

HGrace | 華虹宏力

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)

**芯路
飛虹**
2019
ANNUAL REPORT
年度報告
SUCCESS THROUGH
RELENTLESS
INNOVATION



CONTENTS

Definitions	2
Key Financials	5
Letter to Shareholders	6
Corporate Information	8
Directors and Senior Management Team	11
Corporate Governance Report	18
Directors' Report	28
2019 Environmental, Social and Governance Report	59
Independent Auditors' Report	185
Consolidated Statement of Profit or Loss	193
Consolidated Statement of Comprehensive Income	194
Consolidated Statement of Financial Position	195
Consolidated Statement of Changes in Equity	197
Consolidated Statement of Cash Flows	199
Notes to Financial Statements	201
Five Year Financial Summary	308



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”	a hybrid annual general meeting of the Company to be held on 14 May 2020 at 2:00 p.m., with the combination of a physical meeting at Kowloon Shangri-La Hong Kong, 64 Mody Road, Kowloon, Hong Kong and a virtual meeting online;
“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;
“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;
“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 controlling 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;
“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.;
“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;

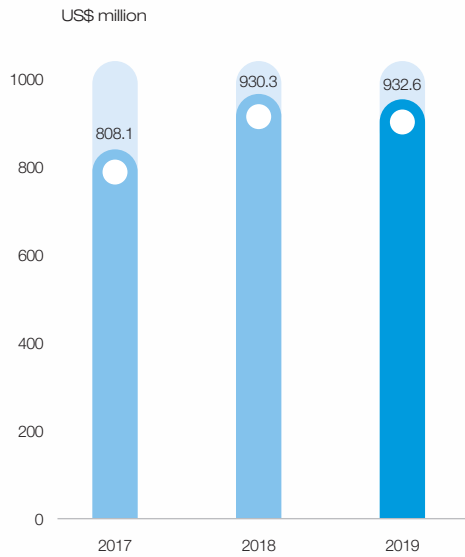


DEFINITIONS

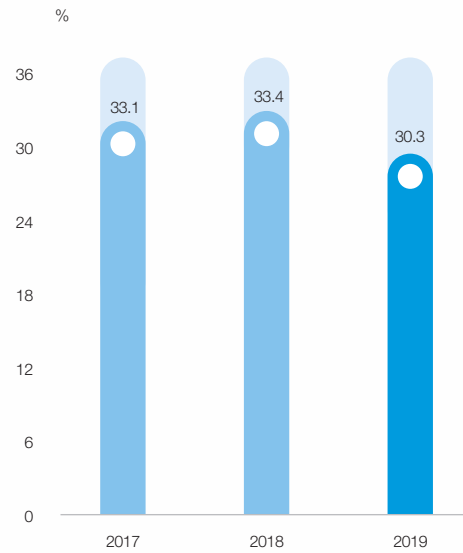
“Independent Non-Executive Director(s)”	the Independent Non-Executive Director(s) of our Company;
“INESA”	INESA (Group) Co., Ltd. (上海儀電(集團)有限公司), formerly known as INESA Holding Group (上海儀電控股(集團)有限公司), a state-owned company incorporated in the PRC in December 1993, and a controlling shareholder of our Company;
“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;
“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;
“RMB”	Renminbi, the lawful currency of the PRC;
“SAIL”	Shanghai Alliance Investment Ltd (上海聯和投資有限公司), a company incorporated in the PRC on 26 September 1994, a controlling shareholder of our Company and a major shareholder of Huahong Group;
“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 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;
“Stock Exchange”	The Stock Exchange of Hong Kong Limited;
“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

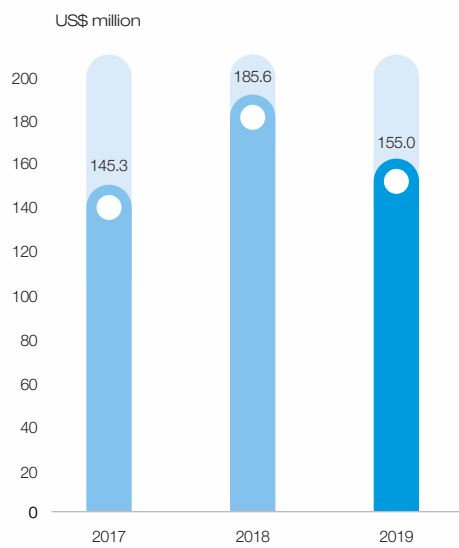
Revenue



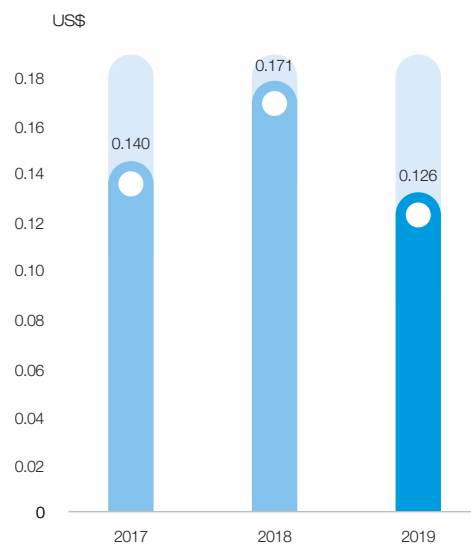
Gross Profit Margin



Net Profit



EPS





LETTER TO SHAREHOLDERS

Dear Shareholders,

In a complex and changing macroeconomic environment, 2019 has been a lower revenue year for the semiconductor industry with global semiconductor sales falling by 12%. With full support of our shareholders, customers, suppliers, and employees, we overcame a challenging market and made great progress toward our goals. Under the strategic guidance of our initiative, “Next 20 Years of Hua Hong”, a 12-inch wafer line was successfully put into production in September at Hua Hong’s IC Research, Development and Manufacturing Base in Wuxi, embodying the ingenuity and hard work of our employees. In Shanghai and Wuxi, our “8-inch + 12-inch” strategy is moving full speed ahead, covering emerging markets for 5G mobile communication, Internet of Things, New Energy Vehicles, Artificial Intelligence, and other new applications, to meet the diverse and growing needs of our customers.

2019 has been a year of growth and profit. The newly completed Hua Hong Wuxi 12-inch fab achieved the targeted monthly capacity of 10,000 wafers and the capacity of our three 8-inch fabs steadily increased. Altogether, total monthly capacity of our four fabs grew to 201,000 wafers (8-inch wafer equivalent). In 2019, the Company’s revenue reached US\$932.6 million, overcoming a lower total available market to achieve another record high with a year-on-year increase of 0.2%; gross margin was 30.3%; net profit was US\$155.0 million, accounting for 16.6% of revenue; and ROE was 7.4%. As of the end of 2019, we have been profitable for 36 consecutive quarters. MCU product shipments grew from 2014 to 2019 at a CAGR of 27%, with particularly strong performance in Asia. In 2019, the Company’s power discrete product revenue increased by 14.2% year-on-year, taking advantage of the demand from industrial, consumer electronics and the growing electric vehicle markets, including products covering low, medium, and high voltage ranges.

2019 has been a year of innovation and recognition. Implementing our strategic plan, we executed on our commitment to technology research and development. We focused on differentiated technology, covering technology nodes ranging from 1 micron to 65 nanometers. The technical advantages of our differentiated platforms (embedded non-volatile memory; power discrete; analog and power management; logic and RF) enabled us to meet the growing requirements of our loyal high-quality customers. We have won many honors for our innovative achievements, significantly increasing our stature in the international market. The Company won the “Second Prize for Scientific and Technological Progress in Shanghai” and the “Golden Award in Innovative Application” at the 7th China Information Technology Expo for technology development of advanced super junction MOSFET. The Company was also awarded “Enterprise with the Greatest Growth Potential” in China New Energy Vehicle IGBT at PSIC2019, recognizing its achievements in IGBT development. Our leading position in the expanding market for new energy vehicles is built on years of successful experience in mass production of automotive electronic chips. The Company’s newly developed ultra-high voltage BCD process platform is leading internationally in performance, enabling a domestic single chip solution for LEDs targeted at the global environmentally friendly lighting market.

In 2019, we focused on bringing the 12-inch wafer line into production. With an investment of US\$2.5 billion for the first phase, our new fab generated a revenue of US\$7.4 million and shipped around 4,000 wafers in the fourth quarter, receiving the “Outstanding Contribution Award for Major Industrial Projects” in Wuxi. We have firmly established our position in the 12-inch wafer market, inaugurating the “Next 20 Years of Hua Hong”. We will speed up the capacity ramp to strengthen our market position and accelerate development of the domestic semiconductor industry.



LETTER TO SHAREHOLDERS

Since the outbreak of the coronavirus, the Company has been taking every effort to protect the safety and health of every one of our employees. We have formed an epidemic emergency reaction team, established a prevention and control system, taken various measures strengthening the safety of our environment, completed a thorough screening control on travel history, temperature check, health condition registration, field disinfection, etc. So far, those epidemic prevention and control systems have worked out well, and our operations are stable and smooth. We will continue to keep a close watch on epidemic prevention and control. We hope the pandemic will be globally contained soon and the market will gradually stabilize.

Looking forward to 2020, Hua Hong Semiconductor will continue to thrive through technical innovation as a world-class semiconductor enterprise. The narrower linewidth capability of our 12-inch wafer fab will support development of new products, such as 65nm eFlash, 65nm RF-SOI, CMOS Image Sensors, and advanced NOR Flash. In terms of 8-inch technology platforms, we will further enhance our embedded non-volatile memory technology by developing a smaller memory cell size and lower mask-count process to meet the demand of high-end MCU market. As an important part of the global semiconductor supply chain, our differentiated technologies will provide domestic and foreign customers with advanced product solutions including cutting edge technology.

All Hua Hong Semiconductor employees are committed to improving returns for our shareholders, surpassing global customers' requirements, making significant contributions to the semiconductor industry for years to come, while adhering to our core values, "Disruptive Innovation, Confidence, Initiative, and Teamwork". We believe 2020 will be a year of remarkable accomplishment for Hua Hong Semiconductor, capitalizing on our strong technology portfolio and strategic position. Thank you for your continued support as we look forward to excellence in the future.

Mr. Suxin Zhang
Chairman and Executive Director

Mr. Junjun Tang
President and Executive Director

Shanghai, PRC
26 March 2020

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



Board of Directors

Executive Directors

Suxin Zhang (*Chairman*)
Junjun Tang (*President*) (*appointed on 1 May 2019*)
Yu Wang (*resigned on 1 May 2019*)

Non-Executive Directors

Yang Du
Takayuki Morita
Jing Wang (*appointed on 28 June 2019*)
Jun Ye
Jianbo Chen (*resigned on 28 June 2019*)

Independent Non-Executive Directors

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

Company Secretary

Sui Har Lee (*appointed on 12 November 2019*)
Xiaojun Wang (*resigned on 12 November 2019*)

Authorized Representatives

Junjun Tang (*appointed on 1 May 2019*)
Sui Har Lee (*appointed on 12 November 2019*)
Yu Wang (*resigned on 1 May 2019*)
Xiaojun Wang (*resigned on 12 November 2019*)

Audit Committee

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

Remuneration Committee

Kwai Huen Wong, JP (*Chairman*)
Long Fei Ye
Jing Wang (*appointed on 28 June 2019*)
Jianbo Chen (*resigned on 28 June 2019*)

Nomination Committee

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

Website

www.huahonggrace.com

Auditor

Ernst & Young
Certified Public Accountants
22nd Floor, CITIC Tower
1 Tim Mei Avenue, Central
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 Province, PRC

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

China Construction Bank Corporation Wuxi High-Tech
Industrial Development Zone Subbranch
No. 26, Hefeng Road
Xinwu District
Wuxi, Jiangsu, PRC

China CITIC Bank Corporation Wuxi New District
Subbranch
No. 26, Hefeng 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

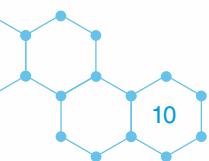
Principal Places of Business

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

No. 30, Xinzhou Road
Xinwu District
Wuxi, Jiangsu, PRC
Postcode: 214000

Stock Code

1347





DIRECTORS AND SENIOR MANAGEMENT TEAM

Mr. Suxin Zhang, aged 56, was appointed on 11 March 2016 as an Executive Director and Chairman of our Company as well as a member of and Chairman of the nomination committee of the Company (the “Nomination Committee”). He is currently Chairman and Secretary of the Communist Party of Huahong Group, Chairman of Shanghai Huali, Chairman of Huali Integrated, 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 55, 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 relationship of Shanghai Huahong NEC Electronics Co., Ltd. (上海華虹NEC電子有限公司). Shanghai Huali, Huali Integrated and Huahong NEC are associates as defined by the Listing Rules of the Company. 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. Mr. Tang obtained the Chief Senior Economist qualification in China in 2014.

Mr. Yu Wang, aged 47, acted as an Executive Director and the President of our Company from February 2012 to May 2019.

Mr. Jianbo Chen, aged 55, acted as a Non-Executive Director of our Company from February 2012 to June 2019.

Mr. Yang Du, aged 42, has served as a Non-Executive Director of the Company since November 2018. Mr. Du joined China Development Bank on August 2005. From 2005 to 2014, Mr. Du held various positions in China Development Bank, including Manager of the Large Corporate Client Department in the head office, Deputy Head of the Customer Division in Henan Branch, and Head of the Project Development and Business Innovation Division in the Business Development Department of the head office. Mr. Du has served as Chief Operating Director of Sino IC Capital Co., Ltd. (華芯投資管理有限責任公司) since December 2014 and General Manager of Shanghai Branch of Sino IC Capital since October 2015. Mr. Du is also Director of Shanghai Integrated Circuit Industry Investment Fund Co., Ltd. (上海集成電路產業投資基金股份有限公司), Shanghai Integrated Circuit Industry Investment Fund Management Co., Ltd. (上海集成電路產業投資基金管理有限公司), Huali Integrated and Shanghai Xinshuo Investment Management Co., Ltd. (上海芯鑠投資管理有限責任公司). In addition, Mr. Du serves as legal representative, Chairman and General Manager of Sino IC Leasing Co., Ltd. (芯鑫融資租賃有限責任公司). Mr. Du successively obtained a degree of Bachelor of Arts in Chinese Language, Literature, an MBA degree and a degree of Master of Financial Management respectively from Fudan University, Nagoya University of Commerce & Business and University of Salford in Manchester of England, and obtained the Senior Economist qualification in 2015.



DIRECTORS AND SENIOR MANAGEMENT TEAM

Mr. Takayuki Morita, aged 60, has been a Non-Executive Director of our Company since July 2009. Mr. Morita joined NEC in April 1983. From 1983 to 2011, he held various positions in NEC, including Manager of the International Planning Division, and Senior Vice President and Executive General Manager of the Corporate Business Development Unit. Mr. Morita is currently the Senior Executive Vice President and the Chief Financial Officer at NEC and has held this position since June 2018. He also served as an auditor at Japan Aviation Electronics Industry Ltd from 24 June 2008 to 26 June 2012. He currently has board representation in NEC as well as in Japan Aviation Electronics. Mr. Morita graduated with a Bachelor's degree in law from the University of Tokyo.

Ms. Jing Wang, aged 49, has been a Non-Executive Director of our Company since June 2019. She is currently President 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 of world economics in 2003 and is a Senior Economist.

Mr. Jun Ye, aged 47, 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 Huahong Group, Huali Integrated, Bank of Shanghai and Sino-US United MetLife Insurance Company Limited. Mr. Ye also serves as the Chairman of Shanghai Zhaoxin Semiconductor Co., Ltd. and Sino Therapeutics Inc. 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.



DIRECTORS AND SENIOR MANAGEMENT TEAM

Mr. Stephen Tso Tung Chang, aged 71, 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 was 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 China Life Insurance Company Ltd. (stock code: 2628.HK) and was formerly an Independent Non-Executive Director of China Cinda Asset Management Co., Ltd. (stock code: 1359.HK). Mr. Chang obtained a Bachelor's of Science degree in food science and chemistry from the University of London.

Mr. Kwai Huen Wong, BBS, JP, aged 68, 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 had 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 Member of Airport Authority Hong Kong, Hospital Authority and the Competition Commission from 2011 to 2018. He was the Chairman of the Hong Kong International Arbitration Centre and the former President of the Law Society of Hong Kong and Inter-Pacific Bar Association. He is presently one of the Deputy Chairmen of Hong Kong Inland Revenue Board of Review, the Chairman of Hong Kong Copyright Tribunal, 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.

Mr. Long Fei Ye, aged 78, is an Independent Non-Executive Director of our Company. Mr. Ye held various positions in the Shanghai Municipal Government. Mr. Ye was 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 Master's degree, both in physics, from Fudan University.



DIRECTORS AND SENIOR MANAGEMENT TEAM

Senior Management

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

Mr. Suxin Zhang, aged 56, was appointed as an Executive Director and Chairman of our Company on 11 March 2016. For more information about Mr. Zhang's past experience and academic background, see the section headed "Directors and Senior Management Team – Board of Directors".

Mr. Junjun Tang, aged 55, was the President and Executive Director of the Company. For more information about Mr. Tang's past experience and academic background, see the section headed "Directors and Senior Management Team – Board of Directors".

Mr. Yu Wang, aged 47, was the President and an Executive Director of our Company from February 2012 to May 2019.

Mr. Wei Xu, aged 62, was an Executive Vice President of our Company and was responsible for manufacturing and engineering, human resources, administration, and security management of our Group, before he retired on 30 September 2019.

Mr. Heng Fan, aged 58, is an Executive Vice President of our Company responsible for Sales and Marketing. 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 this, 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.

Mr. Daniel Yu-Cheng Wang, aged 57, is an Executive Vice President of our Company overseeing finance, information technology, administration and compliance, listed company affairs and overseas human resources for our Group. 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. Mr. Wang has been Secretary of the Board of the Company since February 2012. 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 of Science degree in industrial engineering and operations research from the College of Engineering, University of California, Berkeley, and a Master's of Business Administration in finance and banking from the University of San Francisco.



