種形式幫助員工盡早走出困境。我們關注女性員工的福利和發展，每年組織女員工專項體檢，並持續健全哺乳期員工的人性化管理並提供相關服務設施，保證懷孕女員工和哺乳女員工享受到工作中的便利。

3.2 健康、安全與員工福祉

公司建立了符合ISO45001要求的職業健康安全體系，明確了職業健康安全方針，為員工提供良好的工作環境和職業健康保障。

職業健康與安全管理體系

職業健康與安全管理方針

嚴格遵循安全健康環保法規，致力於清潔生產，持續改善，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。

制度構建	<ul style="list-style-type: none"> • 公司成立安全生產委員會，貫徹執行安全生產委員會安全生產責任制實施辦法，並落實安全例會制度； • 逐級覆蓋全員人人簽署《安全責任書》，落實全員安全生產責任制。 	管理要素	<ul style="list-style-type: none"> • 危險源／環境因素緊急響應； • 特種設備與特殊崗位； • 化學品管理； • 職業健康監控與防護。
內審、檢查及隱患排查	<ul style="list-style-type: none"> • 安全技術改造； • 建立安全風險分級管控與隱患排查治理雙重預防工作機制。 	安全文化建設	<ul style="list-style-type: none"> • 安全意識與安全培訓； • 應急演練。

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安全生產

公司安全生產不懈追求「零事故」，公司以消滅隱患為重點，開展安全管理工作。公司主要從消防設施、報警監控系統、應急措施三大方面消除或控制員工生產活動中的安全風險。對於公司運營過程中會使用硝酸、氨水等化學品，我們亦制定了《化學品管理程序》、《化學物質審查規程》等相關管理制度，定期開展各類安全生產事故應急演練。截至報告期末，公司未發生安全生產事故。

以「落實安全責任，推動安全發展」為主題，組織開展「安全生產月」系列專題活動，進一步強化安全意識，落實企業安全生產主體責任，創建企業安全文化。回顧重溫習近平總書記關於安全生產重要論述、觀看《生命至上人民至上》、《生命重於泰山》安全月主題視頻、開展6月16日全國安全諮詢日、舉辦安全知識猜謎和勞防與應急裝備虛擬VR體驗、實施崗位安全再教育、應急響應拉練等活動。通過各種安全宣傳和展示主題活動，進一步提升員工安全意識，穩步夯實公司安全生產責任，推動公司安全發展。

員工安全風險防範措施



消防設施

- 建立完備的消防系統、自動報警系統。



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、液體洩漏檢測器以及超高感度煙檢測器。



應急措施

- 成立應急搶險隊，制定針對不同災害的緊急處置預案；
- 定期組織專題防災演練，對發現的問題及時整改。

員工健康

在保障員工健康方面，我們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的追蹤員工健康狀況的變化。我們為員工配備必要的個人防護用具和應急防護用品、定期巡檢器材是否配備齊全、是否在有效期內。此外，公司每年委託外部機構對生產環境進行檢測，對超標項目進行分析、整改，確保生產環境符合有害因素職業接觸限值標準，並將檢查結果通報給全體員工。

2021年，公司通過開展各項活動向員工普及健康生活方式，例如開展主題健康講座「心血管醫生告訴您：高血脂應該吃什麼」、「全國高血壓日，血壓多少算正常」等，倡導員工以健康方式的生活和工作。

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優質工作環境

公司致力於為員工創造更好的辦公與生活服務設施，提高員工的幸福感。



辦公

- 安裝空氣淨化系統，改善辦公室空氣質量；
- 在辦公室區域增加綠化。



飲食

- 各廠區設立員工餐廳、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商管理模式，邀請員工、部門代表等進行監督；
- 推出食堂菜餚製作指導書，對員工食堂飲食進行營養均衡搭配和控油控鹽管理。



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、豐巢快遞櫃等設施。



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；
- 對交通不便區域的員工開行通勤班線、以及對有周末需求的部門安排加班車。

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3.3 培訓與職業發展

員工培訓

公司建立了完善的員工教育培訓體系，制定了《內部培訓體系審核操作規程》、《教育培訓規程》和部門級培訓規程，根據戰略發展和員工需求不斷進行調整，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(專用的培訓教室與設備)和學習分享平台(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)，必要時利用外部的資源，為員工的學習與發展提供了基本保障。

2021年，公司持續深入開展新進大學生特訓營培養項目，進一步將企業文化、專業理論與實踐訓練等內容提煉濃縮形成「芯時代」、「芯揭秘」、「芯達人」三大系列課程，幫助企業新人迅速融入團隊，並以飽滿的熱情迎接未來工作的挑戰。

員工培訓方案

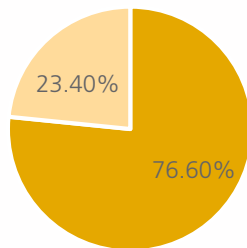
培訓對象	培訓內容	2021年績效
基層管理者	角色認知、自我管理、管理他人、工作管理	員工培訓覆蓋率 100%
一線主管	一線班組長管理技能，培養高素質、高業務能力的一線管理隊伍，夯實公司管理基礎	
新進大學生	職業素養、企業文化、專業入門等課程	人均培訓小時數 119.9小時
一線員工	半導體製造工藝模塊的理論與實訓課程	

職業發展

公司為員工提供明確、透明的晉升通道，為員工的發展提供個人職業發展規劃。公司根據行業特點，建立了管理、技術、職能支持三個職稱系列和相應的崗位培訓。員工可以按照自己的特長、潛能和意願，可以在單一的職稱系列中不斷成長，也支持員工從技術走向管理。

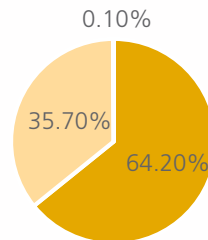
在公司的職業發展體系下，2021年員工流失在性別、年齡方面的比例情況如下：

員工流失性別比例



- 男性員工流失比例
- 女性員工流失比例

員工流失年齡比例



- 小於30歲員工流失比例
- 30-50歲員工流失比例
- 大於50歲員工流失比例

此外，公司制定了《學歷教育補貼實施辦法》，鼓勵員工提高專業技術知識水平，為員工提供在職學歷教育補貼，以促進工作績效和效率提升，持續培養符合公司現有及未來對高素質人才的需求，從而進一步提高公司綜合競爭力。

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4 產品與客戶

4.1 產品責任

2021年主要進展

具體舉措	取得成效
深度推進工業化與信息化融合的產品全周期質量管理	實現產品0投訴

質量控制

秉承「質量是企業生命」的理念，公司制定了《質量管理方針》，成功通過了ISO9001質量管理體系和IATF 16949汽車行業質量管理體系認證。公司致力推行涵蓋質量系統及客戶滿意、供貨商管理及原材料分析、質量保證、可靠性保證、失效分析5個綜合科室的全方位質量管理模式。

華虹嚴格按照以下方針進行質量管理：全面推行卓越績效管理，深度推進工業化與信息化融合；積極履行企業社會責任，嚴格秉承零缺陷理念，按時交付綠色優質的產品，持續提供有競爭力的服務；全面滿足客戶要求，不懈提升客戶滿意，實現互利與雙贏。

通過人員管理、設備管理、供應鏈管理、環境管理、體系管理、過程管理、客戶質量管理等多重管理制度，減少人為失誤；借助可靠性管理系統，從產品研發與生產到售後反饋對產品全周期進行實時監控測試，並對整個生產與應用過程中可能出現的異常情況進行失效分析的處理，挖掘問題的本質，針對性的制定糾正及預防措施。公司已建立健全的產品召回制度，且對於規定功能不合規或不符合有害物質管理要求的產品，客戶可於質保期內退還不合格產品。截至2021年，公司產品在終端客戶端的失效率低於十億分之一。

產品責任相關認證情況

產品質量	認證單位	初次通過認證時間
 ISO 9001 質量管理體系	British Standards Institutions (BSI)	2001/11/6
 IATF 16949 汽車行業質量管理體系	British Standards Institutions (BSI)	2005/8/2
信息安全	認證單位	初次通過認證時間
 ISO 27001 信息安全管理體系	British Standards Institutions (BSI)	2002/4/26

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知識產權保護

作為科技型企業，公司在從事智能卡芯片、信息安全芯片等專用集成電路的研究和開發中重視自主創新，尊重知識產權。根據公司的《知識產權管理制度》，積極進行專利申報，對侵犯知識產權行為進行責任追究，同時我們也承諾不侵犯任何單位或個人的知識產權，對上下游合作夥伴的產品技術信息進行嚴格保密。

為避免因製造涉及侵犯他人知識產權的半導體器件或終端產品而遭到申訴的風險，我們接受來自聲譽良好的客戶及未發現潛在風險的產品訂單，並與主要技術公司訂立多項技術授權協議。

二零二一年專利申請情況

全年申請專利數	618
全年申請已獲批專利數	186
累計獲得中美發明授權專利	3,848

4.2 客戶服務與權益保護

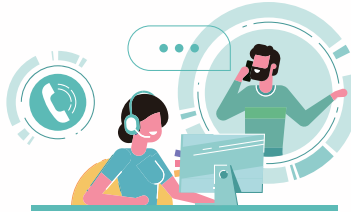
客戶服務體系

秉承「為客戶提供更加便捷安全的服務」的理念，公司建立了完善的客戶服務體系，包括客戶交流、客戶投訴與客戶滿意度三大層面。



客戶交流

- 客戶調研、定期季度／年度業務回顧、技術研討會、培訓等多種與客戶交流的方式。



客戶投訴

- 設立客戶投訴渠道並制定《客戶投訴處理規程》。



客戶滿意度調查

- 每年抽樣實施滿意度調查，根據調查結果制訂改善計劃。

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公司重視客戶反饋，為確保順暢搜集客戶意見，制定《客戶投訴處理規程》，對客戶投訴的處理，以及糾正與整改措施的執行等進行規範。客戶可通過電子郵件、熱線、信函、傳真等渠道向公司進行投訴與反饋。



投訴發生

正常投訴發生後24小時之內與客戶進行溝通與確認，並給出初步回覆。



失效原因調查

需要進行產品失效分析的投訴移交給相關部門處理，根據調查結果提出糾正和預防措施並回覆客戶。



糾正與預防

要求相關部門落實糾正與預防措施，並通過定期對顧客投訴反饋的相關信息進行整理和分析，對整改效果進行監督、評價。

客戶信息保護

公司極其重視維護客戶信息安全，維護客戶權益。公司已建立了ISMS信息安全管理體系，從信息資產管理、人員安全、物理管控、邏輯管控等方面層層把控信息安全風險，保障信息安全，並通過了ISO27001認證。

公司內部設立信息安全委員會，信息安全委員會主要職責包括對緊急重大安全事故進行響應決策；定期開展信息安全管理體系評審；對合作光罩廠進行審核，確保光罩廠數據管理和存儲的安全性；對於芯片生產過程中產生的廢棄掩膜板，我們採取寄回客戶或者進行銷毀的處理方式，從而最大程度的防止廢棄掩膜板內客戶信息的外洩；為提高員工信息安全意識，降低客戶信息外洩風險，公司結合《網絡安全法》、《數據安全法》、《個人信息保護法》等法律法規部署開展涵蓋安全意識測試、線上培訓、線下演示的信息安全周活動，大大提高公司內部整體信息安全意識。公司全年未發生侵犯客戶隱私的違反法律法規事件。

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5 合規運營

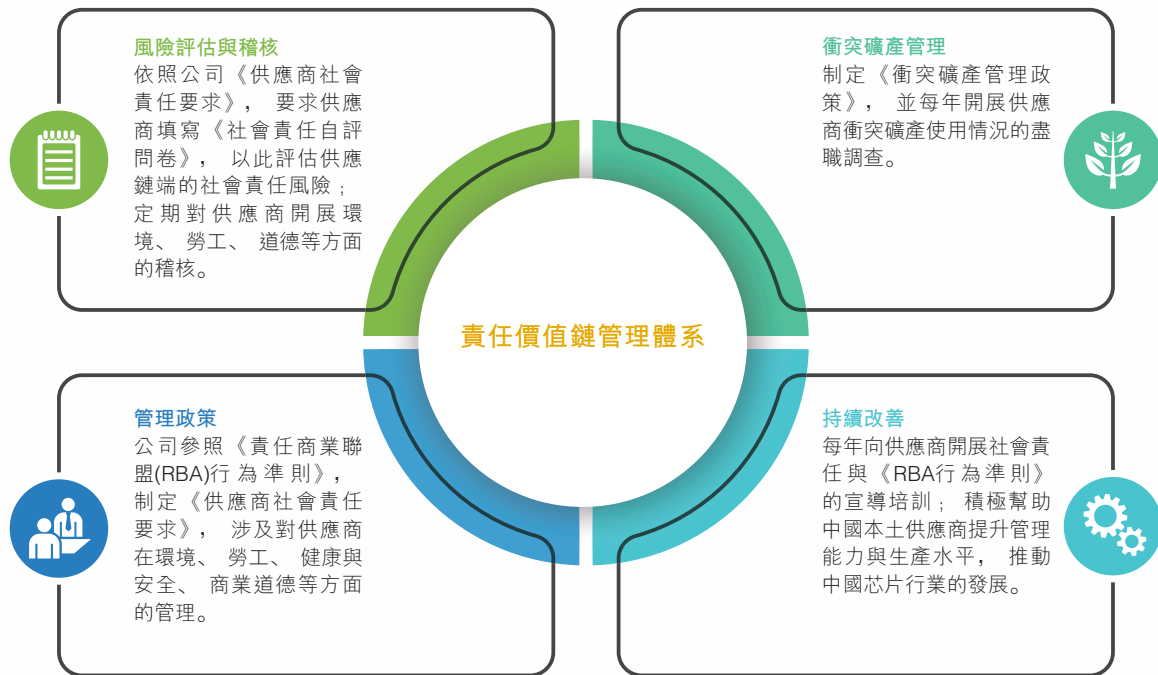
2021年主要進展

具體舉措	取得成效
對上海無錫兩地進行年度全面風險評估	各類主要風險均處於合理水平，公司保持穩健運營。

5.1 責任價值鏈

供應鏈管理

加強供應鏈管理、打造責任價值鏈，是公司長遠發展的重要戰略。公司已建立了完善的價值鏈管理體系，對供貨商的環境、社會風險進行全面的評估與管控，並致力於扶持供貨商的成長，推動國內芯片行業發展。








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管理政策

公司參照《RBA行為準則》制定了的《供貨商社會責任要求》，對供貨商提出在勞工、健康與安全、環境保護、商業道德以及管理體系五大方面的要求。除了要求所有合作的供貨商遵守《供貨商社會責任要求》以外，公司也要求其上游的供貨商認同並依照《供貨商社會責任要求》進行管理。

《華虹半導體供應商社會責任要求》概覽

 勞工	<ul style="list-style-type: none"> • 自由選擇職業 • 青年員工 • 工作時間 	<ul style="list-style-type: none"> • 工資與福利 • 人道的待遇 • 非歧視 	<ul style="list-style-type: none"> • 自由結社
 職業與健康	<ul style="list-style-type: none"> • 職業安全 • 應急準備 • 職業傷害與疾病 	<ul style="list-style-type: none"> • 衛生管理 • 體力需求高的工作 • 機器防護 	<ul style="list-style-type: none"> • 公共衛生， 餐廳和宿舍 • 健康與安全溝通
 環境保護	<ul style="list-style-type: none"> • 環境許可和報告 • 預防污染和節約資源 • 有害物質 	<ul style="list-style-type: none"> • 固體廢棄物 • 空氣排放 • 材料限制 	<ul style="list-style-type: none"> • 水資源管理 • 能源消耗和溫室氣體排放
 商業道德	<ul style="list-style-type: none"> • 廉潔經營 • 無不正當利益 • 信息披露 	<ul style="list-style-type: none"> • 知識產權 • 公平交易， 廣告和競爭 • 身份保密 	<ul style="list-style-type: none"> • 在採購礦物時秉承負責任的態度 • 隱私
 管理體系	<ul style="list-style-type: none"> • 管理職責與責任 • 法律和客戶要求 • 風險評估和風險管理 	<ul style="list-style-type: none"> • 附有實施計劃和措施的績效指標 • 培訓 • 溝通 	<ul style="list-style-type: none"> • 員工反饋、 參與和投訴 • 審核與評估 • 矯正措施

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衝突礦產管理

金屬是通過當地武裝民兵長期以暴力脅迫勞工童工、破壞環境生態的方式取得，也是資助非法武裝組織的主要資金來源。根據《多德－弗蘭克華爾街金融改革與消費者保護法》和部份國際非政府組織的研究報告，此類礦產很可能被信息、通信和技術(ICT)產業應用於手機，計算機等電子電氣產品中。為有效降低公司在衝突礦產使用方面的風險，公司已制定《衝突礦產管理政策》，要求所有供貨商必須承諾採購非衝突礦物，確保負責任礦產有效管理。



衝突礦產管理政策

一直將全球社會環境責任作為我們的目標，實施綠色採購，承諾在金屬供應鏈中承擔以下責任：

- 1) 承擔起社會與環境責任。
- 2) 要求產品中含有金(Au)、鉭(Ta)、鎢(W)、錫(Sn)的供應商遵循負責任礦物政策採購，要求產品中含鈷(Co)和天然雲母(Mica)的供應商披露鈷和天然雲母的來源冶煉廠，保證這些礦物的合法性。
- 3) 承諾將推進產品供貨商提供金(Au)、鉭(Ta)、鎢(W)、錫(Sn)、鈷(Co)金屬不使用「衝突礦產」的聲明，進行衝突礦產的調查，完成負責任礦物計劃(RMI)創建的衝突礦產報告(CMRT)和擴展礦物報告(EMRT)。

公司對供貨商開展衝突礦產使用情況的盡職調查，要求供貨商披露礦產來源以及冶煉廠信息，確保供貨商遵守公司的衝突礦產管理政策。2021年經審核，未發現有使用衝突礦產的供貨商。公司每年向供貨商開展社會責任與《RBA行為準則》的倡導培訓。2021年按計劃完成倡導培訓。

此外，我們積極支持中國供貨商的成長和發展，持續幫助供貨商提升管理能力和生產水平，積極推動中小企業參與包括氣體、化學品、硅片等關鍵原材料的本土供應，培養了一大批本土原材料供貨商和設備供貨商，有力地推動了中國芯片設計業的發展。

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5.2 反腐敗與商業道德

致力於商業道德文化建設，制定了《反腐倡廉廉潔從業承諾制度》，明確要求與公司有經營活動的合作單位包括所有供應商需要簽署《反商業賄賂承諾書》，以及內部相關人員需要簽署《廉潔從業承諾書》。無論是外部的客戶、廠商和利益相關方亦或是內部的員工、幹部以及關鍵崗位人員等。

公司定期開展反腐敗與商業道德風險排查工作。2021年，公司完成對內部管理人員的反腐敗與商業道德風險排查，未發現任何違反規定的現象。此外，公司致力營造廉潔的商業道德從業氛圍，建立內部專欄定期推送警示文章和案例，並定期開展面向所有員工的反腐敗與商業道德培訓活動。

華虹半導體反貪污與反賄賂政策

本公司所有員工（包括兼職員工）、高級管理人員、董事成員均需遵守法律法規，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；

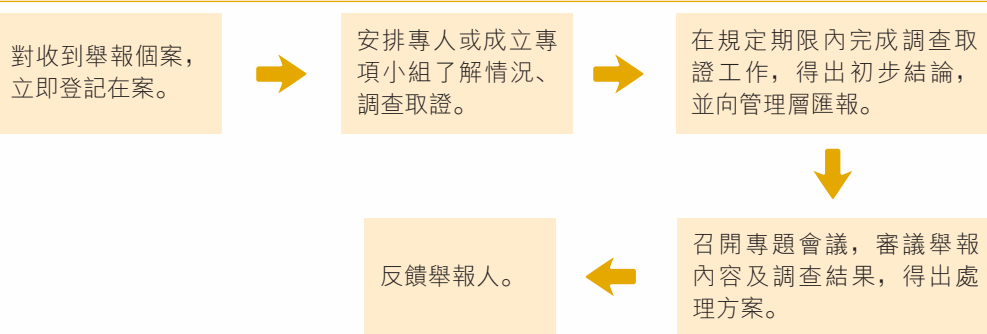
絕不違反財務管理和使用規定，不假公濟私、不化公為私；不弄虛作假，不損害公司合法權益和良好商譽；

不接受可能影響工作的禮品、禮金、有價證券和財務等。

投訴及舉報管理

員工舉報渠道通暢和舉報處理規範有序，提供郵件、電話、信箱等清晰的舉報渠道，鼓勵員工採用實名或匿名的方式進行投訴和舉報，全方位隨時接受來電、來信舉報，做到早發現、早解決、早控制，妥善處理。落實好舉報流程和分類受理、調查和處理工作。此外，公司採取措施對舉報人進行保護，所有涉及舉報人的信息將被嚴格保密。舉報人不會因此遭受任何形式的報復或不利的對待。