DIRECTORS AND SENIOR MANAGEMENT TEAM

Dr. Weiran Kong, aged 56, is an Executive Vice President of our Company and is in charge of technology development. He joined Grace Shanghai in March 2003 and has over 25 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 of Science 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 13 U.S. patents, 58 PRC patents and co-authored over 20 technical papers.

Mr. Weiping Zhou, age 53, joined the Company at the beginning of 2018 as an Executive Vice President and is responsible for manufacturing and security management. 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.

Dr. Qi Li, aged 57, is a Vice President of our Company and is currently responsible for purchasing, logistics, testing, quality assurance, and planning. Dr. Li has over 20 years of professional working experience and joined Grace Shanghai in January 2003. Prior to that, he was the Senior Engineering Manager at Applied Materials, Inc., in the U.S. from 1995 to 2002. Dr. Li received a Bachelor's degree in physics from Peking University and his Master's and Doctorate degrees in physics from the University of Maryland.

Dr. Steven Lin, aged 58, is a Vice President of our Company and currently leads regional sales for 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. Bill Lin, aged 51, is a Vice President of our Company and is currently responsible for our Fab 3 operations. He has over 20 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).



DIRECTORS AND SENIOR MANAGEMENT TEAM

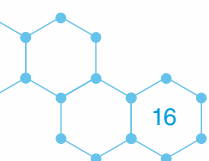
Mr. Mirko Sonntag, aged 43, is a Vice President of our Company and is currently responsible for the Company's sales operations and customer service in Europe. His expertise encompasses demand and supply chain planning and business operations, with a strong foundation in business development. Mr. Sonntag 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.

Ms. Ying Chen, aged 47, is a Vice President of our Company and is currently responsible for general administration, corporate image communication, and compliance. Ms. Chen joined Grace Shanghai in April 2001 and has 20 years of administrative 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, subsequently obtained a Master's degree in business administration from Renmin University of China and is a Senior Economist.

Mr. Guangping Hua, aged 53, is a Vice President of our Company and is currently responsible for our Fab 1 operations. He has over 20 years of working experience in the semiconductor industry and joined HHNEC in July 2007. Before joining HHNEC, 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.

Mr. Liang Yao, aged 55, is a Vice President of our Company and is currently responsible for our Fab 2 operations. He has nearly 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.

Mr. Lihua Ni, aged 51, is a Vice President of the Company and Factory Director of HH 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., Shanghai Hua Hong NEC Electronics Co., Ltd., and acted as a Department Manager at Shanghai Xinjin Semiconductor Fabrication Co., Ltd., Department Head at Shanghai Hua Hong NEC Electronics Co., Ltd. and Deputy Factory Director at Shanghai Huali. He graduated from Xidian University, with a Bachelor of Engineering degree and obtained a Master of Engineering degree from Shanghai Jiao Tong University.





DIRECTORS AND SENIOR MANAGEMENT TEAM

Company Secretary

Mr. Xiaojun Wang, aged 65, was our Joint Company Secretary since June 2014, and was appointed as our Company Secretary in June 2016 and resigned in November 2019.

Ms. Sui Har Lee, aged 42, 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 14 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 2019.

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 2019, the Company complied with the Code.

Securities Transactions by Directors

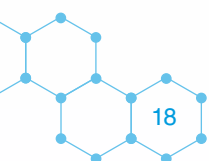
The Company has adopted the Model Code for Securities Transactions by Directors of Listed Issuers (the “Model Code”) as set out in Appendix 10 to the Listing Rules as its own code of conduct regarding securities transactions by Directors. The Company has made specific enquiries with all of the Directors, each of whom has confirmed that he has, throughout the year ended 31 December 2019, 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 the management.

The nine-member Board currently comprises two Executive Directors, Mr. Suxin Zhang (Chairman) and Mr. Junjun Tang (President) (appointed on 1 May 2019); four Non-Executive Directors, Mr. Takayuki Morita, Mr. Jun Ye, Mr. Yang Du and Ms. Jing Wang (appointed on 28 June 2019); 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 11 to 13 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 and 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 the 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 the implementation of the Company's business strategies.

During the year ended 31 December 2019, 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; 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 cover 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 2019, the Board held five Board meetings. The attendance record of each Board member at Board meetings, meetings of the audit committee of the Company (the "Audit Committee"), the Nomination Committee and the remuneration committee of the Company (the "Remuneration Committee"), as well as the 2019 annual general meeting and extraordinary general meeting is set out below:

	Board meetings	Audit Committee meetings	Nomination Committee meetings	Remuneration Committee meetings	2019 AGM and EGM
Executive Directors					
Suxin Zhang	5	N/A	1/1	N/A	2/2
Yu Wang (Note 1)	2	N/A	N/A	N/A	1/2
Junjun Tang (Note 2)	3	N/A	N/A	N/A	1/2
Non-Executive Directors					
Jianbo Chen (Note 3)	3	N/A	N/A	2/3	2/2
Jing Wang (Note 4)	2	N/A	N/A	1/3	0/2
Takayuki Morita	5	N/A	N/A	N/A	2/2
Jun Ye	2	2/5	N/A	N/A	0/2
Yang Du	5	N/A	N/A	N/A	2/2
Independent Non-Executive Directors					
Stephen Tso Tung Chang	5	5/5	N/A	N/A	2/2
Kwai Huen Wong, JP	5	N/A	1/1	3/3	2/2
Long Fei Ye	5	5/5	1/1	3/3	2/2

Note 1: Mr. Yu Wang has resigned as an Executive Director and a President of the Company as of 1 May 2019. Before that, Mr. Yu Wang attended two Board meetings.

Note 2: Mr. Junjun Tang was appointed as an Executive Director and a President of the Company as of 1 May 2019. After that, Mr. Junjun Tang attended three Board meetings.

Note 3: Mr. Jianbo Chen has resigned as a Non-Executive Director and a member of the Remuneration Committee as of 28 June 2019. Before that, Mr. Jianbo Chen attended three Board meetings and two Remuneration Committee meetings.

Note 4: Ms. Jing Wang was appointed as a Non-Executive Director and a member of the Remuneration Committee as of 28 June 2019. After that, Ms. Jing Wang attended two Board meetings and one Remuneration Committee meeting.

During the year ended 31 December 2019, the Company held one extraordinary general meeting on 28 March 2019 to approve and pass the ordinary resolution regarding the share options granted in 2018 and 2019.

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 2019, 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 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 2019 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>)	✓
Jing Wang	✓
Yang Du	✓
Takayuki Morita	✓
Jun Ye	✓
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 compensations in public companies. The Board expects the 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.

During the year ended 31 December 2019, three meetings of the Remuneration Committee was held to review and recommend the share option scheme of the Company, which was approved by an extraordinary general meeting of the Company held on 1 September 2015. The Remuneration Committee also reviewed the share option scheme of the Company, as well as the remuneration of senior management staff and the Directors with reference to the remuneration level of directors of comparable listed companies.



CORPORATE GOVERNANCE REPORT

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

Nomination Committee

The Nomination Committee currently comprises one Executive Director, Mr. 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.

During the year ended 31 December 2019, one meeting of the Nomination Committee was held to assess the independence of Independent Non-executive Directors of the Company, make recommendation to the Board on the retiring Directors' eligibility for re-election at the AGM and approve the nomination of Ms. Jing Wang to the Board for appointment as a Non-executive Director of the Company to fill the vacancy arising from the resignation of Mr. Jianbo Chen. It also reviewed the Nomination Policy, the size and composition of the Board and the Board Diversity Policy, and then endorsed the Nomination Policy and considered that the Board Diversity Policy was appropriate and effective.

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 2019, 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\$0.56 million and US\$0.13 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 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. Reference is also made to the revised terms of reference of the Audit Committee came into effect on 1 January 2019.

During the year ended 31 December 2019, the Audit Committee held five meetings and a majority of the committee members were present at the meetings. The major work performed by the Audit Committee with respect to the year ended 31 December 2019 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 2019, reviewing the audited financial statements and final results announcement for the year ended 31 December 2018, 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 discussed with the management to ensure that the Company has adequate resources, qualified and experienced staff in the accounting and financial reporting function, training programmes 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 on 1 January 2019.

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. In 2019 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 2019, 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 role and function, 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

Former Company Secretary, Mr. Xiaojun Wang, has tendered his resignation as the Company Secretary and the authorized representative of the Company on 12 November 2019. Ms Sui Har Lee has been appointed as the Company Secretary and the authorized representative of the Company on 12 November 2019.

Ms Sui Har Lee is currently a partner of Jun He Law Offices. 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.

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 2019, 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.



CORPORATE GOVERNANCE REPORT

The general meetings of the Company are a primary forum for communication between the Shareholders and the Board. 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 the 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.

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, 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 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 "three lines of defense". It covers the roles and duties of many different aspects as follows:

1st Line of Defense	Business Departments <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;• Assist Risk Management Level in carrying out risk management work, including providing necessary documents and samples, identify major risks related to the department, and determine major risk countermeasures;
2nd Line of Defense	Risk Management Level <ul style="list-style-type: none">• Formulate/revise the Company's risk management systems and provisions, and submit them to the Company's business management team and the Audit Committee for deliberation;• Set/update standardized risk management language terms to assure common understanding of the risk management process, with timely acceptance and implementation among relevant risk management departments;• Based on annual risk assessment results, define the major risk factors and relevant response responsibilities, organize and guide each department in making and implementing response plans for major risks in its area, and follow up on the Implementation;
3rd Line of Defense	Internal Audit Level <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;• Urge departments or agencies to rectify problems discovered during the auditing process, and monitor the ongoing status of the rectification work;• Report the auditing results to the Audit Committee.



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 2019, 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 185 to 192 of this annual report.

On behalf of the Board

Mr. Suxin Zhang

Chairman

DIRECTORS' REPORT

The Directors present herewith the 2019 annual report and the audited financial statements of the Company for the period from 1 January 2019 to 31 December 2019 (the "Financial Statements").

Principal Activities

The Company was a pure-play 200mm and 300mm-wafer foundry throughout 2019. As mentioned in the Letter to Shareholders above, and further elucidated in this Directors' Report below, the Company began delivering products on 300mm wafers starting in the 4th quarter of 2019. We focus on providing wafer manufacturing services to our customers based on our own differentiated semiconductor technologies. The activities of our principal subsidiaries are set out in note 1 to the Financial Statements (Page 201-202).

Business Review

Revenue Analysis

Revenue of the Company in 2019 was US\$932.6 million (a new record high), an increase of 0.2% over 2018. 2019 was the fifth consecutive year of maintaining gross margin above 30%. According to the forecast of IC Insights, a renowned American market research organization, among the top eight pure-play foundries, the Company is one of only two companies that have maintained positive annual revenue growth. The Company's achievements in 2019 were driven by our technological innovations, continuous optimization of product mix, expansion of our production capacity, and increased demand for our differentiated semiconductor technologies, primarily for MCU, super-junction MOSFET, general MOSFET, and IGBT.

Revenue by service						
	2019	2019	2018	2018	YoY	YoY
	US\$'000	%	US\$'000	%	Change	Change
					US\$'000	%
Semiconductor wafers	906,550	97.2%	911,435	98.0%	(4,485)	(0.5)%
Others	26,017	2.8%	18,833	2.0%	7,184	38.1%
Total	932,567	100.0%	930,268	100.0%	2,299	0.2%

- In 2019, 97.2% of our revenue was from the sale of semiconductor wafers.

Revenue by customer						
	2019	2019	2018	2018	YoY	YoY
	US\$'000	%	US\$'000	%	Change	Change
					US\$'000	%
Systems and Fabless companies	730,720	78.4%	721,334	77.5%	9,386	1.3%
IDMs	201,847	21.6%	208,934	22.5%	(7,087)	(3.4)%
Total	932,567	100.0%	930,268	100.0%	2,299	0.2%

- Revenue from systems and fabless companies accounted for 78.4% in 2019, an increase of 1.3% over 2018.
- Revenue from IDMs accounted for 21.6%, a decrease of 3.4% over 2018.

DIRECTORS' REPORT

Revenue by geography

	2019	2019	2018	2018	YoY	YoY
	US\$'000	%	US\$'000	%	Change	Change
					US\$'000	%
China	546,029	58.5%	525,795	56.4%	20,234	3.8%
North America	150,392	16.1%	161,428	17.4%	(11,036)	(6.8)%
Other Asia	115,256	12.4%	117,963	12.7%	(2,707)	(2.3)%
Europe	70,818	7.6%	70,660	7.6%	158	0.2%
Japan	50,072	5.4%	54,422	5.9%	(4,350)	(8.0)%
Total	932,567	100.0%	930,268	100.0%	2,299	0.2%

- In 2019, China was our largest market, with 3.8% increased revenue over 2018. The growth was primarily from embedded flash memory MCU and Discrete.
- Revenue from North America decreased by 6.8%.
- Revenue from Other Asia decreased by 2.3%.
- Revenue from Japan decreased by 8.0%.

Revenue by technology type

	2019	2019	2018	2018	YoY	YoY
	US\$'000	%	US\$'000	%	Change	Change
					US\$'000	%
eNVM	350,477	37.5%	361,341	38.7%	(10,864)	(3.0)%
Discrete	354,470	38.0%	310,488	33.4%	43,982	14.2%
Analog & PM	123,945	13.3%	142,131	15.3%	(18,186)	(12.8)%
Logic & RF	91,012	9.8%	94,549	10.2%	(3,537)	(3.7)%
Standalone NVM	11,805	1.3%	21,261	2.3%	(9,456)	(44.5)%
Others	858	0.1%	498	0.1%	360	72.3%
Total	932,567	100.0%	930,268	100.0%	2,299	0.2%

- In 2019, eNVM was one of our main sources of revenue, with a decrease of 3.0% compared to 2018. Among them, MCU products made an outstanding growth.
- Revenue from discrete increased by 14.2% compared to 2018, mainly from super-junction MOSFET, IGBT and general MOSFET.
- Revenue from Analog & PM decreased by 12.8%.

DIRECTORS' REPORT

Revenue by technology node

	2019 US\$'000	2019 %	2018 US\$'000	2018 %	YoY Change US\$'000	YoY Change %
≤0.13μm	326,165	35.0%	331,521	35.6%	(5,356)	(1.6)%
0.15μm & 0.18μm	117,308	12.6%	131,300	14.1%	(13,992)	(10.7)%
0.25μm	10,910	1.2%	15,482	1.7%	(4,572)	(29.5)%
≥0.35μm	478,184	51.2%	451,965	48.6%	26,219	5.8%
Total	932,567	100.0%	930,268	100.0%	2,299	0.2%

- Revenue from 0.13μm and below technology nodes decreased by 1.6% in 2019.
- Revenue from the 0.35μm and above technology nodes further pushing revenue contribution to 51.2%, mainly from discrete.
- Revenue from 0.15μm & 0.18μm decreased by 10.7%.

Revenue by end market

	2019 US\$'000	2019 %	2018 US\$'000	2018 %	YoY Change US\$'000	YoY Change %
Consumer Electronics	581,094	62.2%	598,031	64.3%	(16,937)	(2.8)%
Industrial & Automotive Electronics	212,278	22.8%	187,930	20.2%	24,348	13.0%
Communications	99,537	10.7%	99,777	10.7%	(240)	(0.2)%
Computing	39,658	4.3%	44,530	4.8%	(4,872)	(10.9)%
Total	932,567	100.0%	930,268	100.0%	2,299	0.2%

- Consumer Electronics accounted for the largest share of the Company's revenue in 2019, a decrease of 2.8% compared to 2018. Among them, discrete and embedded flash memory MCU had outstanding revenue growth.
- Revenue from Industrial & Automotive continuous increased by 13.0%, mainly driven by increase of discrete and domestic MCU.
- Revenue from Communications remained stable.
- Revenue from Computing decreased by 10.9%.

DIRECTORS' REPORT

Capacity and Capacity Utilization			
Fab (In thousands of wafers per month)	2019	2018	YoY Change
Fab1	65	65	0
Fab2	60	59	1
Fab3	53	50	3
Total monthly 8 inches wafer capacity	178	174	4
Fab7	10	0	10
Capacity Utilization (equivalent to 8 inches)	91.2%	99.2%	(8.0)%

- In 2019, the capacity utilization rate was 91.2% as a result of including new capacity of Fab7 in the calculation for the fourth quarter.

Wafer shipments			
In thousands of wafers	2019	2018	YoY Change
Wafer shipments (equivalent to 8 inches)	1,974	2,016	(2.1)%

- In 2019, the Company's wafer shipments decreased by 2.1%.

Research and Development

Hua Hong Semiconductor is committed to research and development, innovation, and optimization of differentiated technologies, with a focus on embedded non-volatile memory (eNVM), discrete, analog and power management, logic, radio frequency (RF). It continues to provide customers with highly cost-effective process technologies and services. In 2019, the "8-inch + 12-inch" strategy was substantially developed and implemented.

Technology platforms related to embedded non-volatile memory remained one of the major revenue sources of Hua Hong Semiconductor in 2019, mainly for smart card chips and MCUs. In terms of smart card chips, 90nm eFlash technology saw a strong year-on-year increase of 78% in shipments in 2019. The third generation of 90nm embedded flash memory technology with proprietary intellectual property rights was successfully developed, reducing the unit area by approximately 40%, thus enabling customers to maintain their products' advantages in the market. This achievement also provided preparation for the transfer to our 12-inch fab. 95nm SONOS EEPROM technology achieved significant success in the domestic bank card market, with annual shipments of 0.2 billion chips. In addition to further development of 8-inch platforms, the 90nm embedded flash technology platform was transferred to the 12-inch fab in the fourth quarter of 2019. The first SIM card chip product was delivered from the 12-inch fab to customers by the end of 2019, with yield exceeding expectation. Smooth progress was made in development of 65nm eFlash platform technology and devices, with verification of the relevant supporting IP.