商業道德監督及舉報處理程序



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5.3 風險管理

公司不斷完善風險管理的組織體系，每三年完成一次覆蓋全部運營過程的審計，不斷改進流程與制度，切實提升全面風險管理能力。自2016年，公司增設內部審計部風險管理條線，發佈公司《全面風險管理制度》並啟動全面風險管理項目。

2021年，公司繼續對現有風險管理制度進行更新，確保制度設計更貼合實際，有效提高風險管理水平；對上海無錫兩地進行年度全面風險評估，通過開展風險調查問卷與管理層風險訪談，識別重大風險領域並形成年度風險管理報告。此外，公司開展風險管理培訓，涉及典型風險事件探討等內容。

公司主要運營風險及管理方法

風險類別	風險內容	策略
戰略	戰略規劃	公司自上而下擬定戰略目標，並進行適當的分解，落實到企業經營的具體業務模塊中，確保戰略目標的達成
	監督與管理體系	持續完善三線風險管理體系，有效保障戰略的實現
運營	人才儲備	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、結合品牌建設與文化推廣的協同作用，全面提升企業的吸引力和員工滿意度
	供應鏈	通過自身技術優勢提升產業鏈內話語權，與供貨商簽訂中長期戰略協議；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；持續評估供應商供貨能力及產品質量，確保供應鏈的穩定
	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
	研究與開發	完善的研發閉環機制，對研發的立項、執行、後評估全方位監控，持續、及時地開發有商業價值的新產品
財務	資金流動	每月現金流動表，記錄現金流動，並發送相關部門作跟進
	匯率波動	涉及外幣的交易盡量使用現有外幣結算，減少兌換外幣的需要，減少匯率波動風險
環境及安全	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
	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

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6 社區與公益

2021年主要進展

具體舉措	取得成效
組織志願者小組積極參與疫情防控工作	累計1,324人參與志願服務，累計服務時長1,986，較2020年增長為原來的3.4倍

志願者服務

我們鼓勵員工服務當地小區、傳遞關懷，成立了志願者小組，2021年共提供志願服務1,324人次，活動95次。

2021年，公司夯實「四個保護好」，繼續嚴格落實常態化疫情防控措施。公司員工在小區被列為中風險地區實施14天密閉管理期間，積極主動響應號召、勇於擔當作為，踴躍參加志願者服務隊，協助維護現場秩序，為封控樓宇運送居民生活物資，參與疫情防控工作。公司多次收到感謝信和表揚信，高度贊揚和認可公司在社區抗疫中所作出的貢獻。

此外，公司志願者們仍然堅持十幾年如一日，每年定期到養老院慰問慰問老年人，與他們話家常、包餛飩、搞活動，給老人們送去歡樂和關心。

社區共建

為了增加社區居民安全意識，公司連續四年在總部運營所在地社區開展《意外急救課程》，包括急救常識及心肺復蘇術應用等。熱心公益事業，堅持每年義務獻血，2021年共計義務獻血219人次。

鄉村振興

公司積極響應華虹集團號召開展幫扶慰問活動，與崇明區豎新鎮油橋村開展結對幫扶，定期走訪豎新鎮慰問當地村民，了解油橋村在民生、黨建方面和綜合治理方面取得的進展，了解幫扶工作重心，建立長期、穩定、全面的結對幫扶關係，切實助力油橋村各項工作發展。以教育公益助力鄉村振興，關愛山區兒童，助力鞏固脫貧成果，在雲南省漾濞縣開展「芯光」閱讀計劃，不僅捐贈「中華彩虹」圖書館，還積極開展「芯閱讀」系列活動，共計捐贈圖書838冊。

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7 附錄

社會認可

2021年所獲社會認可

序號	獲獎名稱
	全國
1	江蘇省五一勞動獎狀
	上海市
2	上海市科學技術進步獎一等獎
3	2021上海市重點產品質量攻關成果獎一等獎
6	上海知識產權創新獎
5	2019~2020年度上海市文明單位
6	上海市五一勞動獎狀
7	2020年上海市優秀院士工作站
8	上海市企業社會責任報告傑出典型企業
9	上海市三八紅旗集體

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量化績效

環境

績效指標	單位	二零一九年	二零二零年	二零二一年 ⁸
排放物				
廢氣排放總量	萬立方米	1,257,074	1,773,740	2,319,307
氮氧化物(Nox)排放量 ¹	千克	19,383	19,688	36,857
二氧化硫(SO ₂)排放量 ²	千克	72.5	338	2,239
廢水排放總量	萬立方米	431	603	704
溫室氣體排放量 ³	噸CO ₂ 當量	449,343	448,614	713,649
其中，直接溫室氣體排放量 ⁴	噸CO ₂ 當量	16,954	18,135	24,803
間接溫室氣體排放量 ⁵	噸CO ₂ 當量	432,389	430,479	697,899
單位產量溫室氣體排放量	噸CO ₂ 當量／8英寸晶圓	0.23	0.23	0.20
有害廢棄物總量	噸	5,013	9,262	17,363
單位產量有害廢棄物產生量	千克／8英寸晶圓	2.57	3.96	4.96
無害廢棄物總量 ⁶	噸	3,595	6,143	8,981
單位產量無害廢棄物產生量	千克／8英寸晶圓	1.80	2.67	2.57
資源使用				
用電總量	兆瓦時	528,044	720,840	867,682
單位產品用電量	千瓦時／8英寸晶圓	271	313	248
天然氣用量	立方米	8,138,435	10,312,006	11,456,569
單位產品天然氣用量	立方米／8英寸晶圓	4.18	4.49	3.27
用水總量	立方米	7,724,830	9,907,631	13,207,829
其中，來源於市政供水的水量	立方米	4,791,336	7,035,272	8,928,040
廢水回用	立方米	2,933,494	2,872,359	4,288,904
單位產品用水量 ⁷	立方米／8英寸晶圓	2.46	2.89	2.55
循環／再利用水量	立方米	2,823,278	4,042,020	86,119,337
成品出貨所用包裝材料的總量	噸	110	128	253.5
單位成品出貨所用包裝材料佔量	千克／8英寸晶圓	0.06	0.06	0.07
成品出貨所用包裝材料的回收量	噸	8	22	48.5

註：

- 1 氮氧化物排放來自於公用車消耗的汽柴油，計算方法依據香港聯合交易所發佈的《環境關鍵績效指標匯報指引》。
- 2 硫氧化物排放來自於公用車消耗的汽柴油，計算方法依據香港聯合交易所發佈的《環境關鍵績效指標匯報指引》。
- 3 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》。
- 4 直接溫室氣體排放源包括天然氣、電力、柴油等。天然氣排放因子參照《綠色信貸節能減排量測算指引》的規定：節約能源品種為天然氣的，二氧化碳排放係數為2.17公斤二氧化碳／標準立方米。柴油、汽油的二氧化碳排放係數取值參照《綠色信貸節能減排量測算指引》的規定。
- 5 間接溫室氣體排放源包括電力、蒸汽等。
- 6 無害廢棄物為廢水處理產生的污泥量。
- 7 單位產品用水量的統計口徑僅包含市政供水。
- 8 2021年，由於公司各生產基地全年處於產能滿載裝填，且增加無錫公司相關數據，故各項環境數據（廢氣排放總量、溫室氣體排放量、有害廢棄物總量、無害廢棄物總量、成品出貨所用包裝材料的總量）均較2020年有所上升。

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僱傭與勞務實踐

績效指標	單位	二零一九年	二零二零年	二零二一年
員工僱傭				
員工總數	人	5,138	5,682	6,084
其中， 男性員工數	人	3,720	4,164	4,426
女性員工數	人	1,418	1,518	1,658
勞動合同制員工數	人	5,138	5,682	6,084
勞務派遣制員工數	人	130	113	85
兼職員工	人	0	0	0
小於30歲員工數	人	2,354	2,542	2,676
30-50歲員工數	人	2,676	3,018	3,271
大於50歲員工數	人	108	122	137
大陸員工數	人	5,129	5,673	6,075
海外員工數	人	9	9	9
健康與安全				
員工職業病發病率	%	0	0	0
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	23	235	367
員工培訓				
全職員工人均接受培訓時長	小時	99.5	100.1	119.9
其中： 普通員工人均培訓時長	小時	100.5	101.4	121.5
管理層員工人均培訓時長	小時	33.6	18.3	23.5
女性員工人均培訓時長	小時	87.7	96.8	123.8
男性員工人均培訓時長	小時	104	101.3	118.5
全職員工受訓覆蓋率	%	100	100	100
其中： 普通員工受訓覆蓋率	%	100	100	100
管理層員工受訓覆蓋率	%	100	100	100
女性員工受訓覆蓋率	%	100	100	100
男性員工受訓覆蓋率	%	100	100	100

2021年度環境、社會及管治報告

產品責任與客戶服務

績效指標	單位	二零一九年	二零二零年	二零二一年
產品責任與客戶服務				
產品退貨率	%	0.05	0.07	0.05
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	3	8	0
客戶投訴辦結率	%	100	100	—

供應鏈管理

績效指標	單位	二零一九年	二零二零年	二零二一年
供應鏈管理				
供應商總數	家	520	535	545
本土供應商總數	家	393	399	410
海外供應商總數	家	127	133	136
接受評估的供應商數目 ¹	家	112	110	115
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	%	26	28	29

註：

- 1 指公司對其實施了勞工、健康安全、環境、道德方面的評估的供貨商數目。
- 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。

2021年度環境、社會及管治報告

反貪污

績效指標	單位	二零一九年	二零二零年	二零二一年
反貪污				
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

社區投資

績效指標	單位	二零一九年	二零二零年	二零二一年
社區投資				
員工參與志願服務的人數	人	245	449	1,324
志願者活動累計時長	小時	659	450	1,986

公司遵守的法規列表

領域	法律法規名稱
環境責任	
環境保護	《中華人民共和國環境保護法》《中華人民共和國大氣污染防治法》《中華人民共和國城鄉規劃法》《中華人民共和國海洋環境保護法》《中華人民共和國節約能源法》等
產品責任	
產品與服務	《中華人民共和國網絡安全法》《中華人民共和國密碼法》《中華人民共和國會計法》《商用密碼管理條例》《中華人民共和國公司法》《中華人民共和國憲法》《中華人民共和國產品質量法》《中華人民共和國海關法》《中華人民共和國計量法》《中華人民共和國對外貿易法》《中華人民共和國反不正當競爭法》關於化學品註冊、評估、許可和限制(簡稱「REACH」)系列法規、Waste Electrical and Electronic Equipment (WEEE)、關於限制在電子電器設備中使用某些有害成分的指令(簡稱「RoHS」)等
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》等
員工責任	
員工僱傭	《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》《中華人民共和國就業促進法》《中華人民共和國社會保險法》《中華人民共和國民法典》《中華人民共和國勞動法》《中華人民共和國刑法》《健康保險管理辦法》《失業保險金申領發放辦法》等
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》《工傷保險條例》等

2021年度環境、社會及管治報告

報告編製說明

《華虹半導體有限公司2021年度環境、社會及管治報告》(以下簡稱為「本報告」)，經過重要性分析，識別出利益相關方關切的關鍵議題和機遇，並通過本報告，向各利益相關方披露公司在經濟、社會和環境方面採取的行動及取得的成效。

報告範圍

組織範圍：本報告涵蓋華虹半導體有限公司及其子公司，與上市公司年度報告合併財務報表範圍一致。

時間範圍：二零二一年一月一日 – 二零二一年十二月三十一日

報告依據

- 香港聯合交易所有限公司《環境、社會及管治報告指引》(2019)

信息來源

本報告資料的獲取和計算方法與以往年度報告相比沒有重大改變。報告中數據和案例來自公司實際運行的原始記錄或財務報告。如有不一致之處，以財務報告數據為準。本報告中所涉及貨幣金額以人民幣作為計量幣種，特別說明的除外。

匯報原則

- 重要性原則。本報告通過利益相關方線上調查、資料分析等工作，識別出影響公司可持續發展的重要ESG議題並回應。重大性分析過程及結果詳見本報告1.4實質性議題識別與分析。
- 量化原則。本報告已經披露本公司ESG量化關鍵績效及排放量的計算依據，詳見本報告附錄量化績效。
- 一致性原則。本報告對不同報告期所使用的指標盡量保持一致，對發生變化的指標進行解釋說明，以反映績效水準趨勢。
- 平衡性原則。本報告內容反映客觀事實，同時披露正面、負面指標。

INDEPENDENT AUDITOR'S REPORT

獨立核數師報告



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To the members of Hua Hong Semiconductor Limited
(Incorporated in Hong Kong with limited liability)

Opinion

We have audited the consolidated financial statements of Hua Hong Semiconductor Limited (the “Company”) and its subsidiaries (the “Group”) set out on pages 205 to 323, which comprise the consolidated statement of financial position as at 31 December 2021, 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 a summary of significant accounting policies.

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 2021, 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.

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)

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205至323頁的綜合財務報表，當中包括於二零二一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(包括重大會計政策概要)。

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二零二一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。

INDEPENDENT AUDITOR'S REPORT

獨立核數師報告

Basis for opinion

We conducted our audit in accordance with Hong Kong Standards on Auditing (“HKSAAs”) 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。

INDEPENDENT AUDITOR'S REPORT

獨立核數師報告

Key audit matters (continued)

Key audit matter	How our audit addressed the key audit matter
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Fair value of an unlisted equity investment

The Group's equity investments designated at fair value through other comprehensive income as at 31 December 2021 included an unlisted equity investment amounting to US\$241 million. The Group measures the investment at fair value at the end of each reporting period and engages an external expert to assess the 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 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, amongst others, assessing the competency, 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
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未上市股權投資之公平值

於二零二一年十二月三十一日，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2.41億美元。貴集團於各報告期末按公平值對該投資進行計量並聘請外部專家評估公平值。於本年度，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主要假設。

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，評價於評估時使用的估值方法及主要假設(如確定比較上市公司(同行)、選擇價格倍數及缺乏流通性的折讓價之估計)。

INDEPENDENT AUDITOR'S REPORT

獨立核數師報告

Key audit matters (continued)

Key audit matter	How our audit addressed the key audit matter
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Fair value of an investment property

The Group recorded an investment property amounting to US\$185 million as at 31 December 2021. The Group measures its investment property at fair value at the end of each reporting period and engages external experts to assess the 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 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, amongst others, assessing the competency, capabilities and objectivity of the independent external valuer 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.

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
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投資物業公平值

於二零二一年十二月三十一日，貴集團錄得投資物業1.85億美元。貴集團於各報告期末按公平值計量投資物業，並委聘外部專家對公平值進行評估。於本年度，該事項對吾等的審計而言屬重大，乃由於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。

貴集團關於投資物業估值的披露載於財務報表附註3及附註14，其中說明管理層於估值中所用的主要假設。

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、將用於評估的物業相關數據與相關文件比較，以及在內部專家協助下，評價評估時使用的估值方法及主要假設(如估計租賃價值、年期回報率、復歸及長期空置率)。

INDEPENDENT AUDITOR'S REPORT

獨立核數師報告

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. The Annual Report is expected to be made available to us after the date of this auditor's report.

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 identified above when it becomes available 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.

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)。預期年報將於本核數師報告日期後提供予我們。

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，吾等的責任是當取得其他資料後閱讀其他資料，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。

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失實陳述。

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。

INDEPENDENT AUDITOR'S REPORT

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任何責任。

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，在某一重大錯誤陳述存在時總能發現。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。

我們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。我們亦：

- 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我們的意見提供基礎。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。

INDEPENDENT AUDITOR'S REPORT

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.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with 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.

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.

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。倘若我們總結認為有重大不確定因素，我們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，則修訂我們的意見。我們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。
- 就貴集團內各實體或業務活動的財務資料獲得充足適當的審計憑證，以便就綜合財務報表發表意見。我們須負責指導、監督和執行貴集團的審計工作。我們須為我們的審計意見承擔全部責任。

我們就(其中包括)審計工作的計劃範圍和時間以及重大審計發現(包括我們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。

我們亦向審核委員會提交聲明，確認我們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我們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。

我們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，我們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，否則我們會在核數師報告中描述此等事項。

INDEPENDENT AUDITOR'S REPORT

獨立核數師報告

Auditor's responsibilities for the audit of the consolidated financial statements (continued)

The engagement partner on the audit resulting in this independent auditor's report is Shun Lung Wai.

核數師就審計綜合財務報表承擔的責任(續)

出具本獨立核數師報告的審計項目合夥人為孫龍偉。

Ernst & Young
Certified Public Accountants
Hong Kong
29 March 2022

安永會計師事務所
執業會計師
香港
二零二二年三月二十九日

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

綜合損益表

Year ended 31 December 2021
截至二零二一年十二月三十一日止年度

		Notes	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
		附註		
Revenue	銷售收入	5	1,630,754	961,279
Cost of sales	銷售成本		(1,179,156)	(726,486)
Gross profit	毛利		451,598	234,793
Other income and gains	其他收入及收益	5	60,758	57,313
Fair value gain on an investment property	投資物業的公平值收益		183	198
Selling and distribution expenses	銷售及分銷費用		(10,673)	(8,169)
Administrative expenses	管理費用		(198,920)	(261,139)
Other expenses	其他費用	5	(165)	(10)
Finance costs	財務費用	7	(13,226)	(2,968)
Share of profit of associates	分佔聯營公司溢利		6,765	26,059
PROFIT BEFORE TAX	稅前溢利	6	296,320	46,077
Income tax expense	所得稅開支	10	(65,349)	(12,762)
PROFIT FOR THE YEAR	年內溢利		230,971	33,315
Attributable to:	下列人士應佔:			
Owners of the parent	母公司擁有人		261,476	99,443
Non-controlling interests	非控股權益		(30,505)	(66,128)
			230,971	33,315
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\$0.201 0.201美元	US\$0.077 0.077美元
Diluted	攤薄			
– For profit for the year	– 年內溢利		US\$0.198 0.198美元	US\$0.076 0.076美元

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

綜合全面收益表

Year ended 31 December 2021
截至二零二一年十二月三十一日止年度

		2021	2020
		二零二一年	二零二零年
		US\$'000	US\$'000
		千美元	千美元
PROFIT FOR THE YEAR	年內溢利	230,971	33,315
OTHER COMPREHENSIVE INCOME	其他全面收益		
Other comprehensive income 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收益：		
Exchange differences on translation of foreign operations	換算海外業務產生的外匯差額	80,630	213,916
Net other comprehensive income 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收益淨額	80,630	213,916
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	15,564	8,211
Income tax effect	所得稅影響	(2,335)	(1,232)
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	13,229	6,979
OTHER COMPREHENSIVE INCOME FOR THE YEAR, NET OF TAX	年內其他全面收益，扣除稅項	93,859	220,895
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	年內全面收益總額	324,830	254,210
Attributable to:	下列人士應佔：		
Owners of the parent	母公司擁有人	336,438	266,532
Non-controlling interests	非控股權益	(11,608)	(12,322)
		324,830	254,210

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

綜合財務狀況表

31 December 2021
二零二一年十二月三十一日

			31 December 2021 二零二一年 十二月三十一日 US\$'000 千美元	31 December 2020 二零二零年 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	3,116,501	2,510,442
Investment property	14	投資物業	184,883	180,476
Right-of-use assets	15	使用權資產	75,331	79,221
Intangible assets	16	無形資產	35,312	36,947
Investments in associates	17	於聯營公司的投資	122,040	105,218
Equity investments designated at fair value through other comprehensive income	18	指定按公平值計入其他 全面收益的股權投資	257,788	230,265
Long term prepayments to third parties		應付第三方之長期預付款項	15,573	10,768
Long term prepayments to related parties	35(c)	向關聯方長期預付款項	-	26
Deferred tax assets	28	遞延稅項資產	3,479	8,965
Total non-current assets		非流動資產總額	3,810,907	3,162,328
CURRENT ASSETS		流動資產		
Properties under development	19	發展中物業	114,492	-
Inventories	20	存貨	432,917	226,476
Trade and notes receivables	21	貿易應收款項及應收票據	181,042	120,952
Prepayments, other receivables and other assets	22	預付款項、其他應收款項及 其他資產	43,443	130,979
Due from related parties	35(c)	應收關聯方款項	6,910	4,706
Pledged deposits	23	已抵押存款	2,248	359
Cash and cash equivalents	23	現金及現金等價物	1,610,140	922,786
Total current assets		流動資產總額	2,391,192	1,406,258
CURRENT LIABILITIES		流動負債		
Trade payables	24	貿易應付款項	194,385	130,980
Other payables and accruals	25	其他應付款項及暫估費用	560,435	386,305
Interest-bearing bank borrowings	26	計息銀行借款	195,024	47,784
Lease liabilities	27	租賃負債	1,676	4,235
Government grants	29	政府補助	66,837	58,926
Due to related parties	35(c)	應付關聯方款項	7,501	12,647
Income tax payable		應付所得稅	54,543	24,171
Total current liabilities		流動負債總額	1,080,401	665,048
NET CURRENT ASSETS		流動資產淨額	1,310,791	741,210
TOTAL ASSETS LESS CURRENT LIABILITIES		資產總值減流動負債	5,121,698	3,903,538