DIRECTORS' REPORT

Embedded flash MCU continued double-digit growth in sales in 2019, contributing to double-digit CAGR in sales and shipments for all MCU products from 2014 to 2019. Driven by the growing trend of smart devices and applications of the Internet of Things, our industry-leading 0.11 micron low power consumption and ultra-low leakage embedded flash memory technology platform, has been widely recognized by customers around the world. A strong and growing number of new products are being launched on this platform including general MCU, Type-C interface chips, image stabilization chips, touch control chips, and smart meter controller chips. In order to meet the needs for large-capacity and ultra-low leakage MCUs, 90 nm ultra-low leakage embedded flash memory technology was developed for the 8-inch wafer fab in the fourth quarter of 2019. These developments enhanced the Company's competitive position in embedded flash memory technology providing better differentiated services to our customers.

The discrete platform of Hua Hong Semiconductor, mainly covering general MOSFET, deep-trench super-junction MOSFET (DT-SJ), IGBT and other mainstream technologies, continued to make a great contribution to revenue in 2019, with a year-on-year increase of 14.2%, maintaining a double-digit growth rate for 5 years in a row. From 2015 to 2019, both deep-trench super-junction MOSFET and IGBT saw a CAGR of over 50% in sales and shipments. In 2019, the Company continued to cooperate with several leading global IGBT enterprises with a focus on products for industrial and automotive electronics.

Thanks to the Company's innovation in DT-SJ technology, the technical advantages of its unique deep trench epitaxial filling process have gradually become well known. In 2019, the Company achieved successful development of 4th-generation super junction technology, trial production of engineering samples, and further optimization of key performance indicators by 30%. This enabled a further reduction in the cost and switching loss of customer products. The Company cooperated with several IGBT customers in our development of 1700V Trench Field-Stop IGBT, which is being mass-produced and used in new energy applications, for example, wind turbines.

In 2019, Hua Hong Semiconductor's power discrete technology made advances in the automotive electronics market. Increasing demands for low-voltage MOSFET in the electronic stability program (ESP), as well as DT-SJ and IGBT in charging stations and inverters for electric vehicles resulted in over 100% year-on-year sales growth rate for automotive power discrete devices. The Company has become a reliable partner for customers in the global automotive electronic power discrete market.

The analog and power management technology platform of Hua Hong Semiconductor has a wide voltage range from 5v to 700v, using technology nodes ranging from 1 microns to 90nm. In line with the trend of higher integration and intelligence used in power management products, Hua Hong Semiconductor devoted considerable research and development resources for 0.18 micron, 0.11 micron and 90 nm BCD (Bipolar-CMOS-DMOS) technologies, which were developed as enhancements of the prior 0.35 micron BCD technology. In 2019, based on mass-produced 0.18 micron second-generation BCD technology, third-generation BCD technology was optimized and upgraded reaching world leading performance, targeted at worldwide customers. The 0.11 micron BCD platform compatible with embedded flash memory is mainly oriented towards chips for automotive power supply systems, wireless charging, etc., while the 90 micron BCD platform is mainly oriented towards chips for digital power supplies, digital motor drives, etc. Both technology platforms were developed for a number of products, which have been launched.

In addition to the above major platform technologies, Hua Hong Semiconductor continues to develop new differentiated technologies. The Company has developed and optimized RF-SOI technology which addresses demand in the radio-frequency front-end module market, establishing a leading position in China. In 2019, with the increase in total available market and demand in domestic markets, the Company closely coordinated its development efforts with several domestic customers. This development effort is expected to become a new driving force to establish a leading position to address expected growth of radio-frequency technology in 2020.

As an important step for Hua Hong Semiconductor to develop its business outside Shanghai as well as integrate into and serve the Yangtze River Delta integration strategy, the Company cooperated with the Government of Wuxi, Jiangsu to establish Hua Hong Semiconductor (Wuxi) Co., Ltd. Formal incorporation and start of operations were achieved in 2019. The 12-inch IC production line with a total investment of US\$10 billion, including a first-tranche investment of US\$2.5 billion, integrates special technologies and covers technology nodes ranging from 65 to 90nm. The planned monthly capacity is approximately 40 thousand pieces. After completion of the factory and availability of the equipment at the end of the second quarter, 65 nm logic technology process development was successfully completed and put into operation in a very short period of time, making a significant contribution to sales in the fourth quarter. Meanwhile, 90 nm embedded flash memory technology was transferred from the 8-inch fab to the 12-inch fab and put into production at the end of 2019. These accomplishments comprehensively support the new “8-inch + 12-inch” strategic plan of Hua Hong Semiconductor.

Based on its technical innovations as a leading enterprise in semiconductor technology, the Company applied for a total of 370 patents in 2019 and has been granted a total of over 3,400 Chinese and U.S. invention patents.

Outlook

Looking forward to 2020, the World Bank has forecast moderate growth for the worldwide economy in Global Economic Prospects. The development trend of the global semiconductor industry continues to be in line with the macro economy. According to predictions by market research institutions, the global semiconductor market will see growth in 2020. The global foundry industry will evolve to positive revenue growth in 2020. However, there is uncertainty in the global market predictions due to the unknown impact of the coronavirus. While we are very confident that, with the growing maturity of China's domestic IC design companies, continuous support of national policies, and rapid growth of innovative and entrepreneurial enterprises, the domestic semiconductor foundry industry will be in a favorable environment with long-term growth.



DIRECTORS' REPORT

Differentiated and innovative technologies will remain the focus of Hua Hong Semiconductor in 2020. For 8-inch technology platforms, we will further enhance existing 95 nm and 90 nm embedded non-volatile memory technologies, providing smaller memory cell and IP size, and a lower mask-count process, to meet the requirements of MCU markets. We will optimize fourth-generation super junction technology, introduce hydrogen injection technology for high-quality automotive IGBT, develop reverse-conducting IGBT (RC-IGBT), SJ-IGBT, and other new power discrete technologies. In addition to efforts towards higher power density and lower power loss required for high-voltage power devices, we will develop intelligent IGBT technology with on-chip sensors and highly reliable IGBT technology with a new thermal dissipation feature. We are also focusing on improving 0.18 micron BCD third-generation technology and 0.11 micron embedded flash memory-BCD technology to meet automotive electronics requirements for electric vehicles. We are working on higher quality, fourth-generation RF-SOI technology to be mass produced for the emerging 5G market, particularly in China.

Hua Hong Semiconductor (Wuxi) Ltd. is an important part of our overall “8-inch + 12-inch” strategy. The 12-inch fab in Wuxi has been completed and put into operation, which means Hua Hong Semiconductor has the most advanced 12-inch semiconductor production line devoted to differentiated technologies in Mainland China. This is also the first 12-inch foundry in Mainland China devoted to power discrete semiconductors. The 12-inch ‘IC + Power’ business position will provide two driving forces for the Company’s revenue growth: more extensive differentiated technologies; and more production capacity to meet our customers’ requirements. We are developing and optimizing our 90 nm to 65 nm IC technologies including logic and radio-frequency, embedded flash memory, power management BCD, CMOS image sensor, RF-SOI, as well as the power discrete technologies. Due to promising market predictions, the Company has accelerated capacity expansion of the 12-inch production lines, so as to capitalize market opportunities for our differentiated technologies.

The “8-inch + 12-inch” strategy of Hua Hong Semiconductor has been substantially developed and implemented, with the use of the capacity and differentiated technologies of the 12-inch platform, along with continuous innovation of the 8-inch platform. In 2020, we will continue to promote the rapid and orderly development of the strategy, accelerate research and development, and continuously provide more reliable products and services to our customers using a variety of technologies. The Company is committed to becoming the world’s most competitive wafer foundry focused on differentiated technologies.

Management Discussion and Analysis

Financial Performance

	2019 US\$'000	2018 US\$'000	Change
Revenue	932,567	930,268	0.2%
Cost of sales	(650,107)	(619,114)	5.0%
Gross profit	282,460	311,154	(9.2)%
Other income and gains	69,091	43,613	58.4%
Fair value gain on an investment property	163	247	(34.0)%
Selling and distribution expenses	(8,828)	(7,771)	13.6%
Administrative expenses	(169,796)	(122,323)	38.8%
Other expenses	(406)	(11,106)	(96.3)%
Finance costs	(1,242)	(2,203)	(43.6)%
Share of profit of an associate	10,131	9,444	7.3%
Profit before tax	181,573	221,055	(17.9)%
Income tax expense	(26,588)	(35,447)	(25.0)%
Profit for the year	154,985	185,608	(16.5)%
Attributable to:			
Owners of the parent	162,237	183,158	(11.4)%
Non-controlling interests	(7,252)	2,450	(396.0)%

Revenue

Revenue was US\$932.6 million, an all-time high and an increase of 0.2% from the prior year.

Gross profit

Gross margin was 30.3%, 3.1 percentage points lower than in 2018 mainly due to decreased capacity utilization, increased labor costs, unit cost of raw materials, and depreciation expenses, partially offset by an increase in average selling price.

Other income and gains

Other income and gains were US\$69.1 million, an increase of 58.4% compared to 2018, primarily due to increased government subsidies, fair value gains on financial assets at fair value through profit or loss, and interest income.

Selling and distribution expenses

Selling and distribution expenses were US\$8.8 million, an increase of 13.6% from 2018, primarily due to increased labor expenses.

Administrative expenses

Administrative expenses were US\$169.8 million, an increase of 38.8% from 2018, chiefly due to increased labor, engineering wafers, and depreciation expenses for the Hua Hong Wuxi fab.

Other expenses

Other expenses were US\$0.4 million, a decreased of 96.3% from 2018, largely due to decreased foreign exchange loss.

DIRECTORS' REPORT

Finance costs

Finance costs were US\$1.2 million, a decrease of 43.6% from 2018, primarily due to decreased bank borrowings.

Income tax expense

Income tax expense was US\$26.6 million, a decrease of 25.0% from 2018, primarily due to decreased taxable profit.

Profit for the year

As a result of the cumulative effect of the above factors, profit for the year decreased to US\$155.0 million from US\$185.6 million, 16.5% below the amount for 2018. Net profit margin decreased from 20.0% to 16.6%.

Financial Status

	31 December 2019 US\$'000	31 December 2018 US\$'000	Change
Non-current assets			
Property, plant and equipment	1,558,283	773,180	101.5%
Investment property	168,615	171,225	(1.5)%
Right-of-use assets	74,526	–	N/A
Investment in an associate	73,142	64,005	14.3%
Equity investments designated at fair value through other comprehensive income	207,689	208,357	(0.3)%
Other non-current assets	34,437	87,432	(60.6)%
Total non-current assets	2,116,692	1,304,199	62.3%
Current assets			
Inventories	142,087	129,629	9.6%
Trade and notes receivables	164,968	176,797	(6.7)%
Due from related parties	9,262	10,800	(14.2)%
Prepayments, other receivables and other assets	113,453	12,479	809.2%
Financial assets at fair value through profit or loss	519,779	667,033	(22.1)%
Restricted and time deposits	70,776	337	20,901.8%
Cash and cash equivalents	476,286	777,000	(38.7)%
Total current assets	1,496,611	1,774,075	(15.6)%
Current liabilities			
Trade payables	86,119	79,470	8.4%
Due to related parties	10,655	5,838	82.5%
Other current liabilities	372,343	239,890	55.2%
Lease liabilities	1,922	–	N/A
Interest-bearing bank borrowings	4,300	4,371	(1.6)%
Total current liabilities	475,339	329,569	44.2%
Net current assets	1,021,272	1,444,506	(29.3)%
Non-current liabilities			
Interest-bearing bank borrowings	21,502	26,227	(18.0)%
Lease liabilities	16,694	–	N/A
Deferred tax liabilities	17,176	18,146	(5.3)%
Total non-current liabilities	55,372	44,373	24.8%
Net assets	3,082,592	2,704,332	14.0%

Explanation of items with a fluctuation of over 5% from 31 December 2018 to 31 December 2019

Property, plant and equipment

Property, plant and equipment increased from US\$773.2 million to US\$1,558.3 million, mainly as a result of the construction of Hua Hong Wuxi.

Right-of-use assets/Lease liabilities

Right-of-use assets and lease liabilities were recognized under HKFRS 16 after 1 January 2019. According to HKFRS 16, a lessee is required to recognize a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments.

Investment in an associate

Investment in an associate increased from US\$64.0 million to US\$73.1 million, primarily due to profit shared from the associate in 2019.

Other non-current assets

Other non-current assets decreased from US\$87.4 million to US\$34.4 million, primarily due to restating prepayments of land lease as right-of-use assets.

Inventories

Inventories increased from US\$129.6 million to US\$142.1 million, primarily due to Hua Hong Wuxi starting production in 2019.

Trade and notes receivables

Trade and notes receivables decreased from US\$176.8 million to US\$165.0 million, primarily due to lower revenue in the second half of 2019 compared to the second half of 2018.

Due from related parties

Due from related parties decreased from US\$10.8 million to US\$9.3 million, primarily due to decreased receivables from certain related companies.

Prepayments, other receivables and other assets

Prepayments, other receivables and other assets increased from US\$12.5 million to US\$113.5 million, primarily due to increased VAT deductible tax.

Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss decreased from US\$667.0 million to US\$519.8 million, primarily due to payout from investment in financial products.

Restricted and time deposits

Restricted and time deposits increased from US\$0.3 million to US\$70.8 million, primarily due to investment in time deposits.



DIRECTORS' REPORT

Cash and cash equivalents

Cash and cash equivalents decreased from US\$777.0 million to US\$476.3 million, mainly due to the reasons stated in the cash flow analysis below.

Trade payables

Trade payables increased from US\$79.5 million to US\$86.1 million, primarily due to increased purchases of inventories for Hua Hong Wuxi.

Due to related parties

Due to related parties increased from US\$5.8 million to US\$10.7 million, primarily due to increased payables to related suppliers for Hua Hong Wuxi.

Other current liabilities

Other current liabilities increased from US\$239.9 million to US\$372.3 million, primarily due to increased payables for capital expenditures.

Interest-bearing bank borrowings

Total interest-bearing bank borrowings decreased from US\$30.6 million to US\$25.8 million, due to repayments of bank borrowings.

Deferred tax liabilities

Deferred tax liabilities, largely comprising withholding tax accrued for dividend distribution, decreased from US\$18.1 million to US\$17.2 million, primarily due to (i) a reversal of dividend withholding tax accrued for the prior year and (ii) the tax paid for 2018 dividends, partially offset by the accrual of dividend withholding tax in 2019.

Cash Flow

	2019 US\$'000	2018 US\$'000	Change
Net cash flows generated from operating activities	162,934	274,400	(40.6)%
Net cash flows used in investing activities	(722,587)	(717,239)	0.7%
Net cash flows generated from financing activities	262,898	865,010	(69.6)%
Net (decrease)/increase in cash and cash equivalents	(296,755)	422,171	(170.3)%
Cash and cash equivalents at the beginning of the year	777,000	374,890	107.3%
Effect of foreign exchange rate changes, net	(3,959)	(20,061)	(80.3)%
Cash and cash equivalents at the end of the year	476,286	777,000	(38.7)%

Net cash flows generated from operating activities

Net cash flows generated from operating activities were US\$162.9 million, a decrease of 40.6% from 2018, mainly due to increased payments for VAT deductible tax, materials, labor, and operating expenses, partially offset by strong collection of trade receivables.

Net cash flows used in investing activities

Net cash flows used in investing activities were US\$722.6 million, primarily attributed to (i) US\$2,532.5 million for investment in financial assets at fair value through profit or loss, (ii) US\$922.3 million for capital investments, and (iii) US\$70.0 million for investment in time deposits, offset by (i) payout of US\$2,689.4 million from investment in financial assets at fair value through profit or loss, (ii) receipts of US\$94.5 million of government grants, (iii) US\$17.4 million of interest income, and (iv) US\$0.8 million of proceeds from disposal of equipment.

Net cash flows generated from financing activities

Net cash flows generated from financing activities were US\$262.9 million, including (i) US\$317.0 million of equity injection into Hua Hong Wuxi, and (ii) US\$2.6 million proceeds from issue of shares, offset by (i) dividend payments of US\$51.0 million, (ii) repayments of bank borrowings of US\$4.3 million, (iii) payments of lease liabilities of US\$0.9 million, and (iv) interest payments of US\$0.5 million.

Net decrease in cash and cash equivalents

As a result of the cumulative effect of the above factors, cash and cash equivalents decreased from US\$777.0 million as of 31 December 2018 to US\$476.3 million as of 31 December 2019.



DIRECTORS' REPORT

Financial Risks

Foreign currency risk

We are exposed to foreign exchange risks, arising primarily from sales or purchases by HHGrace in US\$ rather than in the subsidiary's functional currency, which is RMB. As of 31 December 2019, 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\$10.8 million higher or lower.

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, deposits and other receivables, 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.

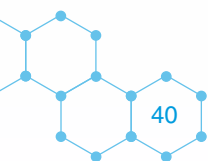
Liquidity risk

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.



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 2019 and the state of affairs at that date are set out in the Financial Statements on pages 193 to 196 of this report.

Final Dividends

In view of the Company's "8-inch + 12-inch" strategy and uncertainty in the impact of the Coronavirus pandemic on the global economy, 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 2019 (2018: HK\$0.31 per share). The Company will retain sufficient cash to continue its investment activities, in preparation for a strong market recovery when the pandemic is contained and to maximize future 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.

Distributable Reserves

As of 31 December 2019, the Company had no distributable reserves available for distribution to our shareholders.

Bank Loans and Other Borrowings

The particulars of bank loans and other borrowings of the Group as of 31 December 2019 are set out in note 26 to the Financial Statements.

Financial Summary

A summary of the published results and of the assets and liabilities of the Group for the past five financial years is set out on page 308. This summary does not form part of the audited financial statements.

DIRECTORS' REPORT

Property, Plant and Equipment

Details of additions and other movements during the year ended 31 December 2019 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 material subsequent event undertaken by the Group after 31 December 2019.

Share Capital and Share Option Scheme

Details of movement in the share capital of the Company during the year ended 31 December 2019 are set out in note 30 to the Financial Statements. The 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 Hong Kong 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 of the date of this report, the total number of shares available for issue under the Share Option Scheme is 47,440,029 shares, representing approximately 3.67% of the total number of shares in issue.

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 2.35% of the issued shares of the Company as of 31 December 2019).
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.



DIRECTORS' REPORT

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; and (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.

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 2.68% of the issued shares of the Company as of 31 December 2019)
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; and (iii) the face value of the share.

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 of 31 December 2019)
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 29 March 2021, 29 March 2022, 29 March 2023, and 29 March 2024

* The March 2019 Options are referred to as "2018 Tranche A" in the financial statements in this report.

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; and (iii) the face 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 of 31 December 2019)
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; and (iii) the face value of the share.

Among the 2015 Options, 2018 Options and March 2019 Options, 988,000⁽¹⁾, 680,000⁽²⁾ and 500,000 share options were granted to the Directors of the Company, respectively, subject to their acceptance.

* The December 2019 Options granted to directors and key management personnel are referred to as “2018 Tranche B” and the December 2019 Options granted to other employees are referred to “2018 Tranche C” in the financial statements in this report.

- (1) Among these, 869,000 share options were granted to Mr. Yu Wang, who has resigned as an Executive Director and President of the Company as at 1 May 2019.
- (2) Among these, 600,000 share options were granted to Mr. Yu Wang, who has resigned as an Executive Director and President of the Company as at 1 May 2019.

DIRECTORS' REPORT

Details of the movements in the share options during the year ended 31 December 2019 are as follows:

Name or category of participants	Number of share options													Exercise price of share options	Weighted average closing price of the shares immediately before the dates on which the share options were exercised		
	Granted at 04.09.2015	Granted at 24.12.2018	Granted at 29.03.2019	Granted at 23.12.2019	Cancelled during the year 2015	Cancelled during the year 2016	Cancelled during the year 2017	Cancelled during the year 2018	Exercised during the period	Cancelled during the period	Lapsed during the period	Outstanding at 01.01.2019	Outstanding at 31.12.2019			Exercise period of share options	
Directors																	
Mr. Junjun Tang			500,000						-	-	-		500,000		29.03.2021-28.03.2026	HK\$18.400	-
Mr. Takayuki Morita	119,000				-	-	-	-	-	-	-	119,000	119,000	04.09.2017-03.09.2022	HK\$6.912	-	
		80,000							-	-	-	80,000	80,000	24.12.2020-23.12.2025	HK\$15.056	-	
Mr. Yu Wang*	869,000				-	-	-	-	669,000	-	-	669,000	0	04.09.2017-03.09.2022	HK\$6.912	HK\$14.150	
		600,000							-	(600,000)	-	600,000	0	24.12.2020-23.12.2025	HK\$15.056	-	
Other employees																	
	29,262,000				(130,000)	(1,458,000)	(1,188,399)	(753,995)	4,198,335	(57,666)	(334)	18,084,362	13,828,027	04.09.2017-03.09.2022	HK\$6.912	HK\$17.022	
		33,820,000							-	(1,035,000)	-	33,820,000	32,785,000	24.12.2020-23.12.2025	HK\$15.056	-	
			2,482,000						-	(36,000)	-		2,446,000	23.12.2021-22.12.2026	HK\$17.952	-	
In aggregate	30,250,000	34,500,000	500,000	2,482,000	(130,000)	(1,458,000)	(1,188,399)	(753,995)	4,867,335	(1,728,666)	(334)	53,372,362	49,758,027				

* The fair value of equity-settled share options granted during the year were US\$2,476,000, which were estimated as of the date of grant, using a binomial model. The value of the options is subject to the limitation of the binomial model and a number of assumptions which are subjective and uncertain. Changes in such assumptions could materially affect the value of the options.

Mr. Yu.Wang resigned as an Executive Director and the President of our Company on 1 May 2019.

Save as disclosed above, the Company has not adopted any other share option scheme during the year ended 31 December 2019.

Reserves

Details of movements in the reserves of the Group during the year ended 31 December 2019 are set out in the consolidated statement of changes in equity on pages 197 and 198 of this report.

Continuing Connected Transactions and Connected Transactions

Continuing Connected Transactions

The Group disclosed in the prospectus of the Company dated 3 October 2014 a series of continuing connected transactions relating to Huahong Zealcore, QST, INESA, Shanghai Huali, Huahong Real Estate, and Shanghai Huajin Property Management Co., Ltd. ("Huajin Property Management"). Certain details of such transactions are summarized in the table below. With respect to of 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 of the Group conducted during 2019 are as follows:

Transaction	Transaction Date	Parties to the Transaction	Connected Relationship	Transaction	Actual Transaction Amount 2019	Proposed Annual Caps 2019
(1)	1 January 2017	Huahong Zealcore (as purchaser) The Company (as seller)	Huahong Zealcore is 90.66% held by and a subsidiary of Huahong Group, the Company's controlling 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\$2,895,000	US\$13,230,000
(2)	1 January 2017	QST (as purchaser) The Company (as seller)	QST was 36.36% held by SAIL, the Company's controlling shareholder, of which 27.27% interest was held directly by SAIL and 9.09% interest was held directly by the Company.	Sales agreement between the Company as seller and QST as purchaser in relation to the sale of IC and other semiconductor products to QST.	US\$1,810,000	US\$9,600,000
(3)	1 January 2017	Huahong Zealcore (as seller) The Company (as purchaser)	Huahong Zealcore is 90.66% held by and a subsidiary of Huahong Group, the Company's controlling 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\$476,000	US\$740,000
(4)	1 January 2017	INESA (on behalf of itself and its subsidiaries*) (as seller) The Company (as purchaser)	INESA is the Company's controlling shareholder.	Purchase agreement between INESA as seller (on behalf of itself and its subsidiaries) and the Company as purchaser in relation to the purchase of goods and services.	US\$4,362,000	US\$5,800,000

* Including Shanghai INESA Intelligent Electronics Co., Ltd., Shanghai Nanyang Software System Integration Co., Ltd. and Shanghai Nanyang Wanbang Software Technology Co., Ltd..

DIRECTORS' REPORT

Transaction	Transaction Date	Parties to the Transaction	Connected Relationship	Transaction	Actual Transaction Amount 2019	Proposed Annual Caps 2019
(5)	27 September 2019	Shanghai Huali (as seller) Hua Hong Wuxi (as purchaser)	Shanghai Huali is 53.42% owned by Huahong Group, the Company's controlling shareholder.	Wafer foundry service agreement between Shanghai Huali and Hua Hong Wuxi in relation to process services and wafer foundry services to be provided to Hua Hong Wuxi during the period of the agreement.	US\$8,698,000	US\$9,000,000
(6)	25 February 2010 (together with supplemental agreements dated 10 June 2011 and 25 July 2014)	Shanghai Huali (as lessee) The Company (as lessor)	Shanghai Huali is 53.42% 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.	RMB86,347,000 (approx. US\$12,536,000)	RMB92,000,000 (approx. US\$13,295,000)
(7)	15 February 2017	Shanghai Huali (as lessee) HHGrace (as lessor)	Shanghai Huali is 53.42% owned by Huahong Group, the Company's controlling shareholder.	Lease agreement between Shanghai Huali as lessee and HHGrace as lessor in relation to certain clean rooms with a total gross floor area of 820 square meters and related utility services and materials to be provided by HHGrace to Shanghai Huali.	RMB4,135,000 (approx. US\$603,000)	RMB22,000,000 (approx. US\$3,179,000)
(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 Hua Hong Technology Development, a company 50% held by and consolidated with Huahong Group, our controlling shareholder, and 50% held by HHGrace.	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.	RMB11,198,000 (approx. US\$1,625,000)*	RMB13,000,000 (approximately US\$1,879,000)
(9)	1 January 2019	Huajin Property Management (as property manager) The Company (as contractor)	Huajin Property Management is a wholly-owned subsidiary of Hua Hong Technology Development, a company 50% held by and consolidated with Huahong Group, our controlling shareholder, and 50% held by HHGrace.	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.	RMB1,502,000 (approx. US\$218,000)	RMB2,000,000 (approximately US\$289,000)

- * The Group entered into a twenty-year lease with respect to certain dormitory properties from Huahong Real Estate. The amount of rent payable by the Group under the lease is US\$1,625,000 per year. With the initial adoption of HKFRS 16, the Group recognized right-of-use assets of US\$16,922,000 and lease liabilities of US\$17,049,000 for the operating lease on 1 January 2019. On 31 December 2019, the balances of those right-of-use assets and lease liabilities were US\$15,538,000 and US\$17,595,000, respectively. Before 1 January 2019, the Group recognized rental expenses under operating leases on a straight-line basis over the lease term according to HKAS 17.

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 2019:

- (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 favorable to the Company than terms available to or from (as appropriate) independent third parties; and
- (iii) in accordance with the relevant agreements on terms that are fair and reasonable and in the interests of the Shareholders of the Company as a whole.

The auditors of the Company have confirmed in a letter to the Board that, with respect to the aforesaid continuing connected transactions of 2019:

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

DIRECTORS' REPORT

Related Party Transactions

During the year ended 31 December 2019, 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 2019 are disclosed in note 35 to the financial statements. The Company has complied with the disclosure requirements in accordance with Chapter 14A of the Listing Rules. Save as disclosed in the paragraph headed “Continuing 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.

Performance of the Equity Investments and FVTPL

The table below sets out the breakdown of the performance in respect of the Equity Investments and FVTPL during the year ended 31 December 2019.

	Shanghai Huali (USD'000)	QST (USD'000)	Principal guaranteed structured deposits and wealth management products (“Products”) purchased from banks (USD'000)
Initial investment cost	229,133	1,704	516,040
Book value at the beginning of the year	205,973	2,384	667,033
Purchases	–	–	2,532,504
Redemption	–	–	(2,689,442)
Changes in fair value	2,708	–	23,989
Exchange realignment	(3,337)	(39)	(14,305)
Book value at the end of the year	205,344	2,345	519,779
Dividends received	–	–	–
Gain on disposals	–	–	19,965
Percentage of shares*	6.3428%	2.18%	N/A
Size compared to the total assets of the Company	5.7%	0.1%	14.4%

* refers to the percentage of shares held by the Company in Shanghai Huali and QST respectively

During the year ended 31 December 2019, the Group did not dispose of any shares in Shanghai Huali or QST. Increases in the fair value of the Company's equity investment in Shanghai Huali and QST were US\$2,708,000 and Nil, respectively.



DIRECTORS' REPORT

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 2019, although there was an increase of US\$2,708,000 in the fair value of the Company's equity investment in Shanghai Huali, the book value of the Company's equity investment has decreased by US\$629,000 due to depreciation of the RMB. Overall, Shanghai Huali continued steady development in 2019. Accordingly, the Board is of the view that the performance of Shanghai Huali during the financial year of 2019 has been in line with its expectations.

QST is committed to the research and development of high performance sensors, emerging sensors and intelligent sensor systems for the internet-of-things, and industrial and automobile applications. In 2018, QST was awarded the Top 10 MEMS Enterprises of China. Similar to the investment in Shanghai Huali, the increase of exchange rate has caused a foreign currency statement loss of around US\$39,000. 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 2019 have been consistent with its expectations.

With respect to of the FVTPL, the Products are generally principal-protected, short-term and low-risk investment products offering a better interest rate than prevailing rates. Their fair value increased by US\$23,989,000 during 2019. Their performance in 2019 tracks the expected rate of return as contained in the terms and conditions of these financial products and are in line with the management expectations.

The Company confirms that it has complied with the accounting policy of investments and other financial assets (policies under HKFRS 9 applicable from 1 January 2018) as contained in the annual report of the Company for the year end 31 December 2019.

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.



DIRECTORS' REPORT

Annual General Meeting

The AGM will be held on Thursday, 14 May 2020.

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 8 May 2020
Closure of Register of members	11 to 14 May 2020 (both dates inclusive)
Record date	14 May 2020

In order to be eligible to attend and vote at the Annual General Meeting, unregistered holders of shares of the Company should ensure all share transfer forms accompanied by the relevant share certificates must be 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 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. Yang Du

Mr. Takayuki Morita

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

Ms. Jing Wang, Mr. Takayuki Morita, Mr. Jun Ye, and Mr. Kwai Huen Wong will retire by rotation from office as Directors at the Annual General Meeting, and Ms. Jing Wang, Mr. Takayuki Morita, Mr. Jun Ye, 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 Annual General Meeting has a service contract which is not 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 11 to 17 of this report.

Highest Paid Individuals and the Remuneration of the Directors and Senior Management

Details of the Directors' remuneration and the five individuals with the highest emoluments are set out in notes 8 and 9 respectively of the consolidated financial statements in this annual report.

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

As at 31 December 2019, 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%
Mr. Takayuki Morita	Beneficial owner	199,000	0.02%

Notes:

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



DIRECTORS' REPORT

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 2019 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 of all the Directors, and the Directors have confirmed that they have complied with the Company Code and the Model Code throughout 2019.

Indemnity and Insurance

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

Director(s) of the Subsidiaries

The names of Directors who have served on the boards of the Company's subsidiaries during the year ended 31 December 2019, or during the period from the end of the year 2019 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



DIRECTORS' REPORT

Name of the Subsidiary	Place of Incorporation	Name of the Director(s)
Global Synergy Technology Limited (“GST”)	Hong Kong, PRC	Mr. Daniel Wang Mr. Cheng Fu
HHGrace Semiconductor USA, Inc. (“HHGrace USA”)	CA, USA	Mr. Daniel Wang Mr. Cheng Fu
HHGrace Semiconductor Japan Co., Ltd. (“HHGrace Japan”)	Tokyo, Japan	Ms. Maki Nakamura Mr. Daniel Wang Mr. Cheng Fu
Shanghai Huajie IC Technology Service Co., Ltd. (“Shanghai Huajie”)	Shanghai, PRC	Mr. Heng Fan
Hua Hong Semiconductor (Wuxi) Limited. (“Hua Hong Wuxi”)	Wuxi, PRC	Mr. Suxin Zhang Mr. Jun Wei Mr. Junjun Tang Mr. Linyi Wei Ms. Jing Wang Mr. Xingliang Tang Ms. Hongxia Yuan

DIRECTORS' REPORT

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

As of 31 December 2019, 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	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⁾	27.19%
Shanghai Huahong (Group) Co., Ltd (Huahong Group) ⁽²⁾	Interest in a controlled corporation	350,401,100 ⁽¹⁾	27.19%
INESA (Group) Co., Ltd. ("INESA") ⁽²⁾	Interest in a controlled corporation	350,401,100 ⁽¹⁾	27.19%
Sino-Alliance International, Ltd. ("Sino-Alliance International")	Legal and beneficial owner	160,545,541 ⁽¹⁾⁽³⁾	12.46%
Sino-Alliance International, Ltd. ("Sino-Alliance International")	Interest in a controlled corporation	34,919,354 ⁽¹⁾	2.71%
Shanghai Alliance Investment Ltd. ("SAIL")	Interest in a controlled corporation	545,865,995 ⁽¹⁾⁽⁴⁾	42.35%
Xinxin (Hong Kong) Capital Co., Limited	Legal and beneficial owner	242,398,925 ⁽¹⁾	18.81%
Xun Xin (Shanghai) Investment Co., Ltd.	Interest in a controlled corporation	242,398,925 ⁽¹⁾	18.81%
China Integrated Circuit Industry Investment Fund Co., Ltd.	Interest in a controlled corporation	242,398,925 ⁽¹⁾	18.81%
NEC Corporation	Legal and beneficial owner	99,038,800 ⁽¹⁾	7.68%

Notes:

- (1) Long positions in the shares of the Company.
- (2) Hua Hong International is a wholly-owned subsidiary of Huahong Group. As of 31 December 2019, Huahong Group was 81.34% owned by SAIL. Therefore SAIL was deemed to be interested in all the Shares in which Huahong Group is interested by virtue of Part XV of the SFO.
- (3) Including 3,084 shares held in escrow by Sino-Alliance International pursuant to an escrow arrangement.
- (4) In addition to the 350,401,100 Shares (27.19%) it indirectly held through Hua Hong International, SAIL indirectly held interests in the Company through four wholly-owned subsidiaries, including Sino-Alliance International.

* The percentages are calculated based on the total number of shares of the Company in issue as of 31 December 2019, i.e., 1,288,819,560 shares.

Save as disclosed above, so far as is known to any of the Directors and the Chief Executive of the Company, as of 31 December 2019, no other person or corporation other than a Director or Chief Executive of the Company had any interests or short positions in any shares or underlying shares of the Company which were recorded in the register required to be kept by the Company pursuant to section 336 of the SFO.

Arrangements to Purchase Shares or Debentures

At no time during the year ended 31 December 2019 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 2019, 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 of 31 December 2019, the Group had a total of 5,138 employees. The Group recruits and promotes individuals based on merit and their development potential. The emolument policy for the 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 decided 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 2019.

Purchase, Sale or Redemption of Securities

For the year ended 31 December 2019, neither the Company nor any of its subsidiaries had purchased, sold, or redeemed any of the Company's listed securities.

Pre-Emptive Rights

There are no provisions for pre-emptive rights 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 are three critical benchmarks to evaluate an enterprise. The Company believes that environmental, social, and governance initiatives are very important to bring success to our business and to create long-term value for the Company. Detailed information on the environmental and social responsibility practices adopted by the Company in 2019 is set out in the 2019 Environmental, Social and Governance Report.

Hua Hong Semiconductor is committed to reducing the negative impact of its operations on the environment through green and effective operating practices. The Company has established a sound environmental management system, formed a waste gas treatment system, and authorized a qualified third-party company to treat the waste produced from the Company's operations. The Company also carries out technical renovations in relation to energy and water conservation, and continues to invest in the development and promotion of green products.

In 2019, the Company won the "Leadership in Energy and Environmental Design" (LEED v4) Gold Award certified by the U.S. Green Building Council (USGBC), the "Two-Star Green Building Design Label Certificate" certified by the Chinese Society for Urban Studies and the honor of Shanghai Energy Conservation and Emissions Reduction Benchmark Enterprise. To promote clean production, the Company continues to invest in energy conservation and emissions reduction to effectively cut down greenhouse gas emissions. In addition, with respect to green products promotion, the Company's customers achieved 100% compliance with hazardous substances control in 2019. All manufacturing facilities of the Company are verified as meeting the QC 080000 electronic components standards and hazardous substances reduction requirements.