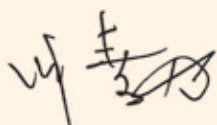
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CONSOLIDATED STATEMENT OF FINANCIAL POSITION

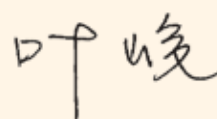
綜合財務狀況表

31 December 2021
二零二一年十二月三十一日

			31 December 2021	31 December 2020
			二零二一年 十二月三十一日	二零二零年 十二月三十一日
	Notes 附註		US\$'000 千美元	US\$'000 千美元
NON-CURRENT LIABILITIES				
非流動負債				
Interest-bearing bank borrowings		計息銀行借款	26 1,395,279	518,391
Lease liabilities		租賃負債	27 16,137	17,405
Deferred tax liabilities		遞延稅項負債	28 25,735	13,621
Total non-current liabilities		非流動負債總額	1,437,151	549,417
Net assets				
資產淨額				
EQUITY				
權益				
Share capital		股本	30 1,986,152	1,979,033
Reserves		儲備	32 884,207	549,409
Total equity attributable to owners of the parent		母公司擁有人應佔權益總額	2,870,359	2,528,442
Non-controlling interests		非控股權益	40 814,188	825,679
Total equity		權益總額	3,684,547	3,354,121



Suxin Zhang
張素心
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 2021
截至二零二一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 other financial assets at fair value											
		Share and through other Statutory Exchange Non-											
		capital reserve option contributed comprehensive Revaluation reserve fluctuation Accumulated controlling Total											
		equity											
		按公平值計入											
		其他資本 其他全面收益											
		儲備及 的金融資產之											
		法定儲備 外匯波動											
		基金 儲備 累計虧損 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
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
		(note 30)		(note 31)				(note 32)				(note 40)	
		(附註30)		(附註31)				(附註32)				(附註40)	
At 1 January 2021	於二零二一年一月一日	1,979,033	645,494	16,212	35,685	11,826	99,257	105,631	159,648	(524,344)	2,528,442	825,679	3,354,121
Profit/(loss) for the year	年內溢利/(虧損)	-	-	-	-	-	-	-	-	261,476	261,476	(30,505)	230,971
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	-	-	-	-	13,229	-	-	-	-	13,229	-	13,229
Exchange differences related to foreign operations	有關海外業務的外匯差額	-	-	-	-	-	-	-	61,733	-	61,733	18,897	80,630
Total comprehensive income for the year	年內全面收益總額	-	-	-	-	13,229	-	-	61,733	261,476	336,438	(11,608)	324,830
Issue of shares	發行股份	30	7,119	(1,819)	-	-	-	-	-	-	5,300	-	5,300
Equity-settled share option arrangements	以權益結算的購股權安排	31	-	179	-	-	-	-	-	-	179	117	296
Transfer from retained profits generated by a subsidiary	轉撥自一間子公司產生的留存溢利	-	-	-	-	-	-	34,795	-	(34,795)	-	-	-
At 31 December 2021	於二零二一年十二月三十一日	1,986,152	645,494*	14,572*	35,685*	25,055*	99,257*	140,426*	221,381*	(297,663)*	2,870,359	814,188	3,684,547

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

綜合權益變動表

Year ended 31 December 2021
截至二零二一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												
		Other comprehensive income												
		Share and contributed surplus												
		Statutory reserve												
		Exchange fluctuation												
		Accumulated losses												
		Non-controlling interests												
		Total												
		Total equity												
		按公平值計入												
		其他資本												
		儲備及												
		的金融資產之												
		法定儲備												
		外匯波動												
		基金												
		儲備												
		累計虧損												
		總計												
		非控股權益												
		權益總額												
Notes	股本	合併儲備	購股權儲備	供款盈餘	公平值儲備	重估盈餘#	基金	儲備	累計虧損	總計	非控股權益	權益總額		
附註	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000		
	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31)				(附註32)				(附註40)			
At 1 January 2020	於二零二零年一月一日	1,966,095	645,494	12,481	35,685	4,847	99,257	89,186	(462)	(607,342)	2,245,241	837,351	3,082,592	
Profit/(loss) for the year	年內溢利/(虧損)	-	-	-	-	-	-	-	-	99,443	99,443	(66,128)	33,315	
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	-	-	-	-	6,979	-	-	-	-	6,979	-	6,979	
Exchange differences related to foreign operations	有關海外業務的外匯差額	-	-	-	-	-	-	160,110	-	-	160,110	53,806	213,916	
Total comprehensive income for the year	年內全面收益總額	-	-	-	-	6,979	-	-	160,110	99,443	266,532	(12,322)	254,210	
Issue of shares	發行股份	30	12,938	(3,763)	-	-	-	-	-	-	9,175	-	9,175	
Equity-settled share option arrangements	以權益結算的購股權安排	31	-	7,494	-	-	-	-	-	-	7,494	650	8,144	
Transfer from retained profits generated by a subsidiary	轉撥自一間子公司產生的留存溢利	-	-	-	-	-	-	16,445	-	(16,445)	-	-	-	
At 31 December 2020	於二零二零年十二月三十一日	1,979,033	645,494*	16,212*	35,685*	11,826*	99,257*	105,631*	159,648*	(524,344)*	2,528,442	825,679	3,354,121	

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\$884,207,000 (2020: US\$549,409,000) 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884,207,000美元(二零二零年: 549,409,000美元)。

CONSOLIDATED STATEMENT OF CASH FLOWS

綜合現金流量表

Year ended 31 December 2021
截至二零二一年十二月三十一日止年度

	Notes 附註	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
CASH FLOWS FROM OPERATING ACTIVITIES	經營活動所得現金流量		
Profit before tax	稅前溢利	296,320	46,077
Adjustments for:	就以下各項作出的調整:		
Finance costs	財務費用	13,226	2,968
Share of profit of associates	分佔聯營公司溢利	(6,765)	(26,059)
Interest income	利息收入	(13,437)	(10,707)
Other interest income from financial assets at fair value through profit or loss	按公平值計入損益的金融資產所產生之其他利息收入	—	(5,337)
Loss on disposal of items of property, plant and equipment	出售物業、廠房及設備項目所得虧損	76	—
Depreciation of property, plant and equipment	物業、廠房及設備折舊	302,245	194,338
Changes in fair value of an investment property	投資物業公平值變動	(183)	(198)
Depreciation of right-of-use assets	使用權資產折舊	5,676	5,628
Amortisation of intangible assets	無形資產攤銷	10,095	6,388
(Reversal)/write-down of inventories to net realisable value	存貨(撥回)/撇減至可變現淨值	(180)	5,614
Impairment of trade receivables	貿易應收款項減值	273	—
Impairment of items of property, plant and equipment	物業、廠房及設備項目減值	3,914	1,136
Equity-settled share option expense	以權益結算的購股權開支	296	8,144
		611,556	227,992
Increase in properties under development	發展中物業增加	(10,858)	—
Increase in inventories	存貨增加	(206,680)	(90,924)
(Increase)/decrease in trade and notes receivables	貿易應收款項及應收票據(增加)/減少	(60,391)	43,926
Increase in prepayments, other receivables and other assets	預付款項、其他應收款項及其他資產增加	(10,248)	(15,707)
(Increase)/decrease in amounts due from related parties	應收關聯方款項(增加)/減少	(2,204)	4,556
(Increase)/decrease in pledged deposits	已抵押存款(增加)/減少	(1,889)	446
Increase in trade payables	貿易應付款項增加	63,405	44,861
Increase in other payables and accruals	其他應付款項及暫估費用增加	137,861	60,679
Increase in government grants	政府補助增加	23,513	14,610
(Decrease)/increase in amounts due to related parties	應付關聯方款項(減少)/增加	(5,146)	1,992
Cash generated from operations	經營活動產生的現金	538,919	292,431
Income tax paid	已付所得稅	(20,448)	(23,321)
Net cash flows generated from operating activities	經營活動所得現金流量淨額	518,471	269,110

CONSOLIDATED STATEMENT OF CASH FLOWS

綜合現金流量表

Year ended 31 December 2021
截至二零二一年十二月三十一日止年度

	Notes 附註	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
CASH FLOWS FROM INVESTING ACTIVITIES			
Interest received		5,899	8,890
Purchases of items of property, plant and equipment, prepaid lease payments and intangible assets		(938,911)	(1,087,257)
Purchases of equity investments designated at fair value through other comprehensive income		(6,290)	–
Investment in an associate		(7,405)	–
Proceeds from disposal of items of property, plant and equipment		54	–
Receipt of government grants for property, plant and equipment		83,594	80,136
Purchases of financial assets at fair value through profit or loss		–	(738,163)
Proceeds from disposal of financial assets at fair value through profit or loss		–	1,260,733
Decrease in time deposits		–	70,000
Net cash flows used in investing activities		(863,059)	(405,661)
CASH FLOWS FROM FINANCING ACTIVITIES			
Proceeds from issue of shares		7,419	8,177
New bank loans		1,070,805	893,186
Interest paid		(11,729)	(2,848)
Repayment of bank loans		(47,860)	(354,418)
Principal portion of lease payments		(3,995)	(3,670)
Net cash flows generated from financing activities		1,014,640	540,427
NET INCREASE IN CASH AND CASH EQUIVALENTS		670,052	403,876
Cash and cash equivalents at beginning of year		922,786	476,286
Effect of foreign exchange rate changes, net		17,302	42,624
CASH AND CASH EQUIVALENTS AT END OF YEAR	23	1,610,140	922,786
ANALYSIS OF BALANCES OF CASH AND CASH EQUIVALENTS			
Cash and bank balances	23	379,968	226,582
Non-pledged time deposits with original maturity of less than three months when acquired		1,230,172	696,204
Cash and cash equivalents as stated in the statement of financial position and in the statement of cash flows	23	1,610,140	922,786

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2021
二零二一年十二月三十一日

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 and the ultimate 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”), supervised by the Shanghai State-owned Assets Supervision and Administration Commission.

Information about subsidiaries

Particulars of the Company’s subsidiaries are as follows:

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，本公司的母公司及最終控股公司為上海華虹(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監管的國有公司。

有關子公司的資料

本公司主要子公司的詳情如下：

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	
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	RMB7,828,578 人民幣7,828,578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\$1,800,000 1,800,000美元	22.2%	28.8%	Manufacture and sale of semiconductor products 生產及銷售半導體產品
Huahong Real Estate (Wuxi) Co., Ltd. ("Huahong Real Estate Wuxi")** 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	–	51%	Real estate development 房地產開發

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2021
二零二一年十二月三十一日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	
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.	USA 美國	-	100%	-	Sales office 銷售辦事處
HHGrace Semiconductor Japan Co., Ltd.	Japan 日本	JPY10,000 10,000日圓	100%	-	Sales office 銷售辦事處
* HHGrace and Hua Hong Wuxi are respectively registered as a wholly-foreign-owned company and a Sino-foreign joint company under PRC law.					* 華虹宏力及華虹無錫分別根據中國法律註冊為外商獨資公司及中外合資公司。
** 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

31 December 2021
二零二一年十二月三十一日 財務報表附註

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”), accounting principles generally accepted in Hong Kong and the Hong Kong Companies Ordinance. They have been prepared under the historical cost convention, except for an investment property, equity investments designated at fair value through other comprehensive income and financial assets at fair value through profit or loss 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 2021. 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).

When the Company has, directly or indirectly, 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.

2.1 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)、香港公認會計準則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、指定按公平值計入其他全面收益的股權投資及按公平值計入損益的金融資產除外。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」)截至二零二一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)。

倘本公司直接或間接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

財務報表附註 31 December 2021 二零二一年十二月三十一日

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 (i) the assets (including goodwill) and liabilities of the subsidiary, (ii) the carrying amount of any non-controlling interest and (iii) the cumulative translation differences recorded in equity; and recognises (i) the fair value of the consideration received, (ii) the fair value of any investment retained and (iii) 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 9, HKAS 39, HKFRS 7, HKFRS 4 and HKFRS 16	<i>Interest Rate Benchmark Reform – Phase 2</i>
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Amendment to HKFRS 16	<i>Covid-19-Related Rent Concessions beyond 30 June 2021 (early adopted)</i>
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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(i)該子公司的資產(包括商譽)及負債，(ii)任何非控股權益的賬面值及(iii)於權益內記錄的累計交易差額；及確認(i)所收代價的公平值，(ii)所保留任何投資的公平值及(iii)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 9號、香港會計準 則第39號、香港 財務報告準則第7 號、香港財務報告 準則第4號及香港 財務報告準則第16 號(修訂本)	<i>利率基準改革 – 第二階段</i>
香港財務報告準則第 16號(修訂本)	<i>二零二一年六月 三十日之後的 新型冠狀病毒 肺炎相關租金 優惠(獲提早 採納)</i>

NOTES TO FINANCIAL STATEMENTS

31 December 2021
二零二一年十二月三十一日 財務報表附註**2.2 Changes in Accounting Policies and Disclosures (continued)**

The nature and the impact of the revised HKFRSs are described below:

- (a) Amendments to HKFRS 9, HKAS 39, HKFRS 7, HKFRS 4 and HKFRS 16 address issues not dealt with in the previous amendments which affect financial reporting when an existing interest rate benchmark is replaced with an alternative risk-free rate (“RFR”). The amendments provide a practical expedient to allow the effective interest rate to be updated without adjusting the carrying amount of financial assets and liabilities when accounting for changes in the basis for determining the contractual cash flows of financial assets and liabilities, if the change is a direct consequence of the interest rate benchmark reform and the new basis for determining the contractual cash flows is economically equivalent to the previous basis immediately preceding the change. In addition, the amendments permit changes required by the interest rate benchmark reform to be made to hedge designations and hedge documentation without the hedging relationship being discontinued. Any gains or losses that could arise on transition are dealt with through the normal requirements of HKFRS 9 to measure and recognise hedge ineffectiveness. The amendments also provide a temporary relief to entities from having to meet the separately identifiable requirement when an RFR is designated as a risk component. The relief allows an entity, upon designation of the hedge, to assume that the separately identifiable requirement is met, provided the entity reasonably expects the RFR risk component to become separately identifiable within the next 24 months. Furthermore, the amendments require an entity to disclose additional information to enable users of financial statements to understand the effect of interest rate benchmark reform on an entity’s financial instruments and risk management strategy.

2.2 會計政策的變動及披露 (續)

經修訂香港財務報告準則的性質及影響載於下文：

- (a) 香港財務報告準則第9號、香港會計準則第39號、香港財務報告準則第7號、香港財務報告準則第4號及香港財務報告準則第16號(修訂本)於現有利率基準被替代無風險利率(「無風險利率」)替換時解決先前修訂中未處理但影響財務報告之問題。該等修訂提供一項可行權宜方法，允許對釐定金融資產及負債之合約現金流量之基準變動進行會計處理時更新實際利率而無需調整金融資產及負債之賬面值，前提是有關變動為利率基準改革之直接後果且釐定合約現金流量的新基準於經濟上等同於緊接變動前的先前基準。此外，該等修訂允許就對沖指定項目及對沖文件作出利率基準改革所要求的變動，而不會終止對沖關係。過渡期間可能產生的任何收益或虧損均通過香港財務報告準則第9號的正常規定進行處理，以衡量及確認對沖無效性。該等修訂亦為實體提供暫時寬免，於無風險利率被指定為風險成份時毋須滿足可單獨識別之規定。該寬免允許實體於指定對沖後假定已滿足可單獨識別之規定，惟實體須合理預期無風險利率風險成份於未來24個月內將可單獨識別。此外，該等修訂要求實體須披露額外資料，以使財務報表的使用者能夠了解利率基準改革對實體的金融工具及風險管理策略的影響。

NOTES TO FINANCIAL STATEMENTS

財務報表附註 31 December 2021 二零二一年十二月三十一日

2.2 Changes in Accounting Policies and Disclosures (continued)

(a) (continued)

The Group had certain interest-bearing bank borrowings denominated in United States dollars based on the London Interbank Offered Rate (“LIBOR”) as at 31 December 2021. For the LIBOR-based borrowings, since the interest rates of these instruments were not replaced by RFRs during the year, the amendments did not have any impact on the financial position and performance of the Group. If the interest rates of these borrowings are replaced by RFRs in a future period, the Group will apply this the above-mentioned practical expedient upon the modification of these borrowings when instruments provided that the “economically equivalent” criterion is met. Additional information about the transition and the associated risks is disclosed in note 38 to the financial statements.

(b) Amendment to HKFRS 16 issued in April 2021 extends the availability of the practical expedient for lessees to elect not to apply lease modification accounting for rent concessions arising as a direct consequence of the covid-19 pandemic by 12 months. Accordingly, the practical expedient applies to rent concessions for which any reduction in lease payments affects only payments originally due on or before 30 June 2022, provided the other conditions for applying the practical expedient are met. The amendment is effective retrospectively for annual periods beginning on or after 1 April 2021 with any cumulative effect of initially applying the amendment recognised as an adjustment to the opening balance of retained profits at the beginning of the current accounting period. Earlier application is permitted.

The Group has early adopted the amendment on 1 January 2021. However, the Group has not received covid-19-related rent concessions and plans to apply the practical expedient when it becomes applicable within the allowed period of application.

2.2 會計政策的變動及披露 (續)

(a) (續)

本集團於二零二一年十二月三十一日持有根據倫敦銀行同業拆息(「倫敦銀行同業拆息」)以美元計值的若干計息銀行借款。就基於倫敦銀行同業拆息的借款而言，由於該等工具的利率於年內並未被無風險利率取代，該等修訂對本集團的財務狀況及業績並無任何影響。倘該等借款的利率於未來期間被無風險利率代替，本集團將於該等工具滿足「經濟上相當」標準的條件下在該等借款調整時應用上述可行權宜方法。有關過渡及相關風險的額外資料於財務報表附註38中披露。

(b) 於二零二一年四月頒佈的香港財務報告準則第16號(修訂本)將可行權宜方法延長12個月，承租人可選擇不就新型冠狀病毒肺炎直接導致的租金優惠應用租賃修訂會計處理。因此，可行權宜方法適用於租賃付款的任何減幅僅影響原到期日為二零二二年六月三十日或之前的付款的租金優惠，惟已滿足應用實際權宜方法的其他條件。該修訂本於二零二一年四月一日或之後開始的年度期間追溯生效，初始應用該修訂本的任何累積影響確認為對當前會計期間開始時保留溢利的期初結餘的調整。允許提早應用。

本集團已於二零二一年一月一日提早採納該修訂本。然而，本集團並無獲得新型冠狀病毒肺炎相關租金優惠，並計劃於允許申請期內適用時應用可行權宜方法。

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2.3 Issued But Not Yet Effective Hong Kong Financial Reporting Standards

The Group has not applied the following new and revised HKFRSs, that have been issued but are not yet effective, in these financial statements.

Amendments to HKFRS 3	<i>Reference to the Conceptual Framework</i> ¹
Amendments to HKFRS 10 and HKAS 28 (2011)	<i>Sale or Contribution of Assets between an Investor and its Associate or Joint Venture</i> ³
HKFRS 17	<i>Insurance Contracts</i> ²
Amendments to HKFRS 17	<i>Insurance Contracts</i> ^{2,5}
Amendments to HKAS 1	<i>Classification of Liabilities as Current or Non-current</i> ^{2,4}
Amendments to HKAS 1 and HKFRS Practice Statement 2	<i>Disclosure of Accounting Policies</i> ²
Amendments to HKAS 8	<i>Definition of Accounting Estimates</i> ²
Amendments to HKAS 12	<i>Deferred Tax related to Assets and Liabilities arising from a Single Transaction</i> ²
Amendments to HKAS 16	<i>Property, Plant and Equipment: Proceeds before Intended Use</i> ¹
Amendments to HKAS 37	<i>Onerous Contracts – Cost of Fulfilling a Contract</i> ¹
Annual Improvements to HKFRSs 2018-2020	Amendments to HKFRS 1, HKFRS 9, Illustrative Examples accompanying HKFRS 16, and HKAS 41 ¹

¹ Effective for annual periods beginning on or after 1 January 2022

² Effective for annual periods beginning on or after 1 January 2023

³ No mandatory effective date yet determined but available for adoption

⁴ As a consequence of the amendments to HKAS 1, Hong Kong Interpretation 5 Presentation of Financial Statements – Classification by the Borrower of a Term Loan that Contains a Repayment on Demand Clause was revised in October 2020 to align the corresponding wording with no change in conclusion

⁵ As a consequence of the amendments to HKFRS 17 issued in October 2020, HKFRS 4 was amended to extend the temporary exemption that permits insurers to apply HKAS 39 rather than HKFRS 9 for annual periods beginning before 1 January 2023

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新訂及經修訂香港財務報告準則。

香港財務報告準則第3號 (修訂本)	概念框架之提述 ¹
香港財務報告準則第10號及香港會計準則第28號 (二零一一年)(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 ³
香港財務報告準則第17號	保險合約 ²
香港財務報告準則第17號 (修訂本)	保險合約 ^{2,5}
香港會計準則第1號 (修訂本)	負債分類為流動或非流動 ^{2,4}
香港會計準則第1號及香港財務報告準則實務報告第2號 (修訂本)	會計政策披露 ²
香港會計準則第8號 (修訂本)	會計估計的定義 ²
香港會計準則第12號 (修訂本)	與單一交易產生的資產及負債相關的遞延稅項 ²
香港會計準則第16號 (修訂本)	物業、廠房及設備：作擬定用途前之所得款項 ¹
香港會計準則第37號 (修訂本)	虧損性合約 – 履行合約之成本 ¹
香港財務報告準則二零一八年至二零二零年週期之年度改進	香港財務報告準則第1號、香港財務報告準則第9號、香港財務報告準則第16號隨附之說明性示例及香港會計準則第41號 (修訂本) ¹

¹ 於二零二二年一月一日或之後開始之年度期間生效

² 於二零二三年一月一日或之後開始之年度期間生效

³ 尚未釐定強制生效日期但可供採納

⁴ 由於香港會計準則第1號 (修訂本)，香港詮釋第5號財務報表的呈報 – 借款人對載有按要求償還條款的定期貸款的分類已於二零二零年十月進行修訂，以使相應措詞保持一致而結論不變

⁵ 由於於二零二零年十月頒佈的香港財務報告準則第17號 (修訂本)，香港財務報告準則第4號獲修訂以擴大暫時豁免，允許保險公司於二零二三年一月一日之前開始的年度期間應用香港會計準則第39號而非香港財務報告準則第9號

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2.3 Issued But Not Yet Effective Hong Kong Financial Reporting Standards (continued)

Further information about those HKFRSs that are expected to be applicable to the Group is described below.

Amendments to HKFRS 3 are intended to replace a reference to the previous *Framework for the Preparation and Presentation of Financial Statements* with a reference to the *Conceptual Framework for Financial Reporting* issued in June 2018 without significantly changing its requirements. The amendments also add to HKFRS 3 an exception to its recognition principle for an entity to refer to the Conceptual Framework to determine what constitutes an asset or a liability. The exception specifies that, for liabilities and contingent liabilities that would be within the scope of HKAS 37 or HK(IFRIC)-Int 21 if they were incurred separately rather than assumed in a business combination, an entity applying HKFRS 3 should refer to HKAS 37 or HK(IFRIC)-Int 21 respectively instead of the Conceptual Framework. Furthermore, the amendments clarify that contingent assets do not qualify for recognition at the acquisition date. The Group expects to adopt the amendments prospectively from 1 January 2022. Since the amendments apply prospectively to business combinations for which the acquisition date is on or after the date of first application, the Group will not be affected by these amendments on the date of transition.

Amendments to HKFRS 10 and HKAS 28 (2011) address an inconsistency between the requirements in HKFRS 10 and in HKAS 28 (2011) in dealing with the sale or contribution of assets between an investor and its associate or joint venture. The amendments require a full recognition of a gain or loss resulting from a downstream transaction when the sale or contribution of assets between an investor and its associate or joint venture constitutes a business. For a transaction involving assets that do not constitute a business, a gain or loss resulting from the transaction is recognised in the investor's profit or loss only to the extent of the unrelated investor's interest in that associate or joint venture. The amendments are to be applied prospectively. The previous mandatory effective date of amendments to HKFRS 10 and HKAS 28 (2011) was removed by the HKICPA in January 2016 and a new mandatory effective date will be determined after the completion of a broader review of accounting for associates and joint ventures. However, the amendments are available for adoption now.

2.3 已頒佈但尚未生效之香港財務報告準則 (續)

有關預期適用於本集團之香港財務報告準則之進一步資料載列如下。

香港財務報告準則第3號(修訂本)旨在以二零一八年六月頒佈之財務報告概念框架之提述取代先前財務報表編製及呈列框架之提述，而毋須大幅更改其規定。該等修訂亦對香港財務報告準則第3號有關實體參考概念框架以釐定資產或負債之構成之確認原則加入一項例外情況。該例外情況規定，對於屬香港會計準則第37號或香港(國際財務報告詮釋委員會)一詮釋第21號範圍內的負債及或然負債而言，倘該等負債屬單獨產生而非於業務合併中產生，則應用香港財務報告準則第3號的實體應分別參考香港會計準則第37號或香港(國際財務報告詮釋委員會)一詮釋第21號而非概念框架。此外，該等修訂澄清或然資產於收購日期不符合確認條件。本集團預計自二零二二年一月一日起前瞻性採納該等修訂。由於該等修訂前瞻性應用於收購日期為首次應用日期或之後的業務合併，因此本集團於過渡日期將不會受該等修訂的影響。

香港財務報告準則第10號及香港會計準則第28號(二零一一年)(修訂本)解決香港財務報告準則第10號與香港會計準則第28號(二零一一年)之間有關處理投資者與其聯營公司或合營企業之間的資產出售或注資的規定的不一致情況。該等修訂規定，倘投資者與其聯營公司或合營企業之間的資產出售或注資構成一項業務，則須悉數確認下游交易產生的收益或虧損。倘交易涉及不構成一項業務的資產，則該交易產生的收益或虧損於投資者的損益內確認，惟以不相關投資者於該聯營公司或合營企業的權益為限。該等修訂將予以前瞻性應用。香港會計師公會於二零一六年一月剔除香港財務報告準則第10號及香港會計準則第28號(二零一一年)(修訂本)的以往強制生效日期，而新的強制生效日期將於對聯營公司及合營企業的會計處理完成更廣泛的審閱後釐定。然而，該等修訂目前可供採納。

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Amendments to HKAS 1 *Classification of Liabilities as Current or Non-current* clarify the requirements for classifying liabilities as current or non-current. The amendments specify that if an entity's right to defer settlement of a liability is subject to the entity complying with specified conditions, the entity has a right to defer settlement of the liability at the end of the reporting period if it complies with those conditions at that date. Classification of a liability is unaffected by the likelihood that the entity will exercise its right to defer settlement of the liability. The amendments also clarify the situations that are considered a settlement of a liability. The amendments are effective for annual periods beginning on or after 1 January 2023 and shall be applied retrospectively. Earlier application is permitted. The amendments are not expected to have any significant impact on the Group's financial statements.

Amendments to HKAS 1 *Disclosure of Accounting Policies* require entities to disclose their material accounting policy information rather than their significant accounting policies. Accounting policy information is material if, when considered together with other information included in an entity's financial statements, it can reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements. Amendments to HKFRS Practice Statement 2 provide non-mandatory guidance on how to apply the concept of materiality to accounting policy disclosures. Amendments to HKAS 1 are effective for annual periods beginning on or after 1 January 2023 and earlier application is permitted. Since the guidance provided in the amendments to HKFRS Practice Statement 2 is non-mandatory, an effective date for these amendments is not necessary. The Group is currently assessing the impact of the amendments on the Group's accounting policy disclosures.

2.3 已頒佈但尚未生效之香港財務報告準則 (續)

香港會計準則第1號(修訂本)之負債分類為流動或非流動澄清將負債分類為流動或非流動的規定。該等修訂指明,倘實體延遲償還負債的權利受限於該實體須符合特定條件,則倘該實體符合當日之有關條件,其有權於報告期末延遲償還負債。負債的分類不受該實體行使權利延遲償還負債的可能性的影響。該等修訂亦澄清被視為償還負債的情況。該等修訂於二零二三年一月一日或之後開始的年度期間生效,並應追溯應用。允許提早應用。該等修訂預期不會對本集團的財務報表產生任何重大影響。

香港會計準則第1號(修訂本)之會計政策披露要求實體披露其重要會計政策資料,而非其重大會計政策。倘連同實體財務報表內其他資料一併考慮,會計政策資料可以合理預期會影響一般用途財務報表的主要使用者根據該等財務報表所作出的決定,則該會計政策資料屬重大。香港財務報告準則實務報告第2號(修訂本)就如何將重要性概念應用於會計政策披露提供非強制指引。香港會計準則第1號(修訂本)於二零二三年一月一日或之後開始的年度期間生效,並允許提早應用。由於香港財務報告準則實務報告第2號(修訂本)提供的指引為非強制性,故該等修訂之生效日期並無必要。本集團現正在評估該等修訂對本集團會計政策披露的影響。

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2.3 Issued But Not Yet Effective Hong Kong Financial Reporting Standards (continued)

Amendments to HKAS 8 clarify the distinction between changes in accounting estimates and changes in accounting policies. Accounting estimates are defined as monetary amounts in financial statements that are subject to measurement uncertainty. The amendments also clarify how entities use measurement techniques and inputs to develop accounting estimates. The amendments are effective for annual reporting periods beginning on or after 1 January 2023 and apply to changes in accounting policies and changes in accounting estimates that occur on or after the start of that period. Earlier application is permitted. The amendments are not expected to have any significant impact on the Group's financial statements.

Amendments to HKAS 12 narrow the scope of the initial recognition exception so that it no longer applies to transactions that give rise to equal taxable and deductible temporary differences, such as leases and decommissioning obligations. Therefore, entities are required to recognise a deferred tax asset and a deferred tax liability for temporary differences arising from these transactions. The amendments are effective for annual reporting periods beginning on or after 1 January 2023 and shall be applied to transactions related to leases and decommissioning obligations at the beginning of the earliest comparative period presented, with any cumulative effect recognised as an adjustment to the opening balance of retained profits or other component of equity as appropriate at that date. In addition, the amendments shall be applied prospectively to transactions other than leases and decommissioning obligations. Earlier application is permitted. The amendments are not expected to have any significant impact on the Group's financial statements.

2.3 已頒佈但尚未生效之香港財務報告準則 (續)

香港會計準則第8號(修訂本)澄清會計估計變更及會計政策變更之間的區別。會計估計的定義是財務報表中存在計量不確定性的貨幣性金額。該等修訂亦釐清實體使用計量技巧及輸入數據以計算會計估計的方式。該等修訂於二零二三年一月一日或之後開始的年度報告期間生效，並適用於該期間開始時或之後發生的會計政策變動及會計估計變動。允許提早應用。該等修訂預期不會對本集團的財務報表產生任何重大影響。

香港會計準則第12號(修訂本)縮小首次確認例外情況的範圍，使其不再適用於產生相同的應課稅及可扣減暫時差額的租賃及退役責任等交易。因此，實體須為該等交易產生的暫時差額確認一項遞延稅項資產和一項遞延稅項負債。該等修訂於二零二三年一月一日或之後開始的年度報告期間生效，並將應用於所呈列的最早比較期間開始的有關租賃及退役責任的交易，任何累計影響確認為該日期保留利潤期初結餘或其他權益成分(如適用)的調整。此外，該等修訂將推遲應用於除租賃及退役責任外的交易。允許提早應用。該等修訂預期不會對本集團的財務報表產生任何重大影響。

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Amendments to HKAS 16 prohibit an entity from deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognises the proceeds from selling any such items, and the cost of those items, in profit or loss. The amendments are effective for annual periods beginning on or after 1 January 2022 and shall be applied retrospectively only to items of property, plant and equipment made available for use on or after the beginning of the earliest period presented in the financial statements in which the entity first applies the amendments. Earlier application is permitted. The amendments are not expected to have any significant impact on the Group's financial statements.

Amendments to HKAS 37 clarify that for the purpose of assessing whether a contract is onerous under HKAS 37, the cost of fulfilling the contract comprises the costs that relate directly to the contract. Costs that relate directly to a contract include both the incremental costs of fulfilling that contract (e.g., direct labour and materials) and an allocation of other costs that relate directly to fulfilling that contract (e.g., an allocation of the depreciation charge for an item of property, plant and equipment used in fulfilling the contract as well as contract management and supervision costs). General and administrative costs do not relate directly to a contract and are excluded unless they are explicitly chargeable to the counterparty under the contract. The amendments are effective for annual periods beginning on or after 1 January 2022 and shall be applied to contracts for which an entity has not yet fulfilled all its obligations at the beginning of the annual reporting period in which it first applies the amendments. Earlier application is permitted. Any cumulative effect of initially applying the amendments shall be recognised as an adjustment to the opening equity at the date of initial application without restating the comparative information. The amendments are not expected to have any significant impact on the Group's financial statements.

2.3 已頒佈但尚未生效之香港財務報告準則 (續)

香港會計準則第16號(修訂本)禁止實體從物業、廠房及設備項目的成本中扣除使資產達到管理層擬定之營運狀態所需位置與條件過程中產生的項目銷售之任何所得款項。相反，實體須於損益中確認銷售任何有關項目之所得款項及該等項目之成本。該等修訂於二零二二年一月一日或之後開始的年度期間生效，並僅追溯應用於實體首次應用該等修訂的財務報表中呈列的最早期間開始或之後可供使用的物業、廠房及設備項目。允許提早應用。該等修訂預期不會對本集團的財務報表產生任何重大影響。

香港會計準則第37號(修訂本)澄清，就根據香港會計準則第37號評估合約是否屬虧損性而言，履行合約的成本包括與合約直接相關的成本。與合約直接相關的成本包括履行該合約的增量成本(例如直接勞工及材料)及與履行合約直接相關的其他成本分配(例如分配履行合約所用物業、廠房及設備項目的折舊費用以及合約管理及監管成本)。一般及行政成本與合約並無直接關聯，除非根據合約明確向對手方收取，否則不包括在內。該等修訂於二零二二年一月一日或之後開始的年度期間生效，並將應用於實體於其首次應用該等修訂的年度報告期間開始尚未履行其所有責任的合約。允許提早應用。初步應用該等修訂的任何累計影響將確認為對首次應用日期之期初權益的調整，而毋須重列比較資料。該等修訂預期不會對本集團的財務報表產生任何重大影響。

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2.3 Issued But Not Yet Effective Hong Kong Financial Reporting Standards (continued)

Annual Improvements to HKFRSs 2018-2020 sets out amendments to HKFRS 1, HKFRS 9, Illustrative Examples accompanying HKFRS 16, and HKAS 41. Details of the amendments that are expected to be applicable to the Group are as follows:

- HKFRS 9 *Financial Instruments*: clarifies the fees that an entity includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability. These fees include only those paid or received between the borrower and the lender, including fees paid or received by either the borrower or lender on the other's behalf. An entity applies the amendment to financial liabilities that are modified or exchanged on or after the beginning of the annual reporting period in which the entity first applies the amendment. The amendment is effective for annual periods beginning on or after 1 January 2022. Earlier application is permitted. The amendment is not expected to have a significant impact on the Group's financial statements.
- HKFRS 16 *Leases*: removes the illustration of payments from the lessor relating to leasehold improvements in Illustrative Example 13 accompanying HKFRS 16. This removes potential confusion regarding the treatment of lease incentives when applying HKFRS 16.

2.3 已頒佈但尚未生效之香港財務報告準則 (續)

香港財務報告準則二零一八年至二零二零年週期之年度改進載列香港財務報告準則第1號、香港財務報告準則第9號、香港財務報告準則第16號隨附之說明性示例及香港會計準則第41號(修訂本)。預期將適用於本集團之該等修訂詳情如下:

- 香港財務報告準則第9號 *金融工具*: 澄清實體於評估一項新訂或經修訂金融負債之條款是否實質上不同於原金融負債之條款時所計入之費用。該等費用僅包括借款人與貸款人之間已付或已收之費用, 其中包括借款人或貸款人代表另一方支付或收取之費用。實體對於該實體首次採用修訂的年度報告期間開始或之後經修訂或交換之金融負債應用該修訂。該修訂於二零二二年一月一日或之後開始的年度期間生效, 允許提早應用。該修訂預期不會對本集團的財務報表產生重大影響。
- 香港財務報告準則第16號 *租賃*: 於香港財務報告準則第16號隨附之第13項說明性示例中移除出租人就租賃物業裝修作出之付款說明。此舉消除了應用香港財務報告準則第16號時對租賃優惠進行處理之潛在混淆。

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2.4 Summary of Significant 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 is in a position to exercise 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.

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 重大會計政策概要

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，且本集團可對其發揮重大影響力的實體。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撇銷，惟未變現虧損有證據顯示所轉讓資產出現減值者除外。

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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2.4 Summary of Significant Accounting Policies (continued)

Fair value measurement

The Group measures its investment property, equity investments designated at fair value through other comprehensive income and financial assets at fair value through profit or loss at fair value 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.

2.4 重大會計政策概要 (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、指定按公平值計入其他全面收益的股權投資以及按公平值計入損益的金融資產。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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(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, financial 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.

2.4 重大會計政策概要 (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

倘一項資產(存貨、合約資產、遞延稅項資產、金融資產、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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2.4 Summary of Significant 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

2.4 重大會計政策概要 (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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(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.

2.4 重大會計政策概要 (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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2.4 Summary of Significant 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.

2.4 重大會計政策概要 (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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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. Cost comprises the direct costs of construction during the period of construction. Construction in progress is reclassified to the appropriate category of property, plant and equipment when completed and ready for use.

Investment property

Investment property is interest in land and buildings (including the leasehold property held as a right-of-use asset which would otherwise meet the definition of an investment property) held to earn rental income and/or for capital appreciation, rather than for use in the production or supply of goods or services or for administrative purposes; or for sale in the ordinary course of business. Such property is measured initially at cost, including transaction costs. Subsequent to initial recognition, the investment property is 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.

2.4 重大會計政策概要 (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。成本包括建造期間的直接建設成本。在建工程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

投資物業乃為賺取租金收入及/或資本增值而持有的土地及樓宇權益(包括符合投資物業定義的持作使用權資產之租賃物業),而非用於生產或供應貨物或服務或用作行政用途;或用作在日常業務過程中銷售。該物業初步以成本(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。

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2.4 Summary of Significant 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.

2.4 重大會計政策概要 (續)

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五至十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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(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 any 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.

2.4 重大會計政策概要 (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任何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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2.4 Summary of Significant 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.

2.4 重大會計政策概要 (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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(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.

2.4 重大會計政策概要 (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至承租人的租賃，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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2.4 Summary of Significant 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.

All regular way purchases and sales of financial assets are recognised on the trade date, that is, the date that the Group commits to purchase or sell the asset. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the period generally established by regulation or convention in the marketplace.

2.4 重大會計政策概要 (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。

所有按常規方式購買及出售的金融資產於交易日（即本集團承諾購買或出售該項資產的日期）確認。常規方式購買或出售乃指購買或出售須在一般按規例或市場慣例確定的期間內交付資產的金融資產。

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(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 at fair value through other comprehensive income (debt instruments)

For debt investments at fair value through other comprehensive income, interest income, foreign exchange revaluation and impairment losses or reversals are recognised in the statement of profit or loss and computed in the same manner as for financial assets measured at amortised cost. The remaining fair value changes are recognised in other comprehensive income. Upon derecognition, the cumulative fair value change recognised in other comprehensive income is recycled to the statement of profit or loss.

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, it is probable that the economic benefits associated with the dividend will flow to the Group and the amount of the dividend can be measured reliably, 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.

2.4 重大會計政策概要 (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。

按公平值計入其他全面收益的金融資產 (債務工具)

就按公平值計入其他全面收益的債務工具而言，利息收入、外匯重估及減值虧損或撥回於損益表中確認，並按與按攤銷成本計量的金融資產相同的方式計量。其餘公平值變動於其他全面收益中確認。終止確認時，於其他全面收益中確認的累計公平值變動將重新計入損益表。

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。當支付權確立及與股息相關的經濟利益可能流入本集團且股息金額能可靠計量時，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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2.4 Summary of Significant Accounting Policies (continued)

Investments and other financial assets (continued)

Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss are carried in the statement of financial position at fair value with net changes in fair value recognised in the statement of profit or loss.

This category includes derivative instruments and equity investments which the Group had not irrevocably elected to classify at fair value through other comprehensive income. Dividends on equity investments classified as financial assets at fair value through profit or loss are also recognised as other income in the statement of profit or loss when the right of payment has been established, it is probable that the economic benefits associated with the dividend will flow to the Group and the amount of the dividend can be measured reliably.

A derivative embedded in a hybrid contract, with a financial liability or non-financial host, is separated from the host and accounted for as a separate derivative if the economic characteristics and risks are not closely related to the host; a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and the hybrid contract is not measured at fair value through profit or loss. Embedded derivatives are measured at fair value with changes in fair value recognised in the statement of profit or loss. Reassessment only occurs if there is either a change in the terms of the contract that significantly modifies the cash flows that would otherwise be required or a reclassification of a financial asset out of the fair value through profit or loss category.

A derivative embedded within a hybrid contract containing a financial asset host is not accounted for separately. The financial asset host together with the embedded derivative is required to be classified in its entirety as a financial asset at fair value through profit or loss.