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

Huahong Group, SAIL and INESA, being 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 "Deed of Non-Competition" 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 "Deed of 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 2019. 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.

Sufficiency of Public Float

Based on the information that is publicly available to the Company and within the knowledge of the Directors as of 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

26 March 2020

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Introduction

Our concept of sustainable development and the pursuit of long-term performance is to achieve these under consideration of economic, environmental, and social aspects, as these aspects interact with 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 promptly respond to Stakeholders, including customers, employees, investors, communities, and countries where we operate, toward the goal of sustainable development of enterprises and society.

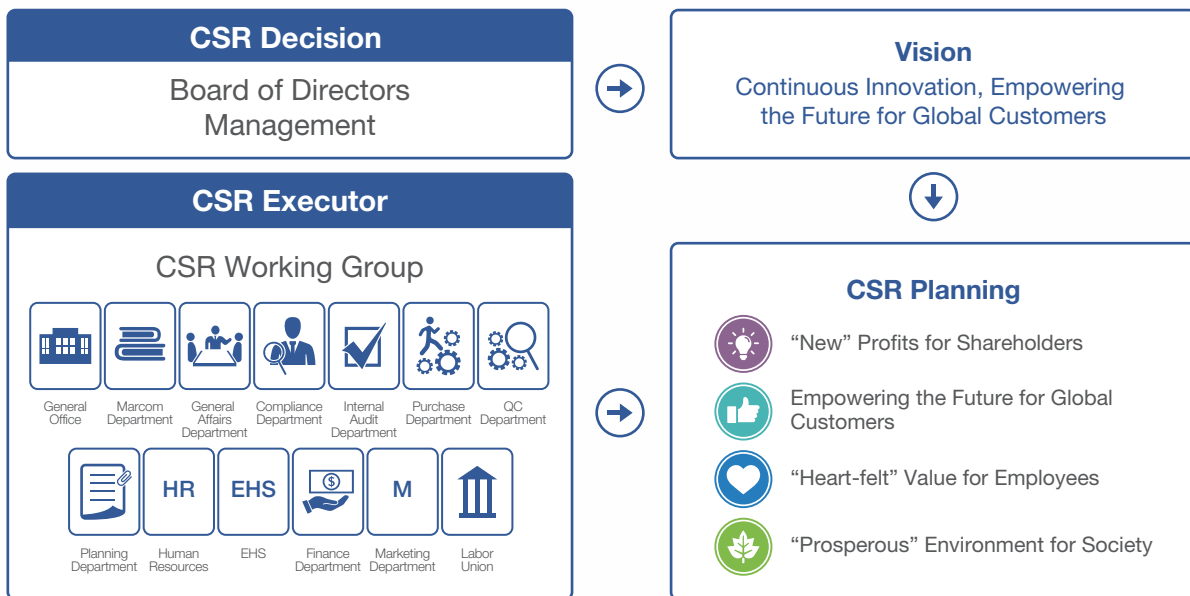
1 Social Responsibility Management System

1.1 Social Responsibility 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.

1.2 Social Responsibility Management Mechanism

Effective social responsibility management requires the ongoing attention of senior management and the involvement of all employees. We established a Corporate Social Responsibility (“CSR”) working group to set up a CSR organization system that enables management to participate in and coordinate with functional departments horizontally and member companies vertically. The working group comprises responsible officers from diverse functional departments.



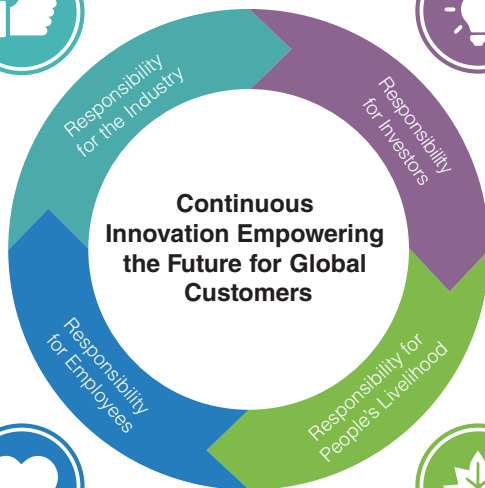
Structure for CSR Management

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

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.

Empowering the Future for Global Customers

Providing Quality Products Guaranteeing Rights & Interests of Customers
Booming Industrial Economy



Expanded "New" Profits for Shareholders

Development through Innovation
Consolidate Operations with Integrity
Sharing the Benefits of China's growth



"Heart felt" Respect for the Value of Employees

Caring about Career Development
Protecting Occupational Health



"Prosperous" Environment for Society

Promoting Green Development
Utilizing Resources Jointly Promoting Social Harmony



Implementation Points of Focus of CSR Planning of Hua Hong Semiconductor Limited

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

1.2 Involvement of Stakeholders

Based on the business and operational characteristics of our Company and leveraging the experience and practices in the 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, trainings, 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.



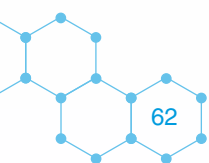
2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

1.3 Risk Management/Identification and Analysis of Substantive Issues

Risk Management

We continuously improve our risk management system by upgrading relevant processes and policies, thereby effectively enhancing our risk management abilities. 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 2019, the Company started construction of the risk control system of Hua Hong Semiconductor (Wuxi) Co., Ltd., a subsidiary, which initially formed a risk control system based on the theory of three lines of defense. The Company carried out an annual comprehensive risk assessment covering Shanghai and Wuxi; interviewed the management with regard to risks through risk questionnaires; identified major risk areas; and formed an annual risk management report. Two risk training sessions were carried out with the participation of 20 managers at all levels from companies in Shanghai and Wuxi, covering the operation of the existing risk management system and discussion of typical risk events.



2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

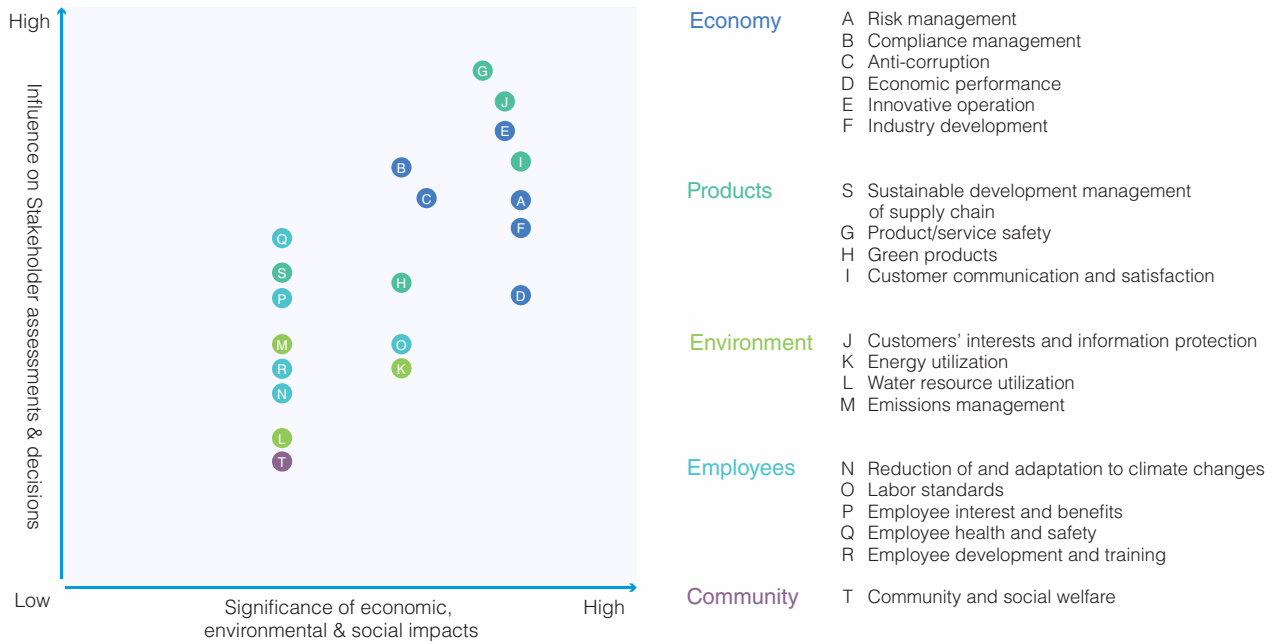
Key Operational Risks and Countermeasures

Risk Category	Content	Countermeasures
Strategy	Strategic planning	The Company formulated strategic objectives from top to bottom, appropriately deconstructed and implemented such objectives in specific business models of corporate operation, to ensure the accomplishment of strategic objectives
	Investment Decision	We conduct prudent pre-investment analysis, continuous process supervision, and effective post-investment evaluation to control the investment risk to an acceptable range in a multi-pronged manner
	Supervising and management system	Our well-organized systems and processes, taken together with the Company's risk management system with its three lines of defense, can efficiently assure accomplishment of strategic objectives
Operation	Reserve of Talents	We set up the talent resume database, carried out the talent inventory, continuously explored the 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.
	Information security	Based on our Management Rules about Information Security, the Company established its information security framework and management policy. We implement the risk evaluation procedure for information security every year to maintain the optimal interests of all Stakeholders
	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 and in a timely fashion
	Intellectual property	Comprehensive intellectual property protection awareness and management procedures protect the intellectual property rights of the Company and customers
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 of 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")
Project risk	Wuxi project management	The Company's management has always attached great importance to Wuxi projects and has given priority to the allocation of resources. Special personnel have been appointed to continuously monitor the project progress, investment expenditure, procurement compliance, and other important control points to ensure that the project progress, quality, and cost control meet established targets.

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Identification and Analysis of Substantive Issues

We check social responsibility issues on a regular basis and identify the more substantive ones on which to focus our operations, reporting, and disclosures through periodic identification, evaluation, and screening. We consider both internal and external factors such as our strategic and operational direction, Stakeholders' concerns and expectations, as well as national and international standards and policies.



2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

2 Environmental Responsibilities

The Company takes environmental protection as its own duty; complies with laws, regulations, and industry standards in relation to environmental protection; makes efficient use of energy and other resources; attaches great importance to pollution prevention; continuously invests in the development and promotion of green products; reduces the negative impact of its own operation on the environment; and strives for the sustainable development of enterprises and society.





2.1 Environmental Management System

The Company gradually shifted its focus from production management to control of product 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 ISO 14001:2015 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.

In 2019, the Company adhered to the aim of innovative development and green development realizing clean production through various energy-saving and emission-reduction group activities. It won the honor of Shanghai Energy Conservation and Emissions Reduction Benchmarking Enterprise in Shanghai Energy-Saving and Emission-Reduction (JJ) group activities.

As of 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

Environmental Management	Certification Authority	Date of First Certification
 ISO 14001:2015 Environmental Management System	British Standards Institutions (BSI)	26 April 2002
Green Building	Certification Authority	Date of First Certification
 "Leadership in Energy and Environmental Design" (LEED v4) Gold Award	U.S. Green Building Council (USGBC)	October 2019
 Two-Star green building design label certificate	Chinese Society for Urban Studies (中國城市科學研究院)	December 2019
Green Products	Certification Authority	Date of First Certification
 QC 080000 Hazardous Substance Process Management System	BSI	18 November 2009



2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Green Building

The Company is committed to becoming a green enterprise in green technology, green production, green building, and green industries. The 12-inch IC production line (HH Fab 7) undertaken by Hua Hong Semiconductor (Wuxi) Co., Ltd. has been designed and constructed in strict compliance with LEED certification requirements and has won the “Leadership in Energy and Environmental Design” (LEED v4) Gold Award certified by the U.S. Green Building Council (USGBC) due to the green and energy-saving features of the building and supporting facility design. In the design and construction of the engineering building (E1), it adhered to the concept of green and energy conservation; made greater effort in innovation; and enhanced the promotion and application of new materials, new equipment, and new technologies. Finally, it won the “Two-Star Green Building Design Label Certificate” certified by the Chinese Society for Urban Studies, with its excellent environmental performance, such as the renewable energy utilization rate of 100% for domestic hot water, the building energy saving rate of 65%, and the non-traditional water utilization rate of 56.19%.

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 environmental protection measures.

Practice in Green Culture

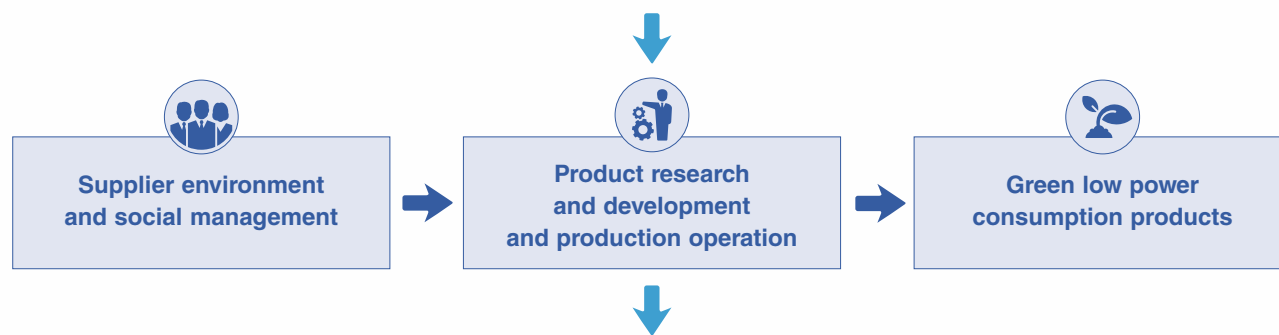
Saving paper around the office	<ul style="list-style-type: none">• Implementing office automation to reduce paper consumption.• Making efforts to promote the use of recycled paper, including for printing business cards of employees, to support recycling.
Saving electricity	<ul style="list-style-type: 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.

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

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, water, and solids. In addition, we are planning to promote supplier environmental management and to provide low-power green products in an effort to achieve better environmental management performance throughout the value chain.

Water Resources	
Total water consumed	7,724,830 m ³
<i>of which: Water from municipal water supply</i>	4,791,336 m ³
<i>Wastewater reused</i>	2,933,494 m ³
Water consumed per unit product	2.46 m ³ per 8-inch wafer
Volume of recycled water	2,823,278 m ³
Energy	
Total electricity consumed	528,044 MWh
Electricity consumed per unit product	271.14 kWh per 8-inch wafer
Natural gas consumed	8,138,435 m ³
Natural gas consumed per unit product	4.18 m ³ per 8-inch wafer
Packaging Materials	
Total packaging materials used for finished products	110 tons
Other Raw Materials	
Silicon slice, quartz, target material, gas, chemicals, and other raw materials for production	



Waste	
Total hazardous waste produced	5,013 tons
Hazardous waste produced per unit product	2.57 kg per 8-inch wafer
Total non-hazardous waste	3,595 tons
Non-hazardous waste produced per unit product	1.80 kg per 8-inch wafer
Air Emissions	
Total air emissions	1,257,074 m ³
Nitrogen oxide (NO _x) emissions	19,383 kg
Sulfur dioxide (SO ₂) emissions	72.50 kg
Greenhouse gas	
GHG emissions	449,339 tCO ₂ e
GHG emissions per unit product	0.23 tCO ₂ e per 8-inch wafer
Wastewater	
Total wastewater discharge	4.31 million m ³

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

2.2 Cleaner Production

Air Emissions and Waste Water Discharge

We follow the rules and regulations related to environmental protection and relevant matters. The air emissions discharged during production include sulfuric acid mist, hydrogen chloride, nitric oxide, ammonia, and volatile organic compounds. We established a system for processing air emissions that meets the new requirements for controlling emissions. This system can eliminate over 90% of the VOCs generated. In terms of waste water discharge, the Company began adoption of the Grade B Standard of GBT 31962-2015 (Waste Water Quality Standards for Discharge to Municipal Sewers) in 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 waste water, 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.

In 2019, the Company amended the Air Emission Management Rules to further improve emission control and treatment of air emissions and waste water. In addition, HH Fab 2 and HH Fab 3 completed clean production audits and adopted a series of improvement measures according to the audit results, including installation of VOC online detection devices.

Pollutant Discharge Management

Type	Treatment Method	
Air Emissions	Acid air emission	Up-to-standard discharge after removing most of the components through a 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
Wastewater	pH, COD, ammonia nitrogen, fluorine ion, etc.	After treatment, up-to-standard discharge through a pipeline into a designated urban sewage pipe network

Discharge Reduction Work and Achievements in 2019

Measures	Achievements
Reconstruction for recycling of boiler flue gas	↓ 80% Nitrogen emissions
Reconstruction for reducing NOx emissions from boilers	≤ 50 mg/m³ NOx emissions from boilers



2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Waste Management

Wafer production generates liquid hazardous waste, such as waste acid and isopropanol. We authorized a qualified third-party company for treatment of this waste, mainly by means of incineration, physical-chemical treatment and recycling. The Company has: formulated a Waste Management Procedure; standardized waste management operations; recorded and managed waste treatment, through the unified environmental protection management system of the government to ensure all transportation records are traceable and controllable. Non-hazardous solid waste, such as sludge generated in wastewater treatment, was treated by the waste disposal agency using landfill. Since 2017, the Company has carried out work to reduce the discharge of various hazardous waste every year. In 2019, it reduced the discharge of waste photoresist and arsenic-containing waste by 96.13 tons in total.

The Company entrusted the Waste Management Center of Shanghai Pudong New Area to pick up and transport domestic waste and kitchen garbage on a regular basis.