2.4 重大會計政策概要 (續)

投資及其他金融資產 (續)

按公平值計入損益的金融資產

按公平值計入損益的金融資產按公平值於財務狀況表列賬，而公平值變動淨額於損益表中確認。

該類別包括本集團並無不可撤回地選擇按公平值計入其他全面收益進行分類的衍生工具及股本投資。分類為按公平值計入損益的金融資產之股本投資的股息在支付權確立及與股息相關的經濟利益可能流入本集團且股息金額能可靠計量時亦於損益表中確認為其他收入。

當嵌入混合合約(包含金融負債或非金融主體)的衍生工具的經濟特徵及風險與主體不緊密相關;與嵌入式衍生工具相同條款的單獨工具符合衍生工具的定義;及混合合約並非以按公平值計入損益計量,則該衍生工具與主體分開並作為單獨衍生工具列賬。嵌入式衍生工具按公平值計量,且其公平值變動於損益表確認。僅當合約條款出現變動,大幅改變其他情況下所需現金流量時,或當原分類至按公平值計入損益的金融資產獲重新分類時,方進行重新評估。

嵌入混合合約(包含金融資產主體)的衍生工具不得單獨列賬。金融資產主體連同嵌入式衍生工具須整體分類為按公平值計入損益的金融資產。

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(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.

2.4 重大會計政策概要 (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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2.4 Summary of Significant 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.

2.4 重大會計政策概要 (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)。

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(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

2.4 重大會計政策概要 (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，則撤銷金融資產。

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 (但並非購入或原生信貸減值) 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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2.4 Summary of Significant 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.

2.4 重大會計政策概要 (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。

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(continued)**Financial liabilities (continued)***Subsequent measurement*

The subsequent measurement of financial liabilities depends on their classification as follows:

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss.

Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by HKFRS 9. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments. Gains or losses on liabilities held for trading are recognised in the statement of profit or loss. The net fair value gain or loss recognised in the statement of profit or loss does not include any interest charged on these financial liabilities.

Financial liabilities designated upon initial recognition as at fair value through profit or loss are designated at the initial date of recognition, and only if the criteria in HKFRS 9 are satisfied. Gains or losses on liabilities designated at fair value through profit or loss are recognised in the statement of profit or loss, except for the gains or losses arising from the Group's own credit risk which are presented in other comprehensive income with no subsequent reclassification to the statement of profit or loss. The net fair value gain or loss recognised in the statement of profit or loss does not include any interest charged on these financial liabilities.

Financial liabilities at amortised cost (loans and borrowings)

After initial recognition, interest-bearing loans and 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.

2.4 主要會計政策概要 (續)

金融負債 (續)*後續計量*

金融負債其後視乎以下分類作出計量：

按公平值計入損益的金融負債

按公平值計入損益的金融負債包括持作買賣的金融負債及於初始確認時指定為按公平值計入損益的金融負債。

倘金融負債是為近期回購而產生，則歸類為持作買賣。該類別亦包括本集團訂立的衍生金融工具，其並未於香港財務報告準則第9號界定的對沖關係中指定為對沖工具。獨立嵌入式衍生工具亦分類為持作買賣，除非其被指定為有效的對沖工具則另作別論。持作買賣的負債的損益於損益表確認。於損益表確認的公平值淨收益或虧損不包括就該等金融負債收取的任何利息。

於初始確認時指定為按公平值計入損益的金融負債於初始確認日期指定，及僅於符合香港財務報告準則第9號的標準時方會進行。指定按公平值計入損益的負債的收益或虧損於損益表中確認，惟於其他全面收益呈列的本集團自身信貸風險所產生的收益或虧損除外，其後續未重新分類至損益表。於損益表確認的公平值淨收益或虧損不包括就該等金融負債收取的任何利息。

按攤銷成本計量的金融負債(貸款及借貸)

初始確認後，計息貸款及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。

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2.4 Summary of Significant 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.

2.4 主要會計政策概要 (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。

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For the purpose of the consolidated statement of cash flows, cash and cash equivalents comprise cash on hand and demand deposits, and short term highly liquid investments that are readily convertible into known amounts of cash, are subject to an insignificant risk of changes in value, and have a short maturity of generally within three months when acquired, less bank overdrafts which are repayable on demand and form an integral part of the Group's cash management.

For the purpose of the consolidated statement of financial position, cash and cash equivalents comprise cash on hand and at banks, including term deposits and assets similar in nature to cash, which are not restricted as to use.

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 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.

2.4 主要會計政策概要 (續)**現金及現金等價物**

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活期存款，以及可隨時轉換為已知數額現金、價值變動風險較低且擁有一般不超過購入起計三個月的較短期限的短期高流動性投資，減去須按要求償還並構成本集團現金管理一部分的銀行透支。

就綜合財務狀況表而言，現金及現金等價物包括手頭及銀行現金(包括定期存款以及與現金性質類似的資產)(使用不受限制)。

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。

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。

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2.4 Summary of Significant Accounting Policies (continued)

Income tax (continued)

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.

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
- 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
- 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.

2.4 主要會計政策概要 (續)

所得稅 (續)

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。

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
- 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
- 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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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.

2.4 主要會計政策概要 (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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2.4 Summary of Significant 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).

2.4 主要會計政策概要 (續)

銷售收入確認

客戶合約收益

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益。

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。

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(continued)**Share-based payments**

The Company operates a share option scheme for the purpose of providing incentives and rewards to eligible participants who contribute to the success of the Group's operations. Employees (including directors) of the Group receive remuneration in the form of share-based payments, whereby employees render services as consideration for equity instruments ("equity-settled transactions").

The cost of equity-settled transactions with employees for grants 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.

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.

2.4 主要會計政策概要 (續)

以股份付款

本公司實施一項購股權計劃，旨在激勵與獎勵對本集團業務成功作出貢獻的合資格參與者。本集團僱員（包括董事）以股份付款的方式收取報酬，僱員提供服務作為收取股本工具的代價（「股權結算交易」）。

於授出相關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型釐定，進一步詳情載於財務報表附註31。

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未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。

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2.4 Summary of Significant Accounting Policies (continued)

Share-based payments (continued)

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.

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.

2.4 主要會計政策概要 (續)

以股份付款 (續)

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。

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。

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(continued)****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. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs capitalised. 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.

2.4 主要會計政策概要 (續)**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市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。在特定借款用作合資格資產支出前暫作投資所賺取的投資收入須自撥充資本的借款成本扣除。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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2.4 Summary of Significant Accounting Policies (continued)

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).

2.4 主要會計政策概要 (續)

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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(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. On disposal of a foreign operation, the component of other comprehensive income 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.

2.4 主要會計政策概要 (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各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。出售國外業務時，有關特定國外業務的其他全面收益的組成部份於損益表確認。

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。

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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.

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。

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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.

Fair value of unlisted equity investments

The unlisted equity investments have been valued based on a market-based valuation technique as detailed in note 37 to the financial statements. For an unlisted equity investment of US\$241,242,000 as at 31 December 2021 without recent deal price to be referenced, the Group determines the comparable public companies (peers) and select 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.

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 2021 was US\$184,883,000 (31 December 2020: US\$180,476,000). 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**

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。

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。就於二零二一年十二月三十一日未參照近期交易價格的非上市股本投資241,242,000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。

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。

於二零二一年十二月三十一日，投資物業的賬面值為184,883,000美元(二零二零年十二月三十一日：180,476,000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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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:

		2021	2020
		二零二一年	二零二零年
		US\$'000	US\$'000
		千美元	千美元
China (including Hong Kong)	中國(包括香港)	1,205,149	624,407
Asia (excluding China and Japan)	亞洲(不包括中國及日本)	169,227	121,885
United States of America	美利堅合眾國	159,281	121,642
Europe	歐洲	70,627	66,149
Japan	日本	26,470	27,196
		1,630,754	961,279

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 2021 (2020: 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益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

截至二零二一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(二零二零年：無)。

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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：

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Revenue from contracts with customers	客戶合約收益		
Sale of goods	銷售貨品	1,630,754	961,279
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	14,488	12,788
Interest income	利息收入	13,437	10,707
Other interest income from financial assets at fair value through profit or loss	來自按公平值計入損益的金融資產的其他利息收入	—	5,337
Government subsidies	政府補貼	7,288	11,680
Sale of scrap materials	銷售廢料	586	278
Others	其他	1,015	725
		36,814	41,515
Gains	收益		
Foreign exchange gains, net	外匯匯兌收益淨額	23,944	15,798
		60,758	57,313
Other expenses	其他費用		
Loss on disposal of items of property, plant and equipment	出售物業、廠房及設備項目的虧損	76	—
Others	其他	89	10
		165	10

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5. Revenue, Other Income and Gains and Other Expenses (continued)

5. 收入、其他收入及收益及其他費用(續)

	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Types of goods		
Sales of semiconductor products and total revenue from contracts with customers	1,630,754	961,279
Timing of revenue recognition		
Goods transferred at a point in time and total revenue from contracts with customers	1,630,754	961,279

The disaggregation of the Group's revenue based on the geographical region for the year ended 31 December 2021 is given in note 4.

截至二零二一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. Profit Before Tax

The Group's profit before tax is arrived at after charging/
(crediting):

6. 稅前溢利

本集團的稅前溢利乃於扣除/(計入)
下列各項後達致:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Cost of inventories sold	已售存貨成本	1,179,156	726,486
Depreciation of property, plant and equipment	物業、廠房及設備折舊	13 302,245	194,338
Depreciation of right-of-use assets	使用權資產折舊	15 5,676	5,628
Amortisation of intangible assets	無形資產攤銷	16 10,095	6,388
Research and development costs	研發成本	86,068	108,042
Lease payments not included in the measurement of lease liabilities	未計入租賃負債計量的租賃付款	33(b) 1,572	637
Auditor's remuneration	核數師薪酬	660	597
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	289,787	205,454
Equity-settled share option expense	以權益結算的購股權開支	31 296	8,144
Pension scheme contributions (defined contribution scheme) *	退休金計劃供款(定額供款計劃) *	28,287	13,991
		318,370	227,589
Impairment of items of property, plant and equipment	物業、廠房及設備項目減值	13 3,914	1,136
Impairment of trade receivables	貿易應收款項減值	21 273	-
(Reversal)/write-down of inventories to net realisable value	存貨(撥回)/撇減至可變現淨值	(180)	5,614
Changes in fair value of an investment property	投資物業公平值變動	14 (183)	(198)

* 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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7. Finance Cost

		2021	2020
		二零二一年	二零二零年
		US\$'000	US\$'000
		千美元	千美元
Interest on bank borrowings	銀行借款利息	12,347	2,005
Interest on lease liabilities	租賃負債利息	879	963
		13,226	2,968

7. 財務費用

8. Directors' and Chief Executive's Remuneration

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:

		2021	2020
		二零二一年	二零二零年
		US\$'000	US\$'000
		千美元	千美元
Fees	袍金	231	216
Other emoluments:	其他酬金:		
Salaries, allowances and benefits in kind	薪酬、津貼及實物利益	179	167
Performance related bonuses	與表現掛鉤的花紅	593	312
Equity-settled share option expense	以權益結算的購股權開支	99	231
Pension scheme contributions	退休金計劃供款	9	6
		880	716
		1,111	932

8. 董事及最高行政人員的薪酬

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:

In prior year, 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:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Stephen Tso Tung Chang	張祖同	77	72
Kwai Huen Wong, JP	王桂壘, 太平紳士	77	72
Long Fei Ye	葉龍蜚	77	72
		231	216

There were no other emoluments payable to the independent non-executive directors during the year (2020: Nil).

年內並無應付予獨立非執行董事的其他酬金(二零二零年: 無)。

(b) A non-executive director and the chief executive

		Salaries, allowances and benefits Fees	Performance related bonuses	Equity- settled share option expense	Pension scheme contributions	Total remuneration
		in kind 薪酬、津貼 及實物利益 US\$'000 千美元	與表現掛鈎 的花紅 US\$'000 千美元	以權益結算的 購股權開支 US\$'000 千美元	退休金 計劃供款 US\$'000 千美元	薪酬總額 US\$'000 千美元
2021	二零二一年					
Chief executive:	最高行政人員:					
Mr. Junjun Tang	唐均君先生	-	179	593	9	880

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:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Stephen Tso Tung Chang	張祖同	77	72
Kwai Huen Wong, JP	王桂壘, 太平紳士	77	72
Long Fei Ye	葉龍蜚	77	72
		231	216

There were no other emoluments payable to the independent non-executive directors during the year (2020: Nil).

年內並無應付予獨立非執行董事的其他酬金(二零二零年: 無)。

(b) 非執行董事及最高行政人員

		Salaries, allowances and benefits Fees	Performance related bonuses	Equity- settled share option expense	Pension scheme contributions	Total remuneration
		in kind 薪酬、津貼 及實物利益 US\$'000 千美元	與表現掛鈎 的花紅 US\$'000 千美元	以權益結算的 購股權開支 US\$'000 千美元	退休金 計劃供款 US\$'000 千美元	薪酬總額 US\$'000 千美元
2021	二零二一年					
Chief executive:	最高行政人員:					
Mr. Junjun Tang	唐均君先生	-	179	593	9	880

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8. Directors' and Chief Executive's Remuneration (continued)

(b) A non-executive director and the chief executive (continued)

		Salaries, allowances and benefits Fees	in kind 薪酬、津貼 袍金 US\$'000 千美元	Performance related bonuses 與表現掛鈎 的花紅 US\$'000 千美元	Equity-settled share option expense 以權益結算 的購股權開支 US\$'000 千美元	Pension scheme contributions 退休金 計劃供款 US\$'000 千美元	Total remuneration 薪酬總額 US\$'000 千美元
2020	二零二零年						
Non-executive director:	非執行董事:						
Mr. Takayuki Morita (resigned on 25 September 2020)	森田隆之先生 (於二零二零年 九月二十五日 辭任)	-	-	-	11	-	11
Chief executive:	最高行政人員:						
Mr. Junjun Tang	唐均君先生	-	167	312	220	6	705
		-	167	312	231	6	716

Save as disclosed above, none of the directors received any emoluments during 2021 and 2020.

There was no arrangement under which a director waived or agreed to waive any remuneration during the year.

8. 董事及最高行政人員的薪酬 (續)

(b) 非執行董事及最高行政人員 (續)

除前述披露者外，概無董事於二零二一年及二零二零年收取任何薪酬。

於年內，概無董事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 (2020: 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 (2020: four) highest paid employees who are not directors of the Company are as follows:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Salaries, allowances and benefits in kind	薪酬、津貼及實物利益	1,094	1,054
Performance related bonuses	與表現掛鉤的花紅	1,384	542
Equity-settled share option expense	以權益結算的購股權開支	97	269
Pension scheme contributions	退休金計劃供款	26	17
		2,601	1,882

The number of highest paid employees who are not directors of the Company and whose remuneration fell within the following bands is as follows:

		Number of employees 僱員人數	
		2021 二零二一年	2020 二零二零年
HK\$2,000,001 to HK\$2,500,000	2,000,001港元至2,500,000港元	—	1
HK\$3,000,001 to HK\$3,500,000	3,000,001港元至3,500,000港元	—	2
HK\$3,500,001 to HK\$4,000,000	3,500,001港元至4,000,000港元	1	—
HK\$4,000,001 to HK\$4,500,000	4,000,001港元至4,500,000港元	1	—
HK\$4,500,001 to HK\$5,000,000	4,500,001港元至5,000,000港元	1	1
HK\$6,500,001 to HK\$7,000,000	6,500,001港元至7,000,000港元	1	—
		4	4

In the prior year, 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）（二零二零年：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（二零二零年：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並非本公司董事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 (2020: 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 (2020: 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, one of the Group's subsidiaries, HHGrace, is qualified as a "High and New Technology Enterprise" and was therefore entitled to a preferential tax rate of 15% from 2020 to 2023.

Pursuant to the relevant laws and regulations in the PRC and with approval from the tax authorities in charge, one of the Group's subsidiaries, Hua Hong Wuxi, is entitled to an exemption from CIT for five years, commencing from the first year that Hua Hong Wuxi generates taxable profit, and a deduction of 50% on the CIT rate for the following five years. Hua Hong Wuxi was in accumulated tax loss positions as at 31 December 2021 and the tax holiday has not begun.

The Company's subsidiary incorporated and operating in Japan was subject to corporation tax at a rate of 33.58% (2020: 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 (2020: 21%), as well as state tax at 8.84% (2020: 8.84%).

10. 所得稅

於年內的香港溢利須按16.5% (二零二零年: 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 (二零二零年: 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, 本集團一家子公司華虹宏力符合資格成為「高新技術企業」, 故有權於二零二零年至二零二三年期間按15%的優惠稅率繳稅。

根據中國相關法律及法規及獲稅務主管機關批准, 本集團一家子公司華虹無錫有權自獲得應課稅溢利第一年起五年獲豁免繳納企業所得稅, 及隨後五年減免50%。截至二零二一年十二月三十一日, 華虹無錫錄得累計稅項虧損, 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% (二零二零年: 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% (二零二零年: 21%) 的聯邦企業所得稅率及8.84% (二零二零年: 8.84%) 的州稅稅率繳稅。

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10. Income Tax (continued)

The major components of income tax expense of the Group are as follows:

10. 所得稅 (續)

本集團所得稅開支的主要組成部份如下:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Current income tax – PRC	當期所得稅 – 中國	49,910	18,414
Current income tax – elsewhere	當期所得稅 – 其他地區	41	37
Deferred tax (note 28)	遞延稅項(附註28)	15,398	(5,689)
		65,349	12,762

A reconciliation of the tax expense applicable to profit before tax at the statutory rate of 25% for the jurisdiction in which the Company and the majority of its subsidiaries are domiciled to the tax expense at the effective tax rate is as follows:

按本公司及其大部份子公司經營所在司法權區的法定稅率25%計算的稅前溢利的適用稅項開支，與按實際稅率計算的稅項開支的對賬如下:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Profit before tax	稅前溢利	296,320	46,077
Tax at the statutory tax rate of 25%	按法定稅率25%計算的稅項	74,080	11,519
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	(39,700)	(18,620)
Adjustments in respect of current tax of previous periods	就上一期間當期稅項的調整	71	54
Profits attributable to associates	聯營公司應佔溢利	(1,015)	(3,909)
Expenses not deductible for tax	不可扣稅開支	153	215
Tax losses not recognised due to tax holiday	因免稅期而未確認的稅項虧損	47,629	47,042
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	2,144	189
Temporary differences not recognised	未確認暫時差額	927	170
Additional deduction of research and development costs	研發成本其他扣減	(33,753)	(18,988)
Effect of withholding tax at 10% (2020: 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%(二零二零年: 10%)計算預扣稅影響	14,813	(4,910)
Tax charge at the Group's effective rate	按本集團實際稅率計算的稅項開支	65,349	12,762

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11. Dividend

The directors did not recommend the payment of any dividend for the year ended 31 December 2021 (2020: Nil).

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 1,300,169,098 (2020: 1,293,227,187) in issue 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 in issue 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.

11. 股息

董事不建議派付截至二零二一年十二月三十一日止年度之任何股息(二零二零年: 無)。

12. 母公司普通股權持有人應佔每股盈利

每股基本盈利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1,300,169,098股(二零二零年: 1,293,227,187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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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:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 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	261,476	99,443
		Number of shares 股份數目	
		2021 二零二一年	2020 二零二零年
Shares	股份		
Weighted average number of ordinary shares in issue 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	1,300,169,098	1,293,227,187
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	19,996,637	17,386,000
		1,320,165,735	1,310,613,187

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13. Property, Plant and Equipment

13. 物業、廠房及設備

		Buildings	Plant and machinery	Office equipment	Motor vehicles	Leasehold improvements	Construction in progress	Total
		樓宇	廠房及機器	辦公設備	汽車	租賃物業裝修	在建工程	總計
		US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
		千美元	千美元	千美元	千美元	千美元	千美元	千美元
31 December 2021	二零二一年十二月三十一日							
At 1 January 2021:	於二零二一年一月一日:							
Cost	成本	471,159	5,138,983	56,047	2,081	4,191	872,854	6,545,315
Accumulated depreciation and impairment	累計折舊及減值	(219,613)	(3,753,370)	(38,428)	(1,777)	(4,151)	(17,534)	(4,034,873)
Net carrying amount	賬面淨值	251,546	1,385,613	17,619	304	40	855,320	2,510,442
At 1 January 2021, net of accumulated depreciation and impairment	於二零二一年一月一日，扣除累計折舊及減值	251,546	1,385,613	17,619	304	40	855,320	2,510,442
Additions	添置	-	-	-	-	-	855,168	855,168
Transfers	轉撥	-	1,475,794	6,276	393	-	(1,482,463)	-
Disposal	處置	-	(80)	(25)	(25)	-	-	(130)
Depreciation provided during the year	年內計提折舊	(16,302)	(281,664)	(4,148)	(122)	(9)	-	(302,245)
Impairment	減值	-	(3,735)	(179)	-	-	-	(3,914)
Exchange realignment	匯兌調整	5,157	43,629	394	11	1	7,988	57,180
At 31 December 2021, net of accumulated depreciation and impairment	於二零二一年十二月三十一日，扣除累計折舊及減值	240,401	2,619,557	19,937	561	32	236,013	3,116,501
At 31 December 2021:	於二零二一年十二月三十一日:							
Cost	成本	480,349	6,752,780	64,260	1,805	4,289	252,902	7,556,385
Accumulated depreciation and impairment	累計折舊及減值	(239,948)	(4,133,223)	(44,323)	(1,244)	(4,257)	(16,889)	(4,439,884)
Net carrying amount	賬面淨值	240,401	2,619,557	19,937	561	32	236,013	3,116,501

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13. Property, Plant and Equipment (continued)

13. 物業、廠房及設備(續)

		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 2020	二零二零年十二月三十一日							
At 1 January 2020:	於二零二零年一月一日:							
Cost	成本	413,332	4,261,537	46,431	1,993	3,881	421,310	5,148,484
Accumulated depreciation and impairment	累計折舊及減值	(181,047)	(3,353,329)	(34,077)	(1,568)	(3,881)	(16,299)	(3,590,201)
Net carrying amount	賬面淨值	232,285	908,208	12,354	425	-	405,011	1,558,283
At 1 January 2020, net of accumulated depreciation and impairment	於二零二零年一月一日, 扣除累計折舊及減值	232,285	908,208	12,354	425	-	405,011	1,558,283
Additions	添置	-	-	-	-	-	1,004,561	1,004,561
Transfers	轉撥	21,747	563,981	5,991	10	41	(591,770)	-
Depreciation provided during the year	年內計提折舊	(15,671)	(176,642)	(1,875)	(148)	(2)	-	(194,338)
Impairment	減值	-	(1,136)	-	-	-	-	(1,136)
Exchange realignment	匯兌調整	13,185	91,202	1,149	17	1	37,518	143,072
At 31 December 2020, net of accumulated depreciation and impairment	於二零二零年十二月 三十一日, 扣除累計折舊 及減值	251,546	1,385,613	17,619	304	40	855,320	2,510,442
At 31 December 2020:	於二零二零年十二月 三十一日:							
Cost	成本	471,159	5,138,983	56,047	2,081	4,191	872,854	6,545,315
Accumulated depreciation and impairment	累計折舊及減值	(219,613)	(3,753,370)	(38,428)	(1,777)	(4,151)	(17,534)	(4,034,873)
Net carrying amount	賬面淨值	251,546	1,385,613	17,619	304	40	855,320	2,510,442

For the year ended 31 December 2021, certain items of the Group's machinery and office equipment of US\$3,914,000 (31 December 2020: US\$1,136,000) 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 2021, certain of the Group's property, plant and equipment with a net carrying value of US\$2,256,289,000 (2020: US\$1,289,808,000) were pledged to banks to secure the Group's banking facilities (note 26).

截至二零二一年十二月三十一日止年度, 本集團機器及辦公設備中若干項目 3,914,000 美元 (二零二零年十二月三十一日: 1,136,000 美元) 已過時, 而根據彼等公平值減出售成本確定最低可收回金額, 因而完全減值。

於二零二一年十二月三十一日, 本集團賬面淨值為 2,256,289,000 美元 (二零二零年: 1,289,808,000 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)。

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14. Investment Property

14. 投資物業

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Carrying amount at 1 January	於一月一日的賬面值	180,476	168,615
Net gain from a fair value adjustment	公平值調整的收益淨額	183	198
Exchange realignment	匯兌調整	4,224	11,663
Carrying amount at 31 December	於十二月三十一日的賬面值	184,883	180,476

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 2021 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。

於二零二一年十二月三十一日，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。該估值參考了現有租約扣除物業潛在可復歸收入後所得收入資本化確定。

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就年度財務報告進行估值時，已與估值師每年討論一次估值假設及估值結果。

投資物業根據經營租約出租予關聯方(附註33和附註35(b))。

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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 2021 and 2020. 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 (2020: Nil).

Below is a summary of the valuation techniques used and the key inputs to the valuation of the investment property:

14. 投資物業(續)

公平值層級

本集團投資物業(為工業物業)於二零二一年及二零二零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(二零二零年: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:

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 2021	Term and reversion method	Estimated rental value (per sq.m. per month)	US\$13.3 (equivalent to RMB86.00)
於二零二一年十二月三十一日	年期及復歸法	估計租賃價值 (每平方米每月)	13.3美元 (相當於人民幣 86.00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%
As at 31 December 2020	Term and reversion method	Estimated rental value (per sq.m. per month)	US\$12.2 (equivalent to RMB84.00)
於二零二零年十二月三十一日	年期及復歸法	估計租賃價值 (每平方米每月)	12.2美元 (相當於人民幣 84.00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%

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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，並就該等租約的潛在可復歸收入計提適當撥備，其後按適用資本化比率撥充資本計算價值而達致。

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。

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15. Right-of-Use Assets

2021

		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 2021, net of accumulated depreciation	於二零二一年一月一日，扣除累計折舊	60,354	18,867	79,221
Depreciation provided during the year	年內計提折舊	(1,556)	(4,120)	(5,676)
Exchange realignment	匯兌調整	1,393	393	1,786
At 31 December 2021	於二零二一年十二月三十一日	60,191	15,140	75,331

15. 使用權資產

二零二一年

2020

		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 2020, net of accumulated depreciation	於二零二零年一月一日，扣除累計折舊	57,830	16,696	74,526
Additions	添置	-	5,107	5,107
Depreciation provided during the year	年內計提折舊	(1,464)	(4,164)	(5,628)
Exchange realignment	匯兌調整	3,988	1,228	5,216
At 31 December 2020	於二零二零年十二月三十一日	60,354	18,867	79,221

二零二零年

As at 31 December 2021, certain of the Group's land use rights with a carrying value of US\$46,604,000 as at 31 December 2021 (31 December 2020: US\$46,636,000) were pledged to banks to secure the Group's banking facilities (note 26).

於二零二一年十二月三十一日，本集團於二零二一年十二月三十一日賬面值為46,604,000美元(二零二零年十二月三十一日：46,636,000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)。

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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 2021	二零二一年十二月三十一日			
At 1 January 2021:	於二零二一年一月一日:			
Cost	成本	290,715	131,796	422,511
Accumulated amortisation and impairment	累計攤銷及減值	(267,884)	(117,680)	(385,564)
Net carrying amount	賬面淨值	22,831	14,116	36,947
At 1 January 2021, net of accumulated amortisation and impairment	於二零二一年一月一日, 扣除累計攤銷及減值	22,831	14,116	36,947
Additions	添置	–	7,777	7,777
Amortisation provided during the year	年內作出攤銷	(5,099)	(4,996)	(10,095)
Exchange realignment	匯兌調整	320	363	683
At 31 December 2021, net of accumulated amortisation and impairment	於二零二一年十二月三十一日, 扣除累計攤銷及減值	18,052	17,260	35,312
At 31 December 2021:	於二零二一年十二月三十一日:			
Cost	成本	297,366	146,577	443,943
Accumulated amortisation and impairment	累計攤銷及減值	(279,314)	(129,317)	(408,631)
Net carrying amount	賬面淨值	18,052	17,260	35,312

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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 2020	二零二零年十二月三十一日			
At 1 January 2020:	於二零二零年一月一日:			
Cost	成本	286,149	98,155	384,304
Accumulated amortisation and impairment	累計攤銷及減值	(283,061)	(87,921)	(370,982)
Net carrying amount	賬面淨值	3,088	10,234	13,322
At 1 January 2020, net of accumulated amortisation and impairment	於二零二零年一月一日, 扣除累計攤銷及減值	3,088	10,234	13,322
Additions	添置	21,389	7,270	28,659
Amortisation provided during the year	年內作出攤銷	(2,355)	(4,033)	(6,388)
Exchange realignment	匯兌調整	709	645	1,354
At 31 December 2020, net of accumulated amortisation and impairment	於二零二零年十二月三十一日, 扣除累計攤銷及減值	22,831	14,116	36,947
At 31 December 2020:	於二零二零年十二月三十一日:			
Cost	成本	290,715	131,796	422,511
Accumulated amortisation and impairment	累計攤銷及減值	(267,884)	(117,680)	(385,564)
Net carrying amount	賬面淨值	22,831	14,116	36,947

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17. Investments In Associates

17. 於聯營公司的投資

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Carrying amount	賬面值	122,040	105,218

Particulars of the material associate are as follows:

主要聯營公司詳情如下：

Name of company	Place of registration and business	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	Principal activities
公司名稱	登記及營業地點		股權百分比	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%	Technology development and investment 科技開發及投資

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 shareholding in the associate is 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)

17. 於聯營公司的投資(續)

The following table illustrates the summarised financial information of Huahong Technology Development:

下表概述華虹科技發展的財務資料:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Current assets	流動資產	27,884	34,869
Non-current assets	非流動資產	324,496	311,701
Current liabilities	流動負債	(100,312)	(114,178)
Non-current liabilities	非流動負債	(23,233)	(21,956)
Net assets	淨資產	228,835	210,436
Net assets, excluding goodwill	淨資產, 不包括商譽	228,835	210,436
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%
Carrying amount of the investment	投資賬面值	114,418	105,218

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Revenue	收入	29,423	21,214
Profit and total comprehensive income	溢利及全面收益總額	13,342	52,118

The following table illustrates the aggregate financial information of the Group's associate that is not individually material:

下表闡述本集團聯營公司的個別不重要的匯總財務資料:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Share of the associate's profit and total comprehensive income for the year	分佔聯營公司年內溢利及全面收益總額	94	-
Aggregate carrying amount of the Group's investment in the associate	本集團於聯營公司的投資的賬面總額	7,622	-

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18. Financial Investments

18. 金融投資

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 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	14,310	-
Unlisted equity investments	非上市股本投資	243,478	230,265
		257,788	230,265

Equity investments designated at fair value through other comprehensive income are listed equity investment in Shanghai Awinic Technology Co., Ltd. and unlisted equity investments in Shanghai Huali Microelectronics Corporation ("Shanghai Huali") and QST Corporation ("QST") with carrying amounts of US\$241,242,000 and US\$2,236,000, respectively, which were irrevocably designated at fair value through other comprehensive income as the Group considers these investments 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為上海艾為電子技術股份有限公司的上市股本投資以及賬面值分別為241,242,000美元及2,236,000美元的上海華力微電子有限公司(「上海華力」)及上海矽睿科技有限公司(「矽睿科技」)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

		2021 二零二一年 US\$'000 千美元
Carrying amount at 1 January	於一月一日的賬面值	-
Additions	添置	114,492
As at 31 December	於十二月三十一日	114,492

20. Inventories

20. 存貨

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Raw materials	原材料	185,541	120,234
Work in progress	在製品	139,754	66,134
Finished goods	製成品	126,119	58,366
		451,414	244,734
Provision for inventories	存貨撥備	(18,497)	(18,258)
		432,917	226,476

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21. Trade and Notes Receivables

21. 貿易應收款項及應收票據

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Trade receivables	貿易應收款項	154,339	97,809
Notes receivable	應收票據	28,424	24,762
		182,763	122,571
Impairment of trade receivables	貿易應收款項減值	(1,721)	(1,619)
		181,042	120,952

The Group's trading terms with its customers are mainly on credit and the credit period is generally 30 to 45 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 receivables, based on the invoice date and net of loss allowances, 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45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（扣除虧損撥備）的賬齡分析如下：

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Within 3 months	3個月以內	149,900	91,156
3 to 6 months	3至6個月	2,718	4,849
Over 6 months but within one year	超過6個月但於一年內	-	185
		152,618	96,190

The movements in loss allowance for impairment of trade receivables are as follows:

貿易應收款項減值虧損撥備的變動如下：

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
At 1 January	於一月一日	1,619	1,529
Impairment losses, net (note 6)	減值虧損淨額（附註6）	273	-
Write-off	撇銷	(199)	-
Exchange realignment	匯兌調整	28	90
As at 31 December	於十二月三十一日	1,721	1,619

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21. Trade and Notes Receivables (continued)

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 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 receivables that were not yet past due or aged within 3 months are minimal.

The credit quality of the trade receivables is as follows:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Neither past due nor impaired	既未逾期亦未減值	152,574	89,676
Less than 1 month past due	逾期少於1個月	44	6,164
1 to 3 months past due	逾期1至3個月	-	325
3 to 6 months past due	逾期3至6個月	-	25
Past due and impaired	已逾期及已減值	1,721	1,619
		154,339	97,809

21. 貿易應收款項及應收票據
(續)

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的預期信貸損失率極低。

貿易應收款項的信貸質量如下：

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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

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Other receivables	其他應收款項	23,485	9,636
Prepayments	預付款項	13,707	5,380
Value-added input tax	增值稅進項稅額	7,206	13,269
Prepayments for acquisition of land use right	購置土地使用權預付款項	—	103,634
		44,398	131,919
Impairment of other receivables	其他應收款項減值	(955)	(940)
		43,443	130,979

Other receivables are repayable on demand.

其他應收款項則須按要求償還。

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：

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
At 1 January	於一月一日	940	898
Exchange realignment	匯兌調整	15	42
As at 31 December	於十二月三十一日	955	940

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\$955,000 (2020: US\$940,000). 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 2021 and 2020 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955,000美元(二零二零年：940,000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，而截至二零二一年及二零二零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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23. Cash and Cash Equivalents and Pledged Deposits

23. 現金及現金等價物以及已抵押存款

		2021	2020
		二零二一年	二零二零年
		US\$'000	US\$'000
		千美元	千美元
Cash and bank balances	現金及銀行結餘	379,995	226,582
Time deposits	定期存款	1,232,393	696,563
		1,612,388	923,145
Less: pledged deposits:	減：已抵押存款：		
Pledged deposits for letters of credit	就信用證抵押存款	(2,221)	(332)
Others	其他	(27)	(27)
Cash and cash equivalents	現金及現金等價物	1,610,140	922,786

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\$975,405,000 (2020: US\$630,887,000). The RMB is not freely convertible into other currencies, however, under Mainland China's Foreign Exchange Control Regulations and Administration of Settlement, 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975,405,000美元（二零二零年：630,887,000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天至三個月不等，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:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Within 1 month	1個月以內	131,102	91,935
1 to 3 months	1至3個月	41,450	20,514
3 to 6 months	3至6個月	7,223	6,041
6 to 12 months	6至12個月	2,767	1,946
Over 12 months	12個月以上	11,843	10,544
		194,385	130,980

The trade payables are unsecured, non-interest-bearing and are normally settled on terms of 30 to 60 days.

於各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

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Other payables and accruals	其他應付款項及暫估費用	307,416	262,421
Contract liabilities	合約負債	182,453	82,270
Payroll and bonus payables	應付薪金及花紅	70,539	41,587
Others	其他	27	27
		560,435	386,305

Other payables are unsecured, non-interest-bearing and repayable on demand.

As at 1 January 2020, the carrying amount of contract liabilities was US\$33,249,000.

During the year ended 31 December 2021, contract liabilities of US\$82,720,000 (2020: US\$33,249,000) at the beginning of the year were recognised as revenue. The increase in contract liabilities in 2021 and 2020 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。

於二零二零年一月一日，合約負債賬面值為33,249,000美元。

截至二零二一年十二月三十一日止年度，年初82,720,000美元（二零二零年：33,249,000美元）的合約負債被確認為收入。於二零二一年及二零二零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

		2021 二零二一年		
		Effective interest rate (%) 實際利率(%)	Maturity 到期	US\$'000 千美元
Current	流動			
Bank loans – unsecured	銀行貸款 – 無抵押	12-month LIBOR+0.50 to 12-month LIBOR+0.80 12個月LIBOR+0.50至 12個月LIBOR+0.80	2022 二零二二年	180,989
Current portion of long term bank loans – secured	長期銀行貸款的 即期部份 – 有抵押	LPR5Y-0.55 to LPR5Y-0.30 LPR5Y-0.55 至LPR5Y-0.30	2022 二零二二年	1,050
Current portion of long term bank loans – secured	長期銀行貸款的 即期部份 – 有抵押	1.20	2022 二零二二年	4,705
Current portion of long term bank loans – secured	長期銀行貸款的 即期部份 – 有抵押	6-month LIBOR+1.48 6個月LIBOR+1.48	2022 二零二二年	8,280
				195,024
Non-current	非流動			
Secured bank loans	有抵押銀行貸款	LPR5Y-0.55 to LPR5Y-0.30 LPR5Y-0.55至 LPR5Y-0.30	2023-2024 二零二三年 – 二零二四年	10,378
Secured bank loans	有抵押銀行貸款	1.20	2023-2025 二零二三年 – 二零二五年	14,116
Secured bank loans	有抵押銀行貸款	6 months LIBOR-0.50 to 6 months LIBOR-0.22 6個月LIBOR-0.50至 6個月LIBOR-0.22	2024-2028 二零二四年 – 二零二八年	94,000
Secured bank loans	有抵押銀行貸款	6-month LIBOR+1.48 6個月LIBOR+1.48	2023-2028 二零二三年 – 二零二八年	1,276,785
				1,395,279
				1,590,303

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(continued)

26. 計息銀行借款 (續)

		2020 二零二零年		
		Effective interest rate (%) 實際利率(%)	Maturity 到期	US\$'000 千美元
Current	流動			
Bank loans – unsecured	銀行貸款 – 無抵押	12-month LIBOR+0.57 12個月LIBOR+0.57	2021 二零二一年	43,186
Current portion of long term bank loans – secured	長期銀行貸款的 即期部份 – 有抵押	1.20	2021 二零二一年	4,598
				47,784
Non-current	非流動			
Secured bank loans	有抵押銀行貸款	1.20	2022-2025 二零二二年 – 二零二五年	18,391
Secured bank loans	有抵押銀行貸款	6-month LIBOR+1.20 to 6-month LIBOR+1.48 6個月LIBOR+1.20至 6個月LIBOR+1.48	2022-2028 二零二二年 – 二零二八年	500,000
				518,391
				566,175

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二零二一年十二月三十一日26. Interest-Bearing Bank Borrowings
(continued)

26. 計息銀行借款 (續)

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 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	195,024	47,784
In the second year	第二年	107,943	4,849
In the third to fifth years, inclusive	第三至第五年 (包括首尾兩年)	677,961	153,542
Beyond five years	五年以上	609,375	360,000
		1,590,303	566,175

Except for bank loans of US\$30,249,000 (2020: US\$22,989,000) which are denominated in RMB, all borrowings are dominated in United States dollars.

除30,249,000美元(二零二零年: 22,989,000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 2021 and 2020, certain of the Group's bank loans were secured by pledges of the Group's assets with carrying values as follows:

於二零二一年及二零二零年十二月三十一日,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:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
		<i>Notes</i>	
		<i>附註</i>	
Property, plant and equipment	物業、廠房及設備	13	2,256,289
Right-of-use assets	使用權資產	15	46,604
			2,302,893
			1,336,444

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27. Lease Liabilities

27. 租賃負債

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Carrying amount at 1 January	於一月一日的賬面值	21,640	18,616
Additions	添置	-	5,107
Accretion of interest	利息增加	879	963
Payments	付款	(4,878)	(4,661)
Exchange realignment	匯兌調整	172	1,615
Carrying amount at 31 December	於十二月三十一日的賬面值	17,813	21,640

The maturity profile of lease liabilities as at 31 December 2021 is as follows:

租賃負債於二零二一年十二月三十一日的到期情況如下：

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Within one year	一年內	2,437	5,051
In the second year	第二年	1,842	2,487
In the third to fifth years, inclusive	第三至第五年(包括首尾兩年)	5,527	5,400
After five years	五年後	12,895	14,401
Total undiscounted lease liabilities	未貼現租賃負債總額	22,701	27,339
Discount amount	貼現額	(4,888)	(5,699)
Total present value of lease liabilities	租賃負債的總現值	17,813	21,640
Current portion	即期部分	(1,676)	(4,235)
Non-current portion	非即期部分	16,137	17,405

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Analysed into:	分析為:		
Within one year	一年內	1,676	4,235
In the second year	第二年	1,142	1,743
In the third to fifth years, inclusive	第三至第五年(包括首尾兩年)	3,772	3,514
After five years	五年後	11,223	12,148
Total present value of lease liabilities	租賃負債的總現值	17,813	21,640

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28. Deferred Tax

The movements in deferred tax liabilities and assets during the year are as follows:

Deferred tax liabilities

		Fair value gains on financial 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	Total 總計 US\$'000 千美元
As at 1 January 2020	於二零二零年一月一日	855	489	15,832	17,176
Deferred tax charged/ (credited) to profit or loss during the year (note 10)	年內扣自／(計入)損益表的遞延稅項(附註10)	-	30	(4,910)	(4,880)
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	1,232	-	-	1,232
Exchange realignment	匯兌調整	27	66	-	93
As at 31 December 2020 and 1 January 2021	於二零二零年十二月三十一日及二零二一年一月一日	2,114	585	10,922	13,621
Deferred tax charged to profit or loss during the year (note 10)	年內扣自損益表的遞延稅項(附註10)	-	27	14,813	14,840
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	2,335	-	-	2,335
Exchange realignment	匯兌調整	79	14	-	93
Gross deferred tax liabilities as at 31 December 2021	於二零二一年十二月三十一日遞延稅項負債總額	4,528	626	25,735	30,889

Pursuant to the PRC Corporate Income Tax Law, a 10% withholding tax is levied on dividends declared to foreign investors from the foreign investment enterprises established in Mainland China. The Group is therefore 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.