Treatment Methods for Hazardous Waste

Treatment Method	Type of Hazardous Waste
Recycling	Such as waste acid, waste isopropanol, and waste phosphoric acid
Physical-chemical treatment	Such as waste glass bottle, 200L chemical barrels, and waste liquid from laboratory
Incineration	Such as cleaning cloth, plastic bottles, organic waste liquid, waste activated carbon, waste resin, and arsenic-containing waste

Carbon Emissions

The emission of large amounts of greenhouse gases such as CO₂ is the main contributor to global warming. We realize that climate change mitigation is of great importance to enterprises and the globe. We actively took part in carbon emission trading by the Shanghai Municipal Development and Reform Commission to cut greenhouse gas emission and slow down climate change. In 2019, the Company completed settlement of carbon credits of approximately 449,343 tons for 2018.

The Company also set an emission target according to the carbon trading management measure of the Shanghai Municipal Development & Reform Commission and reduced greenhouse gas emissions through energy saving and emission reduction projects. In 2019, it invested a total of approximately RMB5.8 million to improve energy saving and emission reduction technologies.

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

2.3 Resource Saving

Energy Management

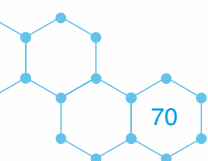
The energy consumed by the Company is mainly electric power, heat, natural gas, and a small amount of gasoline and diesel. It has formulated the Resource and Energy Management Procedure, clearly defining the principle of resource and energy management. The Company shall control the use of energy and carry out continuous reduction, while satisfying production requirements and improving productivity. These actions will reduce our impact on the environment while reducing production cost. Our efforts will promote sustainable development in harmony with the environment. In response to the 2020 goal of the Shanghai Municipal Government to control the total amount of energy and improve energy utilization efficiency, the Company has set its energy-saving target for the “13th Five-Year Plan” period. By 2020, the Company’s comprehensive energy consumption per RMB10 thousand of revenue will be 12% lower than that of 2015, and the energy consumption for 8-inch integrated circuit wafer production will be 13% lower than that of 2015. The Company has engaged a third-party organization to conduct its energy audit and put forward a technical renovation plan for energy conservation.

2019 Energy Saving Work and Achievements

Factory	Measures	Achievements
HH Fab 1	<ul style="list-style-type: none"> Removal of WALL CHILLER for DRK ASP-CH WAT test time reduction 	171,000 kWh Electricity saving for the year 147,000 kWh Electricity saving for the year
HH Fab 2	<ul style="list-style-type: none"> Extending the service life of aluminum and copper kits and reducing the consumption of water and chemicals for kit cleaning Changing cold pure water (electrical heating) to warm pure water for pure water measuring tanks 	228,000 kWh Electricity saving for the year 25,000 kWh Electricity saving for the year
HH Fab 3	<ul style="list-style-type: none"> Lighting energy saving control for electrical rooms, DUPS and generator rooms Optimizing the photolithography technique process of source-drain ion implantation for flash platforms 	199,000 kWh Electricity saving for the year 350,000 kWh Electricity saving for the year

Note:

Since HH Fab 7 was officially put into operation in September 2019 and did not have data on energy saving achievements for the year as of the end of the reporting period, such data were not included in the table.



2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Water Resource Management

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. Through technological improvement and recycling, we actively seek to improve our water saving and water resource utilization efficiency. The Company has used recycled water for the production process and air conditioning condensate water for replenishing the water in cooling towers, with a total recycled water consumption of 2.82 million m³ for the year.

2019 Water Saving Work and Achievements ^{Note}

Factory	Measures	Achievements
HH Fab 1	<ul style="list-style-type: none"> Increasing the yield rate of MN0665X bank card products 	1,100 tons Water saving for the year
	<ul style="list-style-type: none"> Changing POWER MOS Poly 12K to 8K 	300 tons Water saving for the year
	<ul style="list-style-type: none"> Water saving projects for cooling towers 	85,000 tons Water saving for the year
HH Fab 2	<ul style="list-style-type: none"> Recycling RO-3 concentrated pure water for EPI Scrubber 	52,300 tons Water saving for the year
	<ul style="list-style-type: none"> Recycling RO-4 concentrated pure water for dissolution and dilution of lime in the fluoride waste treatment system 	29,200 tons Water saving for the year
HH Fab 3	<ul style="list-style-type: none"> Optimizing transportation and cleaning processes for split-gate trench power devices 	7,200 tons Water saving for the year
	<ul style="list-style-type: none"> Ebara tool cleaner 2 pencil self-clean water flow reduction project 	1,200 tons Water saving for the year

Note:

Since HH Fab 7 was officially put into operation in September 2019 and did not have data on water saving achievements for the year as of the end of the reporting period, such data were not included in the table.

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

2.4 Green Products

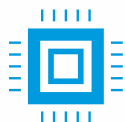
Facing risks arising out of global climate change and the increasingly vigorous demand for energy conservation and emission reduction in society, reducing the high energy consumption of electronic and electrical products has become a focus in industry. In the field of professional integrated circuit manufacturing services, the Company is committed to implementing full-life cycle environmental management covering processes from raw material procurement and production to disposal. By continuously optimizing its wafer manufacturing technology; reducing product volume; improving the energy efficiency of products used at terminals; and reducing the impact of scientific and technological progress on the environment; the Company is supporting construction of a low-carbon and environment-friendly society while creating competitive advantages in power consumption, efficiency, and chip size optimization for customers.

Environmental Management for the Full Life Cycle of Products



Warehousing of Raw materials

- 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.



Product Production

- According to the 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.



Product Transportation

- Recycle and reuse product packaging materials to reduce the consumption of packaging materials and waste generation.



End-user Products

- By helping customers produce low energy consumption products, reduce the environmental impact of the use of terminal electronic products



Disposal

- Monitoring wafers produced by the Company are monitored for harmful substances, which means that the terminal electronic products manufactured by using the wafers have less impact on the environment after disposal.



2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Control of Hazardous Substances

In accordance with: the regulation Restriction of Hazardous Substances (RoHS); the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) as formulated by the EU; as well as customer requirements, we have established a hazardous substances management system and standard.

The Company has established an electronic system to manage different raw materials at different levels. Suppliers are required to provide a signed Commitment on Nonexistence of Hazardous Substances and relevant test reports on a regular basis, so as to ensure that their products comply with laws, regulations, and customers' requirements on the management of harmful substances, assuring control from the source.

The Company entrusted Société Générale de Surveillance S.A. (SGS) to conduct tests for hazardous substances and achieved 100% compliance for control of hazardous substances in 2019. All manufacturing devices of the Company are verified to comply with the standards and requirements of QC 080000 for reducing hazardous substances in electronic elements, apparatus, and products.

3 Employee-Related Responsibilities

Employees are valuable resources of the Company. We are committed to creating a harmonious, friendly, and win-win cultural atmosphere in accordance with relevant laws and regulations. In order to protect the rights and interests of our employees, we take various measures to ensure the occupational health and safety of employees. We build diversified career development paths and provide a warm and comfortable working environment to promote the realization of personal goals and corporate values.

As of the end of the reporting period, the Company did not infringe the rights and interests of its employees and was not subject to complaints or penalties by a regulatory authority.

3.1 Rights and Benefits of Employees

We insist on fair, equal, and open recruitment and employment. We are committed to providing equal opportunity in all our human resources activities such as employee selection, recruitment, promotion, transfer, and remuneration. We do not implement or engage in discriminatory policies or injurious actions for any reason, in particular nationality, region, color of skin, ethnicity, religion, age, family conditions, or other factors. 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 children or adolescents under the age of 16 years. We strictly followed related laws and regulations such as the Labor Law of the People's Republic of China and the Special Rules on Labor Protection of Female Employees and resolutely prevented any compulsory labor practices. As of the end of the reporting period, the Company had 5,138 regular employees.

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Overview of Employee Rights and Interests and Benefit 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.



Benefit

Endowment insurance, medical insurance, unemployment insurance, employment injury insurance, maternity insurance and housing provident fund, accident insurance and other commercial supplementary medical insurances, employee rehabilitation, festival gift, assistance in household registration of non-local employees, etc.



Working hours

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.



Vacation

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



Democratic Participation

Labor union, employee congress, etc.

Harmonious Relation

An unblocked communication channel and sincere care are vital for the establishment of harmonious labor relations. The Company 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 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.

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

3.2 Health, Safety and Employee Welfare

Occupational Health and Safety Management

The Company has established an occupational health and safety system that meets the requirements of OHSAS 18001, defining the occupational health and safety policy, so as to provide its employees with a good working environment and ensure their occupational health. In 2019, in response to the upgrade of OHSAS 18001 to ISO 45001, the Company improved its internal management system in accordance with the requirements of the new standard, involving the identification and evaluation of risks, opportunities, and hazards, etc. and arranged for employees to systematically learn the new standard.

Occupational Health and Safety Management System

Occupational Health and Safety Management Policy							
Strictly comply with the safety, health, and environmental protection regulations; make efforts for clean production; carry out continuous improvement; create a safe, healthy, and comfortable working environment for employees; strenuously pursue the highest goal of "zero accidents"; sustainable operation; and become a model corporate citizen in the world.							
Organizations	Establish a safety, health and environment committee and implement a regular safety meeting system.	System Construction	Require the employees to sign the Safety Responsibility Statement and the Safety Commitment Letter to ensure the performance of the responsibilities for safety production.	Management Items	Emergency response to hazards/ environmental factors; Chemicals management; Special equipment and positions; Construction operations; Occupational health, etc.	Publicity and Education	Safety education and training; Emergency drill; "ANKANG" labor competition events, etc.

The Company mainly eliminated or controlled safety risks in production activities of employees from four major aspects, namely, fire-fighting equipment, alarm monitoring system, personal protection, and emergency measures. In 2019, the Company carried out: education and assessment activities with themes including personal protective equipment; first aid and firefighting; prepared training materials; established a question bank with the internal human resources training system platform as the carrier; carried out training on typical cases; and identification of potential hazards every quarter, to create a good safety culture atmosphere.

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

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.



Personal Protection

- Providing necessary personal protective equipment and emergency protective equipment; Regularly checking whether there is a complete set of equipment and whether the equipment is effective.



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.

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. 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.

Chemicals, including nitric acid and ammonia water, are used in the Company's operation. We have formulated relevant management policies, including the Chemicals Management Procedure and the Chemical Material Review Procedure. We regularly complete annual detection of harmful factors in workplaces, evaluation of current conditions, and carry out various emergency drills for safety production accidents, with a total of 10,767 participants. As of the end of the reporting period, no safety production accidents happened for the Company.

	<p>RMB31.32 million Safety-related investment for the year</p>		<p>100% Percentage of employees receiving safety trainings</p>
	<p>100% Rectification rate for potential safety hazards</p>		<p>100% Percentage of employees having a health check-up</p>

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

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 is installed to improve office air quality;
- The green space is increased in office areas.



Diet

- There are staff canteens and coffee shops in factory zones;
- Establishing a food safety supervision team and 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

- Constructing a 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.

3.3 Training and Career Development

Employee Training

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 where necessary, uses external resources for ensuring employees learning and development.

In addition, the Company has established a complete employee education and training system; formulated the Operating Procedure of Internal Training System Review, the Education and Training Procedure and department-level training procedures; and continuously enhanced the training effect according to the training cycle. The Company continuously carried out improvements according to strategic development and employees' needs.

In 2019, the Company launched two special linked training camps for newly-hired recent college graduates in Shanghai and Wuxi respectively, which provide trainees with a variety of courses including theoretical knowledge about semiconductor manufacturing practices, professional accomplishment, and outward bound. This helped its new employees quickly integrate into the team, preliminarily and comprehensively master semiconductor-related knowledge, and meet the challenges of their future work with full enthusiasm.



2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Employee Training Programs

Trainees	Training Contents	2019 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	100.5 hours Average training hours per employee
Front-line employees	Courses about theory and practical training of the semiconductor manufacturing module	

Career Development

According to industrial characteristics, the Company has set three professional categories, namely, management, technology and functional support and has established corresponding positions. Employees may continuously develop their careers in a single professional title category according to their own specialties, potential, and desires, and in other professional title categories, such as a shift from technology to management, or function to technology. In addition, we encourage employees to receive education and pursue further study, providing on-the-job academic education subsidies for all employees working under a labor contract with the employer. A total of 7 employees received education subsidies for masters and doctorate engineering degrees in 2019.

4 Products and Customers

The Company keeps track of international treaties, local and foreign laws, and regulations that are relevant to our products and customers in places where our business operates; regularly updates our management policies governing products and services in terms of health, safety, labels, privacy, and other areas; and establishes quality assurance systems and customer service systems. As of the end of 2019, the Company had not been involved in any litigation regarding infringement of the interests of customers, nor did the Company receive any litigation from customers regarding product quality.

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

4.1 Product Responsibility

Quality Control




According to the philosophy of “the quality is vital for the existence of an enterprise”, the Company has formulated the Quality Management Policy, and successfully passed the ISO 9001 quality management system and IATF 16949 automotive quality management system certification.

The Company implemented an inclusive quality management model in accordance with the Quality Management Policy covering the five far-reaching departments and sections of: quality systems and customer satisfaction; supplier management and raw materials analysis; quality engineering; reliability assurance; and failure analysis. 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 non-conforming products whose prescribed functions or hazardous substances fail to meet our specifications. As of 2019, the failure rate of the Company’s products on the end-user side was less than one in a billion.

Quality Management Policy

Comprehensively carry out performance excellence management; strenuously promote the integration of industrialization and informatization; actively fulfill corporate social responsibility; strictly adhere to the concept of zero defects; deliver green and high-quality products on time; continuously deliver competitive services; fully meet customer requirements; unremittingly improve customer satisfaction; and realize mutual benefit with win-win results.

Product Responsibility-related Certification

Product Quality	Certification Authority	Date of First Certification
 ISO 9001 Quality Management System	BSI	6 November 2001
 IATF 16949 Automotive Quality Management System	BSI	2 August 2005
Information Security	Certification Authority	Date of First Certification
 ISO 27001 Information Security Management System	BSI	2 July 2004

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Technological Innovation

The Company has always focused on technological innovation and a willingness to cooperate in the creation of ICs under independent innovation. It established the first Expert Workstation and the first Enterprise Association for Science and Technology in the integrated circuit industry in Shanghai. The Company endeavors to fully establish an industry-university-research system for technology innovation through introduction of experts, project cooperation, talent cultivation, academic exchange, etc., thus promoting the transformation of scientific and technological achievements into actual productions.

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.

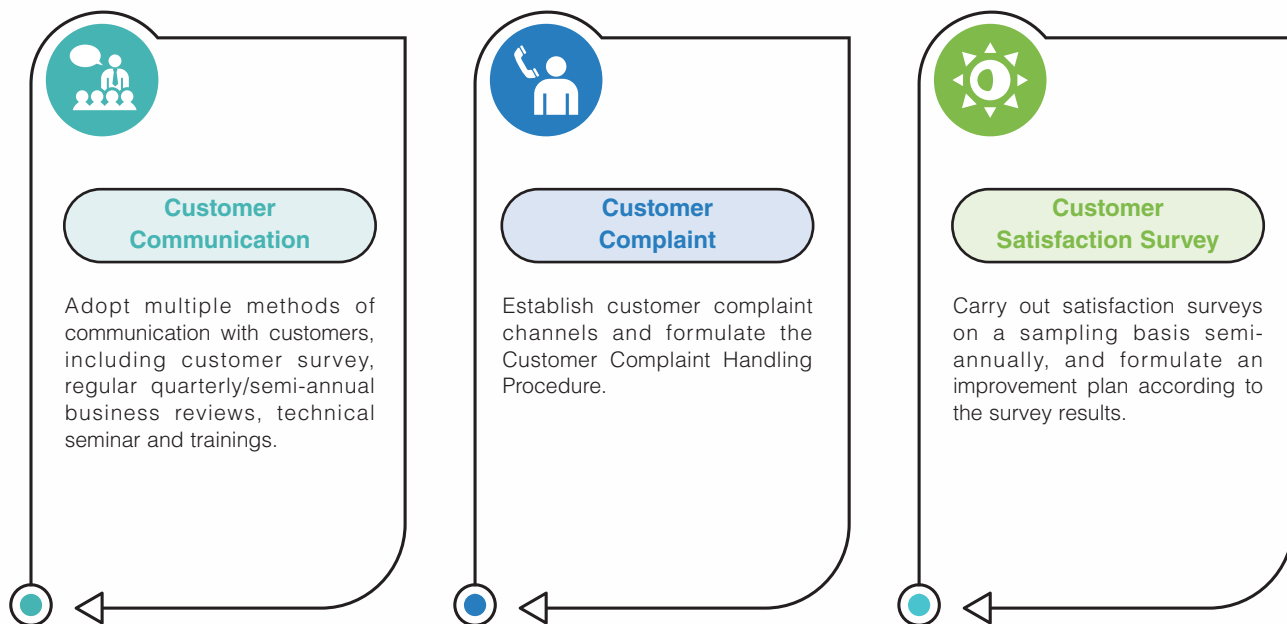
To reduce the risk of claims of infringement of third-party intellectual property rights against our manufacturing of semiconductor devices or end products, we only accept orders from reputable customers with no known potential risk of infringement. We have entered into several technology licensing agreements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

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 Service System



2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

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.

Customer Complaint Handling Process



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 rectification effect 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. We have 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 ISO 27001 certified. An Information Security Committee was established within the Company with the 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. No incidents of infringement against laws or regulations concerning customer privacy occurred within the Company during the year.