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

根據《中華人民共和國企業所得稅法》，於中國內地成立的外資企業向外國投資者宣派的股息須按10%繳納預扣稅。因此，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。

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28. Deferred Tax (continued)

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\$71,536,000 (2020: US\$64,771,000).

Deferred tax assets

		Write-down of inventories and impairment of receivables	Accruals	Leases	Losses available for offsetting against future taxable profits	Total
		存貨撇減及 應收款項減值	暫估費用	租賃	可用來抵銷 未來應課稅 溢利的虧損	總計
		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
As at 1 January 2020	於二零二零年一月一日	1,988	5,269	310	-	7,567
Deferred tax credited to profit or loss during the year (note 10)	年內計入損益表的 遞延稅項(附註10)	231	56	36	486	809
Exchange realignment	匯兌調整	150	415	24	-	589
As at 31 December 2020 and 1 January 2021	於二零二零年十二月三十一日 及二零二一年一月一日	2,369	5,740	370	486	8,965
Deferred tax credited/(charged) to profit or loss during the year (note 10)	年內計入/(扣自)損益表的 遞延稅項(附註10)	109	(203)	22	(486)	(558)
Exchange realignment	匯兌調整	56	161	9	-	226
Gross deferred tax assets as at 31 December 2021	於二零二一年十二月三十一日 遞延稅項資產總額	2,534	5,698	401	-	8,633

28. 遞延稅項(續)

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71,536,000美元(二零二零年：64,771,000美元)。

遞延稅項資產

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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:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Net deferred tax assets recognised in the consolidated statement of financial position	於綜合財務狀況表確認的遞延稅項資產淨額	3,479	8,965
Net deferred tax liabilities recognised in the consolidated statement of financial position	於綜合財務狀況表確認的遞延稅項負債淨額	(25,735)	(13,621)
Net deferred tax liabilities	遞延稅項負債淨額	(22,256)	(4,656)

Deferred tax assets have not been recognised in respect of the following items:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Unused tax losses	未動用稅項虧損	22,332	11,158
Deductible temporary differences	可扣減暫時差額	17,018	13,104
		39,350	24,262

The Group has tax losses arising in Hong Kong of US\$18,800,000 (2020: US\$11,158,000) 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\$3,532,000 (2020: Nil) that will expire in one to five years for offsetting against future taxable profits.

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：

以下項目並無確認遞延稅項資產：

本集團在香港產生的稅項虧損為18,800,000美元(二零二零年：11,158,000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3,532,000美元(二零二零年：無)，將於一至五年內到期以抵銷未來應課稅溢利。

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28. Deferred Tax (continued)

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)

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。

29. Government Grants

29. 政府補助

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
At 1 January	於一月一日	58,926	40,641
Additions	添置	154,965	124,887
Released to offsetting research and development costs	撥入以抵銷研發成本	(65,596)	(30,141)
Offset with long term assets	抵銷長期資產	(83,594)	(80,136)
Exchange realignment	匯兌調整	2,136	3,675
As at 31 December	於十二月三十一日	66,837	58,926

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。

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30. Share Capital

30. 股本

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Issued and fully paid:	已發行及繳足:		
1,301,191,585 (2020: 1,297,818,273) ordinary shares	1,301,191,585股(二零二零年: 1,297,818,273股)普通股	1,986,152	1,979,033

A summary of movements in the Company's share capital is as follows:

本公司股本的變動概述如下:

		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 2020	於二零二零年一月一日	1,288,820	1,966,095
Share options exercised (note (a))	行使購股權(附註(a))	8,998	12,938
At 31 December 2020 and 1 January 2021	於二零二零年十二月三十一日及 二零二一年一月一日	1,297,818	1,979,033
Share options exercised (note (a))	行使購股權(附註(a))	3,374	7,119
At 31 December 2021	於二零二一年十二月三十一日	1,301,192	1,986,152

Note:

附註:

- (a) The subscription rights attaching to 1,197,000 (2020: 7,892,000) share options under the 2015 Options were exercised at the subscription price of HK\$6.912 per share (2020: HK\$6.912 per share), resulting in the issue of 1,197,000 (2020: 7,892,000) shares for a total cash consideration of US\$1,065,000 (2020: US\$7,035,000). An amount of US\$465,000 (2020: US\$3,080,000) was transferred from the share option reserve to share capital upon exercise of the share options.

- (a) 根據二零一五年購股權, 1,197,000份(二零二零年: 7,892,000份)購股權附帶之認購權已按認購價每股6.912港元(二零二零年: 每股6.912港元)行使, 引致發行1,197,000股(二零二零年: 7,892,000股)股份, 總現金代價為1,065,000美元(二零二零年: 7,035,000美元)。購股權獲行使後, 465,000美元(二零二零年: 3,080,000美元)款項已由購股權儲備轉撥至股本。

The subscription rights attaching to 2,177,000 (2020: 1,106,000) share options under the 2018 Options were exercised at the subscription prices of HK\$15.056 and HK\$17.952 per share (2020: HK\$15.056), resulting in the issue of 2,177,000 (2020: 1,106,000) shares for a total cash consideration of US\$4,235,000 (2020: US\$2,140,000). An amount of US\$1,354,000 (2020: US\$683,000) was transferred from the share option reserve to share capital upon exercise of the share options.

根據二零一八年購股權, 2,177,000份(二零二零年: 1,106,000份)購股權附帶之認購權已按認購價每股15.056港元以及17.952港元(二零二零年: 15.056港元)行使, 引致發行2,177,000股(二零二零年: 1,106,000股)股份, 總現金代價為4,235,000美元(二零二零年: 2,140,000美元)。購股權獲行使後, 1,354,000美元(二零二零年: 683,000美元)款項已由購股權儲備轉撥至股本。

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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.

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不時已發行股份之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500萬港元,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。

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31. Share Option Scheme (continued)

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.

Share options do not confer rights on the holders to dividends or to vote at shareholders' meetings.

2015 Options

The following 2015 Options were outstanding during the year:

31. 購股權計劃(續)

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。

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。

二零一五年購股權

年內，以下購股權尚未根據二零一五年購股權獲行使：

		2021		2020	
		二零二一年		二零二零年	
		Weighted average exercise price HK\$ per share	Number of options '000	Weighted average exercise price HK\$ per share	Number of options '000
		加權平均行使價每股港元	購股權數目千份	加權平均行使價每股港元	購股權數目千份
At 1 January	於一月一日	6.912	5,935	6.912	13,947
Exercised during the year	年內行使	6.912	(1,197)	6.912	(7,892)
Forfeited during the year	年內沒收	6.912	—	6.912	(120)
At 31 December	於十二月三十一日	6.912	4,738	6.912	5,935

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31. Share Option Scheme (continued)

2015 Options (continued)

The exercise prices and exercise periods of the outstanding 2015 Options as at the end of the reporting period are as follows:

2021 二零二一年	2020 二零二零年	Exercise price* 行使價*	Exercise period 行使期
Number of options 購股權數目	Number of options 購股權數目	HK\$ per share 每股港元	
'000 千份	'000 千份		
1,952	2,551	6.912	4 September 2018 to 3 September 2022 二零一八年九月四日至二零二零年九月三日
2,786	3,384	6.912	4 September 2019 to 3 September 2022 二零一九年九月四日至二零二零年九月三日
4,738	5,935		

* 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.

No share option expense of the 2015 Options was recognised (2020: Nil) during the year.

The 1,197,000 (2020: 7,892,000) share options exercised under the 2015 Options during the year, resulting in the issue of 1,197,000 (2020: 7,892,000) ordinary shares of the Company for a total cash consideration of US\$1,065,000 (2020: US\$7,035,000). An amount of US\$465,000 (2020: US\$3,080,000) 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.

31. 購股權計劃 (續)

二零一五年購股權 (續)

於報告期末二零一五年購股權項下尚未行使購股權的行使價及行使期如下:

Exercise price* 行使價*	Exercise period 行使期
HK\$ per share 每股港元	
6.912	4 September 2018 to 3 September 2022 二零一八年九月四日至二零二零年九月三日
6.912	4 September 2019 to 3 September 2022 二零一九年九月四日至二零二零年九月三日

* 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。

年內，概無根據二零一五年購股權確認購股權開支(二零二零年：無)。

年內，二零一五年購股權項下1,197,000份(二零二零年：7,892,000份)購股權獲行使，引致本公司發行1,197,000股(二零二零年：7,892,000股)普通股，總現金代價為1,065,000美元(二零二零年：7,035,000美元)。如財務報表附註30進一步詳述，購股權獲行使後，465,000美元(二零二零年：3,080,000美元)的款項已由購股權儲備轉撥至股本。

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31. Share Option Scheme (continued)

2015 Options (continued)

At the end of the reporting period, the Company had 4,738,000 2015 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 4,738,000 additional ordinary shares of the Company and additional share capital of US\$6,038,000 (including US\$1,838,000 transferred from the share option reserve to share capital).

At the date of approval of these financial statements, the Company had 4,557,999 2015 Options outstanding, which represented approximately 0.4% of the Company's shares in issue as at that date.

2018 Options

The following 2018 Options were outstanding during the year:

31. 購股權計劃 (續)

二零一五年購股權 (續)

於報告期末，本公司擁有4,738,000份尚未行使的二零一五年購股權。根據本公司現時的股本架構，悉數行使尚未行使的購股權可能會導致額外發行4,738,000股本公司普通股及增加股本6,038,000美元(包括由購股權儲備轉撥至股本的1,838,000美元)。

於批准該等財務報表日期，本公司擁有4,557,999份尚未行使的二零一五年購股權，佔該日期本公司已發行股份的約0.4%。

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：

		2021 二零二一年		2020 二零二零年	
		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	15.310	33,547	15.303	35,811
Exercised during the year	年內行使	15.088	(2,177)	15.056	(1,106)
Forfeited during the year	年內沒收	15.357	(6,407)	15.266	(1,158)
At 31 December	於十二月三十一日	15.317	24,963	15.310	33,547

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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:

2021 二零二一年 Number of options 購股權數目 '000 千份	2020 二零二零年 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
6,954	9,188	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
4,943	10,219	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
9,859	10,220	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
1,025	1,058	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
62	125	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
316	763	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
677	762	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
677	762	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
24,963	33,547		

* 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\$296,000 (2020: US\$8,144,000) during the year.

The 2,177,000 (2020: 1,106,000) share options exercised under the 2018 Options during the year, resulting in the issue of 2,177,000 (2020: 1,106,000) ordinary shares of the Company for a total cash consideration of US\$4,235,000 (2020: US\$2,140,000). An amount of US\$1,354,000 (2020: US\$683,000) 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 24,963,000 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 24,963,000 additional ordinary shares of the Company and additional share capital of US\$65,144,000 (including US\$16,111,000 transferred from the share option reserve to share capital).

At the date of approval of these financial statements, the Company had 24,551,436 2018 Options outstanding, which represented approximately 1.9% of the Company's shares in issue as at that date.

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 209 to 210 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.

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296,000美元(二零二零年: 8,144,000美元)。

年內,二零一八年購股權項下2,177,000份(二零二零年: 1,106,000份)購股權獲行使,引致本公司發行2,177,000股(二零二零年: 1,106,000股)普通股,總現金代價為4,235,000美元(二零二零年: 2,140,000美元)。如財務報表附註30進一步詳述,購股權獲行使後,1,354,000美元(二零二零年: 683,000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24,963,000份尚未行使的二零一八年購股權。根據本公司現時的股本架構,悉數行使尚未行使的購股權可能會導致額外發行24,963,000股本公司普通股及增加股本65,144,000美元(包括由購股權儲備轉撥至股本的16,111,000美元)。

於批准該等財務報表日期,本公司擁有24,551,436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1.9%。

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209至210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\$14,488,000 (31 December 2020: US\$12,788,000), details of which are included in note 5 to the financial statements.

At 31 December 2021, undiscounted lease payments receivable by the Group in future periods under non-cancellable operating leases with its tenant are as follows:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Within one year	一年內	15,754	13,788
After one year but within two years	一年後但於兩年內	15,534	13,788
After two years but within three years	兩年後但於三年內	15,534	13,788
After three years but within four years	三年後但於四年內	15,534	13,788
After four years but within five years	四年後但於五年內	15,534	13,788
More than five years	超過五年	50,190	58,426
		128,080	127,366

The Group received advance rental payments of US\$3,606,000 from Shanghai Huali as at 31 December 2021 (2020: US\$3,916,000).

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14,488,000美元(二零二零年十二月三十一日: 12,788,000美元)，其詳情載於財務報表附註5。

於二零二一年十二月三十一日，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：

於二零二一年十二月三十一日，本集團收到上海華力預付租金3,606,000美元(二零二零年: 3,916,000美元)。

作為承租人

本集團擁有可能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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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:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Interest on lease liabilities	租賃負債利息	879	963
Depreciation charge of right-of-use assets	使用權資產折舊開支	5,676	5,628
Expense relating to short-term leases	與短期租賃有關的開支	1,572	637
Total amount recognised in profit or loss	於損益確認的總金額	8,127	7,228

(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 capital commitments at the end of the reporting period:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Contracted, but not provided for: Property, plant and equipment	已訂約，但未撥備： 物業、廠房及設備	283,019	180,581

34. 承擔

本集團於報告期末有以下資本承擔:

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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」)	26.9% shareholder of the Company 持股26.9%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
– 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 Integrated Circuit Research and Development Center (“ICRD”) – 上海集成電路研發中心(「集成電路研發」)	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
NEC Corporation (“NEC”)* NEC Corporation (「NEC」)*	Shareholder of the Company (before 19 February 2021) 本公司股東(於二零二一年二月十九日之前)
– NEC Management Partner, Ltd. (“NEC Management”) – NEC Management Partner, Ltd. (「NEC Management」)	Subsidiary of NEC NEC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」)	14.5% shareholder of the Company 持股14.5%之本公司股東
– QST** – 矽睿科技**	Subsidiary of SAIL (before 1 September 2020) 上海聯和子公司 (於二零二零年九月一日之前)

NOTES TO FINANCIAL STATEMENTS

財務報表附註 31 December 2021
二零二一年十二月三十一日35. Related Party Transactions and Balances
(continued)

(a) Name and relationship (continued)

Name of related party 關聯方名稱
INESA and its subsidiaries 儀電集團及其子公司
– INESA (Group) Co., Ltd. (“INESA”)**
– 上海儀電(集團)有限公司(「儀電集團」)**
– Shanghai INESA Intelligent Electronics Co., Ltd. (“Shanghai INESA”) **
– 上海儀電智能電子有限公司(「上海儀電」)**
– Shanghai Nanyang Software System Integration Co., Ltd. (“Nanyang Software”)**
– 上海南洋軟件系統集成有限公司(「南洋軟件」)**
– Shanghai Nanyang Wanbang Software Technology Co., Ltd. (“Wanbang”)**
– 上海南洋萬邦軟件技術有限公司(「萬邦」)**
Huahong Technology Development 華虹科技發展
– Shanghai Huahong Real Estate Co., Ltd. (“Huahong Real Estate”)
– 上海華虹置業有限公司(「華虹置業」)
– Shanghai Huajin Property Management Co., Ltd. (“Huajin”)
– 上海華錦物業管理有限公司(「華錦」)
* NEC disposed of all of its shareholdings in the Company on 19 February 2021. From then on, NEC and its subsidiaries are no longer related parties to the Group.
** QST issued new ownership interests to third parties on 1 September 2020 and therefore a dilution in the SAIL’s interests occurred. From then on, QST ceased to be a subsidiary of SAIL and is no longer a related party to the Group.
*** INESA, a shareholder of Huahong Group, and its subsidiaries are no longer related parties to the Group since 1 January 2021.

35. 關聯方交易及結餘(續)

(a) 名稱及關係(續)

Relationship with the Group 與本集團的關係
Shareholder of Huahong Group 華虹集團股東
Subsidiary of INESA 儀電集團子公司
Subsidiary of INESA 儀電集團子公司
Subsidiary of INESA 儀電集團子公司
Associate of the Group 本集團聯營公司
Subsidiary of Huahong Technology Development 華虹科技發展子公司
Subsidiary of Huahong Technology Development 華虹科技發展子公司
* NEC於二零二一年二月十九日出售其 於本公司的所有股權。自此，NEC及 其子公司不再為本集團的關聯方。
** 矽睿科技於二零二零年九月一日向第 三方發行新的所有權權益，因此上海 聯和的權益發生攤薄。自此，矽睿科 技不再為上海聯和的子公司，且不再 為本集團的關聯方。
*** 自二零二一年一月一日起，華虹集團 股東儀電集團及其子公司不再作為本 集團的關聯方。

NOTES TO FINANCIAL STATEMENTS

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二零二一年十二月三十一日 財務報表附註35. Related Party Transactions and Balances
(continued)

(b) Related party transactions

In addition to the transactions and balances disclosed elsewhere in these financial statements, the Group had the following material transactions with related parties during the year:

35. 關聯方交易及結餘 (續)

(b) 關聯方交易

除該等財務報表其他部分披露的交易及餘額外，本集團於年內已與關聯方進行以下重大交易：

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Sales of goods to related parties (note (i))	向關聯方出售貨品 (附註(i))		
ICRD#	集成電路研發#	8,742	8,861
Huahong Zealcore#	華虹摯芯#	6,404	2,797
Hongri#	虹日#	3,376	2,056
QST	矽睿科技	-	3,027
Shanghai Huali	上海華力	-	42
Purchases of goods from related parties (note (ii))	自關聯方購買貨品 (附註(ii))		
Hongri#	虹日#	18,247	15,321
Huahong Zealcore#	華虹摯芯#	688	525
Shanghai Huali	上海華力	519	1,832
Jitong	計通	249	280
NEC Management	NEC Management	233	1,375
ICRD	集成電路研發	-	2,065
Purchases of intangible assets from related parties (note (ii))	自關聯方購買無形資產 (附註(ii))		
Shanghai Huali	上海華力	-	17,100
ICRD	集成電路研發	-	1,350
Rental income from a related party (note (iii))	來自關聯方的租金收入 (附註(iii))		
Shanghai Huali#	上海華力#	14,497	13,036
Service fees charged by related parties (note (iv))	關聯方收取的服務費 (附註(iv))		
Huajin	華錦	338	224
Huahong Real Estate	華虹置業	28	51
Shanghai INESA	上海儀電	-	3,453
Wanbang	萬邦	-	388
Nanyang Software	南洋軟件	-	33

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財務報表附註 31 December 2021
二零二一年十二月三十一日35. Related Party Transactions and Balances
(continued)

(b) Related party transactions (continued)

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Interest expense charge by a related party (notes (iv) and (vi)) Huahong Real Estate	關聯方收取的利息開支 (附註(iv)及(vi)) 華虹置業	795	788
Expense paid on behalf of a related party (note (v)) Shanghai Huali	代關聯方支付的開支 (附註(v)) 上海華力	30,760	26,641

The related party transactions also constitute continuing connected transactions as defined in Chapter 14A of the Listing Rules.

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 rental income received from a related party was based on the prices and terms agreed between the related parties.

Note (iv) The service fees and interest expense charged by related parties were based on the prices and terms agreed between the related parties.

Note (v) The expense paid on behalf of the related party is interest-free and repayable on demand.

Note (vi) The Group entered into a 20-year lease in respect of certain dormitory properties from Huahong Real Estate. The amount of rent payable by the Group under the lease is US\$1,783,000 per year. At 31 December 2021, the balances of those right-of-use assets and lease liabilities were US\$14,573,000 (2020: US\$15,426,000) and US\$17,225,000 (2020: US\$17,845,000), respectively.