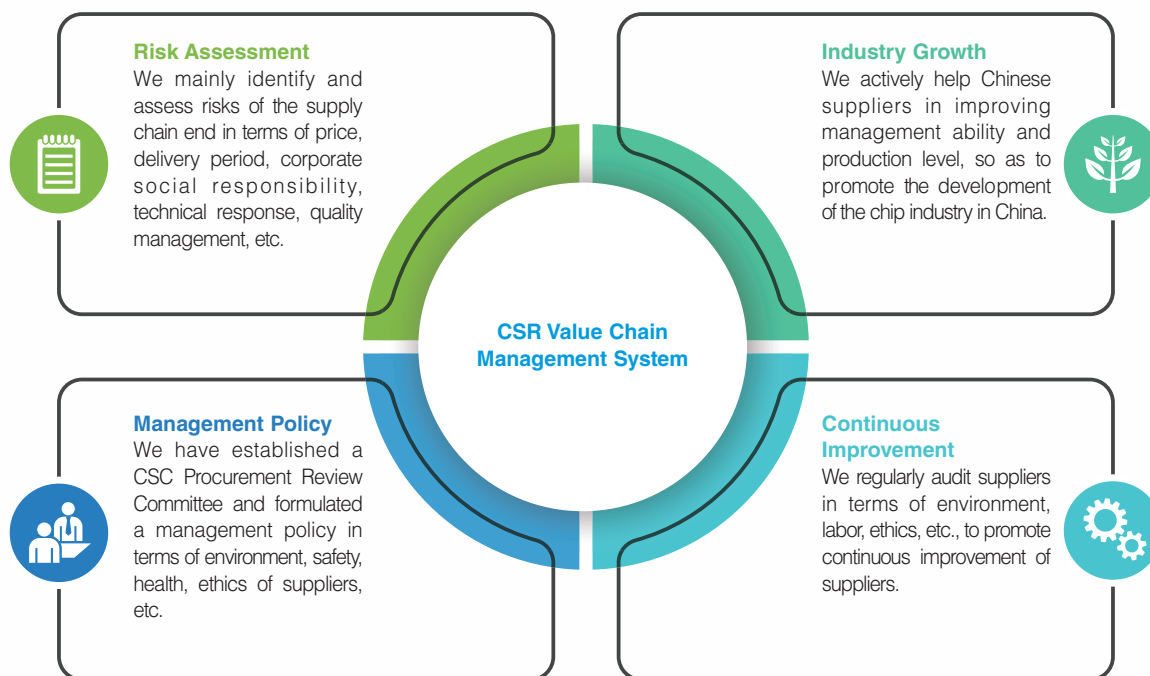
2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

5 Compliance in Business Operation

The Company is in strict compliance with laws and regulations with respect to compliance in business operations including the Criminal Law of the People's Republic of China, the Contract Law of the People's Republic of China, and the Anti Unfair Competition Law of the People's Republic of China. We thereby strengthen the implementation of supplier review work and proactively engage in the promotion of clean and honest industrial practices and anti-corruption governance. As of the end of the reporting period, the Company had not been involved in any litigation with respect to any commercial bribery or corruption.

5.1 Responsible Value Chain

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.



The Company established a CSC Procurement Review Committee and implemented an open bidding process as our main procurement approach to guarantee an equitable, open, and fair procurement process. As a member of ECOVadis in France, we monitored the environmental and social risks of suppliers. By entering into the Undertakings Against Commercial Bribery with suppliers, we strive to eradicate all unfair competition activities.

The Company continued raising requirements on our suppliers with respect to labor, health and safety, environment, ethics, and management systems in accordance with the Code of Conduct of the Responsible Business Alliance (formerly known as EICC) and offered relevant training. Through the annual supplier assessment system, the Company requires unqualified suppliers to take corrective action, thereby further promoting the development of our green supply chain.



2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

We proactively support growth and development of our suppliers in China and constantly assist suppliers in improving their management capabilities and production levels. In addition, 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.

Conflict Minerals Management

According to the Dodd-Frank Wall Street Reform and Consumer Protection Act and research reports of certain international non-governmental organizations, metal mining will cause serious social and environmental problems in certain areas. For example, gold, palladium, tungsten, tin, tantalum, etc. mined in the Democratic Republic of Congo are likely to be used for electronic and electrical products, such as mobile phones and computers, in ICT industries.

The Company has undertaken to refuse to purchase conflict minerals and has conducted due diligence on the use of conflict raw materials by suppliers. We continuously update reports on conflict minerals investigations according to the Conflict Minerals Reporting Template (CMRT), jointly created by the Responsible Business Alliance (RBA, formerly EICC) and the Global e-Sustainability Initiative (GeSI). According to investigation and review, in 2019 all of the Company's suppliers met the requirements of non-use of conflict minerals.

5.2 Anti-corruption

The Company has a long-term commitment to the development of an integrity and credibility culture, whether for the management of external customers and manufacturers or for the management of internal cadres. The Company has formulated the Management Rule Against Commercial Bribery, explicitly specifying that companies having business dealings with the Company shall sign the Undertaking Against Commercial Bribery and that relevant internal personnel shall sign the Undertaking to Reject Commercial Bribery. In order to ensure unblocked reporting channels for employees and the standard and orderly handling of matters reported, the Company has published the Management Measures for Case Handling and Investigation by the Discipline Inspection Commission, which covers the scope of reporting, notes on reporting, requirements on handling of matters reported, and handling processes, etc.

In 2019, the Company continuously provided training and education on business integrity for all employees; actively promoted the execution of the Undertaking Against Commercial Bribery and the Undertaking to Reject Commercial Bribery; carried out regular audits and random checks; constantly promoted ethical business practices; organized training programs with respect to anti-corruption and business integrity initiatives; and published ethical business practice publicity documents through the intranet.

Declaration of Non-use of Illegal Minerals

"HHGrace 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) The promisor will assume social and environmental responsibilities.
 - 2) Gold (Au), tantalum (Ta), tungsten (W) and tin (Sn) that it promises to use do not come from "conflict minerals".
 - 3) It promises to cause product suppliers to provide the declaration that gold (Au), tantalum (Ta), tungsten (W) and tin (Sn) do not come from "conflict minerals", and to carry out an investigation into conflict minerals, and complete the EICC-GeSI conflict minerals report.
-

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Achievements in Anti-corruption and Integrity Promotion in 2019



System Construction

- Prepared the work division table for the work plan and published it in the intranet of the Company.
- Carried out enforcement for signing the Business Integrity Undertaking, the Undertaking to Reject Commercial Bribery, and other documents, ensuring that 100% of relevant persons signed the documents.



Petitioning and Reporting

- Handled letters and visits according to the amended Case Handling and Investigation Management Measure and submitted letters from employees to the Discipline Inspection Commission in a timely manner.



Awareness and Education

- In the intranet, set special columns including “discipline inspection system, alarm bell, discipline inspection mailbox” and other columns to continuously improve and update relevant information in a timely manner.
- Held a three-day business training course.



Special Audits

- In 2019, successfully completed special audits on cadre promotion and appointment procedures of Fab 7 and special audits on remunerations and business expenditures of leaders and cadres.

Complaint and Reporting Management

In order to standardize complaint and reporting management procedures, the Employee Complaints and Reporting Management Measures of the Company provides clear reporting channels such as mail, hotline and mailbox to encourage its employees to report suspected internal violations. With regard to the protection of whistle blowers, the Company is responsible for the fairness and impartiality of the report handling process and results, and it strictly protects the personal privacy of whistle blowers, in accordance with the requirements of the Management Measures for Case Handling and Investigation by the Discipline Inspection Commission.

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Anti-corruption Supervision and Report Handling Procedures



6 Social Welfare Causes and Public Communities

The Company insists on continual concern about and deep integration with the community. The Company focuses on the needs of the community and regards mutual development with the community as an important part of our social responsibility, including feedback to society in collaboration with all walks of life. With regard to community investment, we focus on targeted poverty alleviation, joint construction of the community, and volunteer services.

The Company encourages employees to actively participate in voluntary services. The trade union department takes the lead in organizing various employee volunteer activities, which are specified in the HHGrace Trade Union Member Benefit Policy.

Targeted Poverty Alleviation

In 2019, in response to the call of Huahong Group for urban-rural partner assistance, the Company designated employees to visit local underprivileged families in Youqiao Village, Shuxin Town, Chongming District during the Spring Festival and held a signing ceremony for the urban-rural party organization partner assistance (for joint construction). In the future, the Company will continue to carry out mutual assistance and joint construction activities with Youqiao Village to realize resource sharing and mutual complementation, thus promoting better the harmonious development and joint construction of enterprises and communities.



2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Joint Construction of Communities

In order to enhance the safety awareness of community residents, the Company has provided a First Aid Course for Children's Accidents in the community where the headquarters operates, including first aid common sense for children and cardiopulmonary resuscitation for children, for three successively years. As a science-oriented enterprise, the Company cooperated with the enterprise association for science and technology in launching a pilot project of the community STEM science workshop. In 2019, it continued to provide children with programming enlightenment activities, covering basic programming, robot control, and intelligent watering of plants, etc., so as to enhance the exploration spirit and innovation ability of the children in communities.

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 659 hours of volunteer services provided in 2019.

Since 2006, employees of the Company have visited Meixin Nursing Home in Pudong New Area each quarter in their spare time. In 2019, the Company's employees gave the elderly wormwood sachets, citrus pu-erh tea, and other gifts. They also wrote and directed art programs to bring joy and laughter to elderly in the nursing home.

7 2019 Social Recognitions

No.	Awards
National and Industrial Awards	
1	Benchmarking Enterprise in the Electronic Information Industry in China in 2019
2	Leadership in Energy and Environmental Design
3	Two-Star Green Building Design Label Certificate certified by Chinese Society for Urban Studies
4	2018 China Semiconductor Innovation Product and Technology Award
5	Enterprise with the Greatest Growth Potential in China New Energy Vehicle IGBT
6	Wafer OEM Enterprise with Outstanding Performance for the Year in 2019 China IC Design Achievement Award
Provincial and Departmental-level Awards	
7	Shanghai Quality Gold Award in 2018
8	Second Prize for Shanghai Science and Technology Award
9	2017-2018 Shanghai Role Model in Ethical and Cultural Progress
10	Outstanding Contribution Award in Science and Technology Innovation in the Pudong New Area of Shanghai
11	Benchmarking Enterprise for the 10th Anniversary of Shanghai Energy-saving and Emission-reduction (JJ) Group Activities
12	Economic Contribution Award for Outstanding Enterprises in Zhangjiang Science City
13	Science and Technology Innovation Award at 2019 Conference for the Release of Shanghai Corporate Social Responsibility Report

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

8 Performance Data

Environment

Performance Indicators	Unit	2017	2018	2019
Emissions				
Total air emissions	10,000 m ³	1,121,958	1,145,074	1,257,074
Nitrogen oxide (NOx) emissions	Kg	26,374	26,821	19,383
Sulfur dioxide (SO ₂) emissions	Kg	62	68	72.5
Total wastewater discharge	10,000 m ³	436	473	431
GHG emissions	Ton of CO ₂ equivalent	424,151	434,834	449,339
GHG emissions per unit output	Ton of CO ₂ equivalent/ 8-inch wafers	0.22	0.21	0.23
Total hazardous waste produced	Ton	4,641	5,122	5,013
Hazardous waste produced per unit output	Kg/8-inch wafers	2.43	2.47	2.57
Total non-hazardous waste ¹	Ton	3,982	4,017	3,595
Non-hazardous waste produced per unit output	Kg/8-inch wafers	/	2	1.80
Use of Resources				
Total electricity consumed	MWh	509,877	528,402	528,044
Electricity consumed per unit product ²	kWh/8-inch wafers	268	259	271
Natural gas consumed	m ³	7,155,253	7,481,586	8,138,435
Natural gas consumed per unit product	m ³ /8-inch wafers	3.75	3.66	4.18
Total water consumed	m ³	4,898,783	9,267,637	7,724,830
including: Water from municipal water supply	m ³	4,898,783	6,325,999	4,791,336
Wastewater reused	m ³	/	2,941,638	2,933,494
Water consumed per unit product ³	m ³ /8-inch wafers	2.57	3.10	2.46
Recycled/reused water	m ³	2,820,686	2,923,067	2,823,278
Total packaging materials used for the shipment of finished products	Ton	75	78	110
Total recycled packaging materials for the shipment of finished products	Ton	15	16	8

Note:

- 1 Non-hazardous waste is sludge produced in wastewater treatment.
- 2 The electricity consumed per unit product in 2018 disclosed in the 2018 Environmental, Social and Governance Report of Hua Hong Semiconductor Limited has been changed to 259 kWh per 8-inch wafer.
- 3 In calculation, water consumed per unit product only includes water from the municipal water supply.

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Employment and Labor Practice

Performance Indicators	Unit	2017	2018	2019
Employment				
Total number of employees	Individual	4,138	4,512	5,138
Including: Number of male employees	Individual	2,914	3,227	3,720
Number of female employees	Individual	1,224	1,285	1,418
Number of employees working under a labor contract with the employer	Individual	4,138	4,512	5,138
Number of employees working under a labor contract with a labor dispatch company	Individual	215	209	130
Number of employees aged under 30	Individual	2,001	2,129	2,354
Number of employees aged between 30 and 50	Individual	2,054	2,284	2,676
Number of employees aged above 50	Individual	83	99	108
Number of employees from Mainland China	Individual	4,128	4,503	5,129
Number of foreign employees	Individual	10	9	9
Health and Safety				
Occupational disease incidence	%	0	0	0
Number of work-related fatalities	Individual	0	0	0
Lost days due to work injury	Day	193.0	206.0	23.0
Development and Training				
Average training hours completed per employee	Hour	72.3	77.0	99.5
Including: Average training hours completed per non-management employee	Hour	72.6	78.0	100.5
Average training hours completed per management member	Hour	11.6	13.0	33.6
Average training hours completed per female employee	Hour	69.9	66.0	87.7
Average training hours completed per male employee	Hour	74.3	82.0	104.0
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

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Product Responsibility and Customer Service

Performance Indicators	Unit	2017	2018	2019
Product Responsibility				
Product return rate	%	0.3	0.104	0.05
Percentage of products sold subject to recalls for safety and health reasons.	%	0	0	0
Customer Service				
Customer complaint event	Case	10	8	3
Percentage of customer complaints resolved	%	100	100	100

Supply Chain Management

Performance Indicators	Unit	2017	2018	2019
Supply Chain Management				
Total number of suppliers	Supplier	508	520	532
Number of local suppliers	Supplier	385	393	399
Number of foreign suppliers	Supplier	123	127	133
Number of suppliers assessed ¹	Supplier	115	112	110
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	%	23	26	28

Note:

- 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 slice, quartz, target material, gas, chemicals, and other raw materials for production

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Anti-corruption

Performance Indicators	Unit	2017	2018	2019
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	2017	2018	2019
Community Investment				
Number of employees participating in volunteer services	Person	178	176	245
Total hours of volunteer activities	Hour	356	352	659

Compliance

Fields	Names of Major Laws and Regulations
EHS	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, Production Safety 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, Law of the People's Republic of China on Prevention and Control of Occupational Diseases, 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, Registration, Evaluation, Authorization, and Restriction of Chemicals ("REACH"), Waste Electrical and Electronic Equipment (WEEE) and Restriction of Hazardous Substances ("RoHS") etc.
Information Security	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, 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, and Regulation on the Administration of Commercial Cipher Codes, etc.
Quality	Company Law of the People's Republic of China, Constitution of the PRC, Law of the People's Republic of China on Product Quality, Customs Law of the PRC, Metrology Law of the People's Republic of China, and Foreign Trade Law of the PRC, etc.
RBA	Anti-unfair Competition Law of the People's Republic of China, Employment Promotion Law of the People's Republic of China, Social Insurance Law of the People's Republic of China, Contract Law 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.



2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

9 Preparation

Report Overview

The 2019 ESG Report of Hua Hong Semiconductor Limited (hereinafter referred to as the “Report”) discloses its principles in fulfilling CSR and the work carried out in 2019. It mainly addresses our Stakeholders about sustainable development regarding the relevant economic, environmental, and social issues.

Basis of Preparation

The Report was prepared in accordance with the Environmental, Social and Governance Reporting Guide published by The Stock Exchange of Hong Kong Limited, and by reference to the Sustainability Reporting Standards (2016) issued by the Global Reporting Initiative (GRI).

Scope of the Report

Organizational Scope: The Report covers Hua Hong Semiconductor Limited and its subsidiaries (collectively the “Company” or “we”), and is in consistent with the scope of the annual consolidated financial statements of the Company.

Reporting Period: From 1 January 2019 to 31 December 2019

Report Cycle: This is an annual report

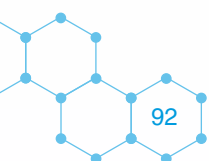
Notes on the Data

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.