35. 關聯方交易及結餘 (續)

(b) 關聯方交易 (續)

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Interest expense charge by a related party (notes (iv) and (vi)) Huahong Real Estate	關聯方收取的利息開支 (附註(iv)及(vi)) 華虹置業	795	788
Expense paid on behalf of a related party (note (v)) Shanghai Huali	代關聯方支付的開支 (附註(v)) 上海華力	30,760	26,641

關聯方交易亦構成上市規則第14A章所界定的持續關連交易。

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) 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(iv) 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(v) 代關聯方支付的開支為不計息，及須按的要求償還。

附註(vi) 本集團就自華虹置業租賃的若干宿舍物業訂立一份為期二十年的租約。本集團於租賃項下應付的租金為每年1,783,000美元。於二零二一年十二月三十一日，該等使用權資產及租賃負債的結餘分別為14,573,000美元(二零二零年: 15,426,000美元)及17,225,000美元(二零二零年: 17,845,000美元)。

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(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

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Long-term prepayments to related parties	應付關聯方長期預付款項		
Jitong	計通	-	26
		-	26
Amounts due from related parties	應收關聯方款項		
Shanghai Huali	上海華力	6,359	3,046
Huahong Zealcore	華虹摯芯	406	489
ICRD	集成電路研發	145	1,171
		6,910	4,706
Amounts due to related parties	應付關聯方款項		
Shanghai Huali	上海華力	3,673	5,639
Hongri	虹日	2,995	4,695
ICRD	集成電路研發	468	468
Huahong Zealcore	華虹摯芯	304	255
Jitong	計通	32	29
Huahong Real Estate	華虹置業	24	12
Huajin	華錦	5	3
Shanghai INESA	上海儀電	-	988
NEC Management	NEC Management	-	365
Wanbang	萬邦	-	188
Nanyang Software	南洋軟件	-	5
		7,501	12,647

(d) Compensation of key management personnel of the Group

(d) 本集團主要管理人員的酬金

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Short term employee benefits	短期僱員福利	6,569	3,960
Pension scheme contributions	退休金計劃供款	81	59
Equity-settled share option expense	以權益結算的購股權開支	364	1,047
Total compensation paid to key management personnel	支付予主要管理人員的酬金總額	7,014	5,066

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。

NOTES TO FINANCIAL STATEMENTS

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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

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Trade and notes receivables	貿易應收款項及應收票據	181,042	120,952
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)	22,530	8,696
Due from related parties	應收關聯方款項	6,910	4,706
Restricted and time deposits	已凍結及定期存款	2,248	359
Cash and cash equivalents	現金及現金等價物	1,610,140	922,786
		1,822,870	1,057,499

Financial assets – at fair value through other comprehensive income without recycling to profit or loss

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 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	257,788	230,265

Financial liabilities – at amortised cost

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Trade payables	貿易應付款項	194,385	130,980
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)	307,443	262,448
Interest-bearing bank borrowings	計息銀行借款	1,590,303	566,175
Lease liabilities	租賃負債	17,813	21,640
Due to related parties	應付關聯方款項	7,501	12,647
		2,117,445	993,890

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

	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
貿易應收款項及應收票據	181,042	120,952
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)	22,530	8,696
應收關聯方款項	6,910	4,706
已凍結及定期存款	2,248	359
現金及現金等價物	1,610,140	922,786
	1,822,870	1,057,499

金融資產 – 按公平值計入其他全面收益 (不得重新計入損益)

	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
指定為按公平值計入其他全面收益的股本投資	257,788	230,265

金融負債 – 按攤銷成本

	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
貿易應付款項	194,385	130,980
計入其他應付款項及暫估費用的金融負債 (附註25)	307,443	262,448
計息銀行借款	1,590,303	566,175
租賃負債	17,813	21,640
應付關聯方款項	7,501	12,647
	2,117,445	993,890

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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:

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:

	Carrying amounts		Fair values		
	賬面值		公平值		
	2021	2020	2021	2020	
	二零二一年	二零二零年	二零二一年	二零二零年	
	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本投資	257,788	230,265	257,788	230,265
Financial liabilities	金融負債				
Interest-bearing bank borrowings	計息銀行借款	1,395,279	518,391	1,417,069	521,759

Management has assessed that the fair values of cash and cash equivalents, restricted and time deposits, trade and notes receivables, financial assets included in prepayments, other receivables and other assets, trade payables, financial liabilities included in other payables and accruals, amounts due from/to related parties and 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.

管理層已評估現金及現金等價物、已凍結及定期存款、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、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。

NOTES TO FINANCIAL STATEMENTS

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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 2021 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,於二零二一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 2021

37. 金融工具的公平值及公平值層級 (續)

公平值層級

下表顯示本集團金融工具的公平值計量層級：

按公平值計量的金融資產
二零二一年十二月三十一日

		Fair value measurement using 公平值計量採用以下基準			
		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	Total 總計 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	14,310	2,236	241,242	257,788

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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)
31 December 2020

		Fair value measurement using 公平值計量採用以下基準			
		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	Total 總計 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	-	2,508	227,757	230,265

As at 31 December 2021, the fair value of the equity investment classified in Level 2 with a carrying amount of US\$2,236,000 (31 December 2020: US\$2,508,000) was estimated based on a recent dealing price.

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 (2020: Nil).

During the year, there were no transfers into or out of Level 3 for the financial assets above. 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\$2,508,000 as at 31 December 2020 because there was a recent deal regarding the investment and the observable market data became available.

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)
二零二零年十二月三十一日

於二零二一年十二月三十一日，賬面值為2,236,000美元(二零二零年十二月三十一日：2,508,000美元)的分類為第2級的股本投資的公平值乃依據近期交易價估計。

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(二零二零年：無)。

於年內，以上金融資產的第3級並無轉入或轉出。於二零二零年十二月三十一日，賬面值為2,508,000美元的指定為按公平值計入其他全面收益的股本投資自第3級轉入第2級，因為存在與投資有關的近期交易及獲得了可觀察市場數據。

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二零二一年十二月三十一日 財務報表附註

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 2021 and 2020. 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二零二一年及二零二零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	2021: 0.8x-3.4x 2020: 1.1x-3.0x	5% (2020: 5%) increase/decrease would result in increase/decrease in fair value by 5% (2020: 5%)
		估值倍數	同業平均市賬率	二零二一年: 0.8x-3.4x 二零二零年: 1.1x-3.0x	5% (二零二零年: 5%) 的增加 / 減少將導致公平值增加 / 減少5% (二零二零年: 5%)
			Discount for illiquidity	2021: 20%-30% 2020: 20%-30%	5% (2020: 5%) increase/decrease would result in decrease/increase in fair value by 5% (2020: 5%)
			缺乏流通性的折讓價	二零二一年: 20%-30% 二零二零年: 20%-30%	5% (二零二零年: 5%) 的增加 / 減少將導致公平值減少 / 增加5% (二零二零年: 5%)

NOTES TO FINANCIAL STATEMENTS

財務報表附註 31 December 2021
二零二一年十二月三十一日

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本投資 US\$'000 千美元	Financial assets at fair value through profit or loss 按公平值計入損益的金融資產 US\$'000 千美元
At 1 January 2020	於二零二零年一月一日	207,689	519,779
Transfer to Level 2	向第2級轉入	(2,508)	-
Purchases	購買	-	738,163
Disposals	處置	-	(1,260,733)
Total gains recognised in the statement of profit or loss included in other income and gains	於損益表確認計入其他收入及收益的收益總額	-	5,337
Total gains recognised in other comprehensive income	於其他全面收益確認的收益總額	8,211	-
Exchange realignment	匯兌調整	14,365	(2,546)
At 31 December 2020 and 1 January 2021	於二零二零年十二月三十一日及二零二一年一月一日	227,757	-
Total gains recognised in other comprehensive income	於其他全面收益確認的收益總額	8,155	-
Exchange realignment	匯兌調整	5,330	-
As at 31 December 2021	於二零二一年十二月三十一日	241,242	-

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二零二一年十二月三十一日

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 2021, 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\$7,793,346 lower/higher (31 December 2020: US\$5,431,860), 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。

於二零二一年十二月三十一日，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7,793,346美元（二零二零年十二月三十一日：5,431,860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。

NOTES TO FINANCIAL STATEMENTS

財務報表附註 31 December 2021
二零二一年十二月三十一日

38. Financial Risk Management 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 26% (2020: 34%) of the Group's sales were denominated in currencies other than the functional currency of the subsidiary making the sale, whilst 70% (2020: 78%) 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 2020, interest-bearing bank borrowings with a carrying amount of US\$1,560,054,000 (2020: US\$543,186,000) 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 rate, with all other variables held constant, of the Group's profit before tax (due to changes in the fair value of monetary assets and liabilities):

		Increase/ (decrease) in US\$ rate 美元匯率 增加 / (減少) US\$'000 千美元	Increase/ (decrease) in profit before tax 稅前溢利 增加 / (減少) US\$'000 千美元
Year ended 31 December 2021	截至二零二一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%	48,160
If US\$ strengthens against RMB	倘美元兌人民幣升值	(5%)	(48,160)
Year ended 31 December 2020	截至二零二零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%	14,208
If US\$ strengthens against RMB	倘美元兌人民幣升值	(5%)	(14,208)

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26% (二零二零年：34%) 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70% (二零二零年：78%) 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。於二零二零年十二月三十一日，賬面值為1,560,054,000美元 (二零二零年：543,186,000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 (由於貨幣資產及負債公平值變動) 對人民幣匯率的合理可能變動的敏感度：

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二零二一年十二月三十一日 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 restricted and time 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 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 2021 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凍結及定期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)就二零二一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。

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二零二一年十二月三十一日

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 2021

	On demand	Less than 3 months	3 to 12 months	1 to 5 years	Over 5 years	Total	
	按要求	少於三個月	十二個月	一至五年	五年以上	總計	
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	
	千美元	千美元	千美元	千美元	千美元	千美元	
Interest-bearing bank borrowings	計息銀行借款	–	43,255	176,631	868,841	631,600	1,720,327
Lease liabilities	租賃負債	–	731	1,706	7,369	12,895	22,701
Trade payables	貿易應付款項	21,833	172,552	–	–	–	194,385
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	215,220	92,223	–	–	–	307,443
Amounts due to related parties	應付關聯方款項	7,501	–	–	–	–	7,501
		244,554	308,761	178,337	876,210	644,495	2,252,357

31 December 2020

	On demand	Less than 3 months	3 to 12 months	1 to 5 years	Over 5 years	Total	
	按要求	少於三個月	十二個月	一至五年	五年以上	總計	
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	
	千美元	千美元	千美元	千美元	千美元	千美元	
Interest-bearing bank borrowings	計息銀行借款	–	–	55,967	183,637	370,263	609,867
Lease liabilities	租賃負債	–	1,613	3,438	7,887	14,401	27,339
Trade payables	貿易應付款項	18,531	112,449	–	–	–	130,980
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	140,125	122,323	–	–	–	262,448
Amounts due to related parties	應付關聯方款項	12,647	–	–	–	–	12,647
		171,303	236,385	59,405	191,524	384,664	1,043,281

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：

二零二一年十二月三十一日

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31 December 2021
二零二一年十二月三十一日 財務報表附註**38. Financial Risk Management Objectives and Policies (continued)****Interest rate benchmark reform**

As at 31 December 2021, the Group had certain interest-bearing bank borrowings denominated in United States dollars. The interest rates of these instruments are based on the LIBOR with a tenor of six months, which will cease to be published after 30 June 2023. Replacement of the benchmark rates of these instruments from LIBOR to an RFR has yet to commence but it is expected that there will be renegotiations of terms in the future. During the transition, the Group is exposed to the following risks:

- Parties to the contract may not reach agreement in a timely manner as any changes to the contractual terms require the agreement of all parties to the contract
- Additional time may be needed for the parties to the contract to reach agreement as they may renegotiate terms which are not part of the interest rate benchmark reform (e.g., changing the credit spread of the bank borrowings due to changes in credit risk of the Group)
- The existing fallback clause included in the instruments may not be adequate to facilitate a transition to a suitable RFR

The Group will continue to monitor the development of the reform and take proactive measures for a smooth transition.

The information about financial instruments based on an interbank offered rate that has yet to transition to an alternative benchmark rate is as follows:

As at 31 December 2021**38. 財務風險管理目標及政策 (續)****利率基準改革**

於二零二一年十二月三十一日，本集團擁有若干以美元計值的計息銀行借款。該等金融工具的利率基於倫敦銀行同業拆息，期限為六個月，將在二零二三年六月三十日之後停止公佈。尚未開始將該等工具的基準利率從倫敦銀行同業拆息替換為無風險利率，但預計未來將重新協商條款。於過渡期間，本集團面臨以下風險：

- 由於合約條款的任何變更均須經合約各方同意，故合約各方或許無法及時達成協議
- 由於合同各方或許會重新協商不屬於利率基準改革的條款（例如，因集團信貸風險的變化而改變銀行借款的信貸利差），故合同各方或許需要額外時間達成協議
- 工具中含有的現有備用條款或許不足以促進過渡到一個適當的無風險利率

本集團將繼續監控改革進展，並採取積極措施實現平穩過渡。

關於基於銀行同業拆息但尚未過渡到替代基準利率的金融工具的資料如下：

於二零二一年十二月三十一日

**Non-derivative
financial liabilities
– carrying value
非衍生金融負債
– 賬面值
US\$'000
千美元**

Interest-bearing bank borrowings
– United States dollar LIBOR

計息銀行借款
– LIBOR美元

1,560,054

NOTES TO FINANCIAL STATEMENTS

財務報表附註 31 December 2021
二零二一年十二月三十一日

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 2021 二零二一年 十二月三十一日 US\$'000 千美元	31 December 2020 二零二零年 十二月三十一日 US\$'000 千美元
Trade payables	貿易應付款項	194,385	130,980
Other payables and accruals (note 25)	其他應付款項及暫估費用(附註25)	377,982	304,035
Interest-bearing bank borrowings	計息銀行借款	1,590,303	566,175
Lease liabilities	租賃負債	17,813	21,640
Amounts due to related parties	應付關聯方款項	7,501	12,647
Less: Cash and cash equivalents	減：現金及現金等價物	(1,610,140)	(922,786)
Net debt	淨負債	577,844	112,691
Total equity	權益總額	3,684,547	3,354,121
Total equity and net debt	權益總額及淨負債	4,262,391	3,466,812
Gearing ratio	資產負債比率	13.56%	3.25%

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39. Notes to the Consolidated Statement of Cash Flows

(a) Major non-cash transactions

During the year, the Group had no non-cash additions to right-of-use assets or lease liabilities (2020: US\$5,107,000 and US\$5,107,000, respectively, in respect of lease arrangements for offices and dormitory properties).

(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 2020	於二零二零年一月一日	25,802	18,616
Changes from financing cash flows	融資現金流量變動	538,768	(4,661)
Interest expense	利息開支	-	963
New leases	新租賃	-	5,107
Foreign exchange movements	外匯變動	1,605	1,615
As at 31 December 2020 and 1 January 2021	於二零二零年十二月三十一日及二零二一年一月一日	566,175	21,640
Changes from financing cash flows	融資現金流量變動	1,022,945	(4,878)
Interest expense	利息開支	-	879
Foreign exchange movements	外匯變動	1,183	172
As at 31 December 2021	於二零二一年十二月三十一日	1,590,303	17,813

(c) Total cash outflow for leases

The total cash outflow for leases included in the statement of cash flows is as follows:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Within operating activities	經營活動內	1,572	637
Within financing activities	融資活動內	4,878	4,661
		6,450	5,298

39. 綜合現金流量表附註

(a) 主要非現金交易

於年內，本集團並無使用權資產或租賃負債的非現金添置(二零二零年：與辦公室及宿舍物業有關的租賃安排分別為5,107,000美元及5,107,000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：

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40. Partly-Owned Subsidiary With Material Non-Controlling Interests

Details of the Group's subsidiary that has material non-controlling interests are set out below:

		2021 二零二一年	2020 二零二零年
Percentage of interest held by non-controlling interests	非控股權益持有權益比率		
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。

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 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	(30,505)	(66,128)
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	814,188	825,679

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The following tables illustrate the summarised financial information of the above subsidiary. The amounts disclosed are before any inter-company eliminations:

		Hua Hong Wuxi 華虹無錫 2021 二零二一年 US\$'000 千美元	Hua Hong Wuxi 華虹無錫 2020 二零二零年 US\$'000 千美元
Revenue	銷售收入	481,167	64,078
Other income	其他收入	32,757	35,374
Total expenses	開支總額	(576,179)	(234,407)
Loss and total comprehensive loss for the year	年內虧損及全面虧損總額	(62,255)	(134,955)
Current assets	流動資產	1,019,923	636,669
Non-current assets	非流動資產	2,539,652	1,846,074
Current liabilities	流動負債	(610,803)	(297,698)
Non-current liabilities	非流動負債	(1,287,163)	(500,000)
Net cash flows used in operating activities	經營活動所用現金流量淨額	(8,320)	(59,599)
Net cash flows used in investing activities	投資活動所用現金流量淨額	(824,666)	(296,157)
Net cash flows generated from financing activities	融資活動所得現金流量淨額	922,342	541,018
Effect of foreign exchange rate changes, net	外匯匯率變動影響，淨額	5,299	19,339
Net increase in cash and cash equivalents	現金及現金等價物增加淨額	94,655	204,601

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：

41. Event After the Reporting Period

There is no material subsequent event undertaken by the Group after 31 December 2021.

41. 報告期後事項

本集團於二零二一年十二月三十一日後概無發生重大期後事項。

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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 2021	31 December 2020
		二零二一年 十二月三十一日	二零二零年 十二月三十一日
		US\$'000	US\$'000
		千美元	千美元
NON-CURRENT ASSETS	非流動資產		
Investments in subsidiaries	投資於子公司	1,976,048	1,975,752
Total non-current assets	非流動資產總額	1,976,048	1,975,752
CURRENT ASSETS	流動資產		
Prepayments, other receivables and other assets	預付款項、其他應收款項及其他資產	6,027	6,317
Due from a subsidiary	應收子公司款項	998	998
Restricted and time deposits	已凍結及定期存款	27	27
Cash and cash equivalents	現金及現金等價物	28,112	21,235
Total current assets	流動資產總額	35,164	28,577
CURRENT LIABILITIES	流動負債		
Other payables and accruals	其他應付款項及暫估費用	903	675
Due to subsidiaries	應付子公司款項	95,841	93,248
Total current liabilities	流動負債總額	96,744	93,923
NET CURRENT LIABILITIES	流動負債淨額	(61,580)	(65,346)
TOTAL ASSETS LESS CURRENT LIABILITIES	資產總值減流動負債	1,914,468	1,910,406
Net assets	淨資產	1,914,468	1,910,406
EQUITY	權益		
Share capital	股本	1,986,152	1,979,033
Reserves (note)	儲備(附註)	(71,684)	(68,627)
Total equity	權益總額	1,914,468	1,910,406

Suxin Zhang
張素心
Director
董事

Jun Ye
葉峻
Director
董事

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42. Statement of Financial Position of the Company (continued)

42. 本公司的財務狀況表(續)

Note:

A summary of the Company's reserves is as follows:

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	Accumulated losses 累計虧損 US\$'000 千美元	Total 總計 US\$'000 千美元
As at 1 January 2020	於二零二零年一月一日	(68,260)	12,719	(16,324)	(71,865)
Loss for the year	年內虧損	-	-	(1,143)	(1,143)
Equity-settled share option arrangements	以權益結算的購股權安排	-	8,144	-	8,144
Issue of shares	發行股份	-	(3,763)	-	(3,763)
At 31 December 2020 and 1 January 2021	於二零二零年十二月三十一日及二零二一年一月一日	(68,260)	17,100	(17,467)	(68,627)
Loss for the year	年內虧損	-	-	(1,534)	(1,534)
Equity-settled share option arrangements	以權益結算的購股權安排	-	296	-	296
Issue of shares	發行股份	-	(1,819)	-	(1,819)
As at 31 December 2021	於二零二一年十二月三十一日	(68,260)	15,577	(19,001)	(71,684)

43. Approval of the Financial Statements

43. 財務報表的批准

The financial statements were approved and authorised for issue by the board of directors on 29 March 2022.

財務報表已於二零二二年三月二十九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				
		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元	2019 二零一九年 US\$'000 千美元	2018 二零一八年 US\$'000 千美元	2017 二零一七年 US\$'000 千美元
RESULTS	業績					
REVENUE	銷售收入	1,630,754	961,279	932,567	930,268	808,148
Cost of sales	銷售成本	(1,179,156)	(726,486)	(650,107)	(619,114)	(540,971)
Gross profit	毛利	451,598	234,793	282,460	311,154	267,177
Other income and gains	其他收入及收益	60,758	57,313	69,091	43,613	24,394
Fair value gain on an investment property	投資物業的公平值收益	183	198	163	247	89
Selling and distribution expenses	銷售及分銷費用	(10,673)	(8,169)	(8,828)	(7,771)	(7,232)
Administrative expenses	管理費用	(198,920)	(261,139)	(169,796)	(122,323)	(108,673)
Other expenses	其他費用	(165)	(10)	(406)	(11,106)	(10,712)
Finance costs	財務費用	(13,226)	(2,968)	(1,242)	(2,203)	(2,178)
Share of profits of associates	分佔聯營公司溢利	6,765	26,059	10,131	9,444	9,622
PROFIT BEFORE TAX	稅前溢利	296,320	46,077	181,573	221,055	172,487
Income tax expense	所得稅開支	(65,349)	(12,762)	(26,588)	(35,447)	(27,225)
PROFIT FOR THE YEAR	年內溢利	230,971	33,315	154,985	185,608	145,262
Attributable to:	以下各項應佔:					
Owners of the parent	母公司擁有人	261,476	99,443	162,237	183,158	145,262
Non-controlling interests	非控股權益	(30,505)	(66,128)	(7,252)	2,450	-
		230,971	33,315	154,985	185,608	145,262
		As at 31 December 於十二月三十一日				
		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元	2019 二零一九年 US\$'000 千美元	2018 二零一八年 US\$'000 千美元	2017 二零一七年 US\$'000 千美元
Total assets	資產總值	6,202,099	4,568,586	3,613,303	3,078,274	2,078,306
Total liabilities	負債總額	(2,517,552)	(1,214,465)	(530,711)	(373,942)	(383,101)
Non-controlling interests	非控股權益	(814,188)	(825,679)	(837,351)	(549,076)	-
		2,870,359	2,528,442	2,245,241	2,155,256	1,695,205



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