2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

10 Index Table of the Environmental, Social and Governance Reporting Guide of the Hong Kong Stock Exchange

Aspects, General Disclosures and KPIs	Section
A1. Emissions	
General Disclosure A1	8 Performance Data
KPI A1.1	2.1 Environmental Management System 8 Performance Data
KPI A1.2	2.1 Environmental Management System 8 Performance Data
KPI A1.3	2.1 Environmental Management System 8 Performance Data
KPI A1.4	2.1 Environmental Management System 8 Performance Data
KPI A1.5	2.2 Cleaner Production
KPI A1.6	2.2 Cleaner Production
A2. Use of Resources	
General Disclosure A2	2.3 Resource Saving
KPI A2.1	2.1 Environmental Management System 8 Performance Data
KPI A2.2	2.1 Environmental Management System 8 Performance Data
KPI A2.3	2.3 Resource Saving
KPI A2.4	2.3 Resource Saving
KPI A2.5	8 Performance Data
A3. The Environment and Natural Resources	
General Disclosure A3	2.1 Environmental Management System 2.4 Green Products
KPI A3.1	2.1 Environmental Management System 2.4 Green Products
B1. Employment	
General Disclosure B1	3.1 Rights and Benefits of Employees 8 Performance Data
KPI B1.1	8 Performance Data
KPI B1.2	8 Performance Data
B2. Health and Safety	
General Disclosure B2	3.2 Health, Safety and Employee Welfare 8 Performance Data
KPI B2.1	8 Performance Data
KPI B2.2	8 Performance Data
KPI B2.3	3.2 Health, Safety and Employee Welfare
B3. Development and Training	
General Disclosure B3	3.3 Training and Career Development
KPI B3.1	8 Performance Data
KPI B3.2	8 Performance Data
B4. Labour Standards	
General Disclosure B4	8 Performance Data





2019 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Aspects, General Disclosures and KPIs	Section
KPI B4.1	3.1 Rights and Benefits of Employees
KPI B4.2	3.1 Rights and Benefits of Employees
B5. Supply Chain Management	
General Disclosure B5	5.1 Responsible Value Chain
KPI B5.1	8 Performance Data
KPI B5.2	5.1 Responsible Value Chain
B6. Product Responsibility	
General Disclosure B6	4.2 Customer Service and Protection of Customers' Interests
KPI B6.1	8 Performance Data
KPI B6.2	4.2 Customer Service and Protection of Customers' Interests
KPI B6.3	8 Performance Data
KPI B6.4	4.1 Product Responsibility
KPI B6.5	4.1 Product Responsibility
B7. Anti-corruption	
General Disclosure B7	4.2 Customer Service and Protection of Customers' Interests
KPI B7.1	5.2 Anti-corruption
KPI B7.2	8 Performance Data
B8. Community Investment	
General Disclosure B8	8 Performance Data
KPI B8.1	6 Social Welfare Causes and Public Communities
KPI B8.2	6 Social Welfare Causes and Public Communities
	8 Performance Data

目錄

釋義	95
主要財務指標	98
致股東的信	99
公司資料	101
董事及高級管理層	104
企業管治報告	111
董事會報告	121
2019年環境、社會及管治報告	150
獨立核數師報告	185
綜合損益表	193
綜合全面收益表	194
綜合財務狀況表	195
綜合權益變動表	197
綜合現金流量表	199
財務報表附註	201
五年財務概覽	308

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」	本公司將於二零二零年五月十四日下午二時正舉行兩種與會方式的股東週年大會，包括在香港九龍麼地道64號九龍香格里拉大酒店舉行的現場會議以及在線虛擬會議；
「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；
「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；

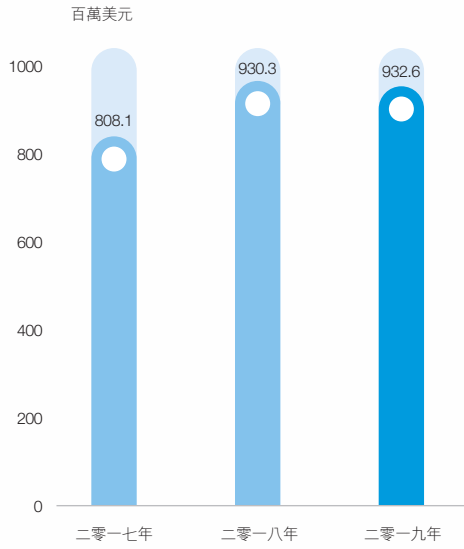
釋義

「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；
「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，為本公司控股股東；
「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；
「獨立非執行董事」	本公司獨立非執行董事；

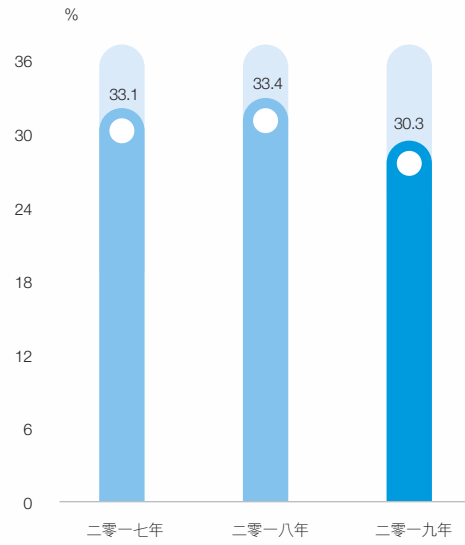
「儀電集團」	上海儀電（集團）有限公司，前身為上海儀電控股（集團）有限公司，一家於一九九三年十二月在中國註冊成立的國有公司，為本公司控股股東；
「合營協議」	本公司、華虹宏力、華虹無錫、國家集成電路產業基金及無錫錫虹聯芯於二零一八年一月三日訂立的合營協議；
「上市規則」	《香港聯合交易所有限公司證券上市規則》（經不時修訂或補充）；
「合併」	Grace Cayman與本公司在開曼群島組建的Hua Hong Semiconductor (Cayman) Inc.進行的合併；
「NEC」	NEC Corporation，一家於一八九九年在日本註冊成立及創立名為Nippon Electric Company, Limited的公司；
「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，為關連人士；
「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，為本公司控股股東，華虹集團的主要股東；
「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；
「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，系由市屬及區級國企聯合設立的专业投資公司。

主要財務指標

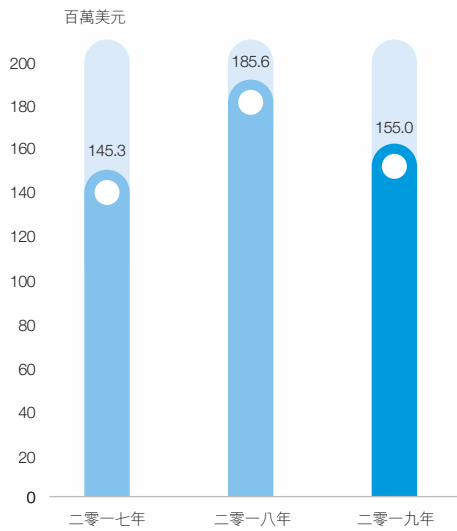
銷售收入



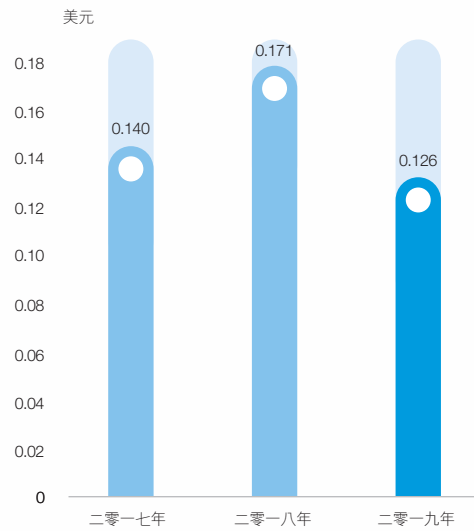
毛利率



淨利潤



每股盈利





致股東的信

尊敬的各位股東：

二零一九年的宏觀經濟環境複雜多變，對半導體產業來說是極具挑戰性的一年，據統計，全球半導體市場下挫了12%。在股東、客戶、廠商與員工的鼎力支持下，華虹半導體逆風揚帆、再創佳績。在華虹新二十年發展戰略的引領下，凝聚著公司全體員工智慧與汗水的華虹無錫集成電路研發和製造基地（一期）12吋生產線於9月建成投片。滬錫兩地8吋與12吋齊頭並進，覆蓋5G移動通信、物聯網、新能源汽車、人工智能等多種新型應用領域，全方位滿足客戶不斷增長的多元化需求。

二零一九年是破浪前行之年。新建成的華虹無錫12吋晶圓廠不負眾望達成了本年度1萬片產能的目標，三座8吋晶圓廠產能也穩步擴增。四座晶圓廠折合8吋的總月產能達20.1萬片。二零一九年，公司頂住市場壓力，銷售收入達9.326億美元，同比增長0.2%，再創新高。毛利率為30.3%；年內溢利為1.55億美元，佔銷售收入的16.6%；淨資產收益率為7.4%。截至二零一九年底，我們已連續36個季度實現盈利。二零一四年至二零一九年，公司的MCU產品出貨量年複合增長率達27%，在亞洲地區表現尤為強勁。二零一九年，受惠於工業電子、消費電子以及新能源汽車市場的強勁需求，公司的功率器件產品營收同比增長14.2%，覆蓋低、中、高，各個電壓段。

二零一九年是革新圖強之年。在清晰的戰略指導下，公司始終致力於技術研發。長期以來，我們專注於特色工藝，覆蓋1微米至65納米各個技術節點。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特色工藝平台擁有優質穩定的客戶資源與長期積累的技术優勢。我們的創新成果斬獲了多項殊榮，國際市場影響力顯著提升。其中，公司的高壓大功率深槽型超級結MOSFET技術開發成果斬獲「上海市科技進步二等獎」；高壓大功率雙溝槽型超級結工藝平台榮獲「第七屆中國電子信息博覽會創新應用金獎」。榮譽PSIC2019中國新能源汽車用IGBT「最具發展潛力企業」獎，印證了公司在IGBT研發上的突出成就。多年來量產汽車電子芯片的成功經驗奠定了公司在新能源汽車更迭浪潮中的領軍地位。此外，公司最新研發成功的超高壓BCD工藝平台，其性能達國際領先水準，立足於全球環保照明市場，實現了國產LED照明驅動的單芯片解決方案。

二零一九年是突破進取之年。一期投資額為25億美元的華虹無錫集成電路研發和製造基地項目榮獲無錫市「重大產業項目突出貢獻獎」，吹響了我們進軍12吋領域的號角，拉開了下一個二十年宏圖的序幕。第四季度，無錫新廠交付客戶約4千片晶圓，為公司創造了740萬美元的銷售收入。我們在12吋市場踏出了堅實的一步，為華虹新二十年創造了良好的開端。我們將加快產能爬坡、夯實市場地位、帶動當地半導體產業的全面提速。



致股東的信

自新型冠狀病毒疫情爆發以來，公司上下堅定信心、同心協力，始終把員工的生命安全和身體健康放在第一位。我們迅速成立了疫情防控應急管理小組，建立起完善的防控體系，采取了一系列措施保障工作環境安全，全面落實人員排查管控、體溫檢測、健康登記、場地消毒等各項環節。截至目前，公司疫情防控工作有序推進，生產線穩定運行。我們將繼續抓實抓細各項工作部署，堅決打贏這場疫情防控阻擊戰！我們相信，不久之後疫情將在全球範圍內得到有效控制，市場漸趨穩定，撥雲見日，未來可期。

誠芯鑄華章，春風繪彩虹。展望二零二零年，華虹半導體必將騰飛夢想，續寫輝煌。12吋廠所具備的更窄線寬能力將為面向5G市場的新產品研發提供支持，例如65納米嵌入式閃存、65納米RF-SOI、CMOS圖像傳感器和先進NOR型閃存等。在8吋平台上，我們將通過縮小存儲面積、減少光罩層數等方式來進一步強化嵌入式閃存技術工藝，來滿足高端MCU市場的需求。作為全球半導體產業鏈的重要一環，我們將繼續在差異化技術領域深耕細作，為海內外客戶提供先進的產品解決方案。

時代日新月異，而我們的初心不移。華虹半導體全體員工將繼續秉持「革新，自信，進取，團結」的企業核心價值觀，為全體股東創造「芯」價值，為全球客戶完成「芯」夢想。我們相信，藉由正確的戰略定位和強大的技術後盾，二零二零年會是華虹半導體再度建功立業的一年。感謝各位長久以來的支持，誠邀繼續攜手、共繪「芯」華虹！

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
二零二零年三月二十六日

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) (於二零一九年五月一日獲委任)
王煜 (於二零一九年五月一日辭任)

非執行董事

杜洋
森田隆之
王靖 (於二零一九年六月二十八日獲委任)
葉峻
陳劍波 (於二零一九年六月二十八日辭任)

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 (於二零一九年十一月十二日獲委任)
王小軍 (於二零一九年十一月十二日辭任)

授權代表

唐均君 (於二零一九年五月一日獲委任)
李瑞霞 (於二零一九年十一月十二日獲委任)
王煜 (於二零一九年五月一日辭任)
王小軍 (於二零一九年十一月十二日辭任)

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 (於二零一九年六月二十八日獲委任)
陳劍波 (於二零一九年六月二十八日辭任)

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
香港中環
添美道1號
中信大廈22樓

法律顧問

史密夫·斐爾律師事務所
香港
皇后大道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

中國農業銀行股份有限公司無錫新吳支行
中國江蘇省無錫市
新吳區和風路26號

中國建設銀行股份有限公司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

中信銀行股份有限公司無錫新區支行
中國江蘇省無錫市
新吳區和風路26號

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：214000

股份代號

1347

董事及高級管理層

張素心先生，56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本公司提名委員會（「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，55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，擔任上海華虹NEC電子有限公司黨委副書記、工會主席兼行政與政府關係總監。上海華力、華力集成和華虹NEC均為本公司上市規則定義下的關聯人。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。並於二零一四年取得中國正高級經濟師資格。

王煜先生，47歲，自二零一二年二月至二零一九年五月為本公司總裁兼執行董事。

陳劍波先生，55歲，自二零一二年二月至二零一九年六月為本公司非執行董事。

杜洋先生，42歲，自二零一八年十一月起為本公司非執行董事。杜先生於二零零五年八月加入國家開發銀行。二零零五年至二零一四年，杜先生在國家開發銀行擔任多項職務，包括總行企業局客戶處客戶經理、河南分行客戶處副處長、總行業務發展局項目開發與業務創新處處長等。二零一四年十二月起至今，杜先生擔任華芯投資管理有限責任公司總監，並於二零一五年十月起兼任華芯投資上海分公司總經理。杜先生亦為上海集成電路產業投資基金股份有限公司、上海集成電路產業投資基金管理有限公司、華力集成、上海芯鑠投資管理有限公司的董事。杜先生亦擔任芯鑫融資租賃有限責任公司的法人代表、董事長兼總裁。杜先生先後分別獲得複旦大學、名古屋商業大學及英國曼徹斯特索爾福德大學的中文系學士、工商管理碩士和金融管理碩士，並於二零一五年獲得高級經濟師專業技術資格。



董事及高級管理層

森田隆之先生，60歲，自二零零九年七月起為本公司非執行董事。森田先生於一九八三年四月加入NEC。一九八三年至二零一一年，森田先生在NEC擔任多項職務，包括國際規劃部經理、企業業務發展部高級副總裁兼執行總經理。現任NEC資深執行副總裁，並於二零一八年六月起兼任首席財務官(Chief Financial Officer)。二零零八年六月二十四日至二零一二年六月二十六日，森田先生出任日本航空電子工業株式會社的核數師。森田先生在NEC以及日本航空電子擁有一席董事席位。森田先生畢業於東京大學，獲法律學士學位。

王靖女士，49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、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；高級經濟師。

葉峻先生，47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。葉先生亦為華虹集團、華力集成、上海銀行及中美聯泰大都會人壽保險有限公司的董事。葉先生亦任上海兆芯集成電路有限公司及上海宣泰醫藥科技有限公司的董事長。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。

董事及高級管理層

張祖同先生，71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）、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、張先生曾任中國信達資產管理股份有限公司（股票代碼：1359.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。

王桂壠先生，68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，以及香港律師會及環太平洋律師協會前會長。王先生現時為香港稅務上訴委員會其中一名副主席，香港版權審裁處主席，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。

葉龍蜚先生，78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。

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，56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。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，55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。

王煜先生，47歲，自二零一二年二月至二零一九年五月為本公司總裁兼執行董事。

徐偉先生，62歲，為本公司製造工程、人事、行政及安全管理執行副總裁，直至二零一九年九月三十日退休。

范恒先生，58歲，為本公司銷售與市場執行副總裁。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。在加入華虹計通之前，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。

王鼎先生，57歲，為本公司財務、信息科技、行政與合規、上市公司工作及外籍人事執行副總裁。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，並自二零一二年二月起擔任公司董事會秘書。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。



董事及高級管理層

孔蔚然博士，56歲，為本公司技術研發與設計服務執行副總裁。孔博士於半導體領域擁有逾25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13項美國專利、58項中國專利，共同發表逾20篇技術論文。

周衛平先生，53歲，為本公司製造工程與安全管理執行副總裁。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。

李琦博士，57歲，為本公司採購物流、測試、質量、計劃副總裁。李博士擁有逾20年專業工作經驗，於二零零三年一月加入上海宏力。此前，李博士自一九九五年至二零零二年於美國應用材料公司擔任高級工程經理。李博士畢業於北京大學，獲物理學學士學位；後於美國馬里蘭大學獲物理學碩士學位及博士學位。

林宏哲博士，58歲，為本公司北美及日本銷售副總裁。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。林博士於加州理工學院獲電機工程學博士學位。

林俊毅先生，51歲，為本公司三廠運營副總裁。林先生於半導體行業擁有逾20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。



董事及高級管理層

Mirko Sonntag先生，43歲，為本公司歐洲銷售營運與服務副總裁。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。

陳瑛女士，47歲，為本公司行政副總裁，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，擁有逾20年行政管理經驗。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，獲法學士學位；後於中國人民大學獲管理學碩士學位；高級經濟師。

華光平先生，53歲，為本公司一廠運營副總裁。華先生於半導體行業擁有逾20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。

姚亮先生，55歲，為本公司二廠運營副總裁。姚先生於半導體行業擁有近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。

倪立華先生，51歲，為本公司副總裁兼華虹七廠廠長，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，上海華虹NEC電子有限公司，上海新進半導體製造有限公司部經理，上海華虹NEC電子有限公司部長，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。



董事及高級管理層

公司秘書

王小軍先生，65歲，自二零一四年六月起擔任本公司聯席公司秘書，並於二零一六年六月獲委任為本公司公司秘書，於二零一九年十一月辭任。

李瑞霞女士，42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14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二零一九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

截至二零一九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二零一九年十二月三十一日止年度全年遵守當中所載的必守標準。

董事會

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

董事會現時共有九名董事，當中包括兩名執行董事張素心先生（主席）及唐均君先生（總裁，二零一九年五月一日獲委任），四名非執行董事森田隆之先生、葉峻先生、杜洋先生及王靖女士（二零一九年六月二十八日獲委任），以及三名獨立非執行董事張祖同先生、王桂壩先生、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104至106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紀錄由公司秘書保管，並應在獲得合理通知時，公開有關會議紀錄以供查閱。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当事項進行討論。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。

截至二零一九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。

董事會的運作

截至二零一九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、本公司的審核委員會（「審核委員會」）會議、提名委員會會議及本公司的薪酬委員會（「薪酬委員會」）會議以及二零一九年股東週年大會及股東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	二零一九年股東週年大會及股東特別大會
執行董事					
張素心	5	不適用	1/1	不適用	2/2
王煜（附註1）	2	不適用	不適用	不適用	1/2
唐均君（附註2）	3	不適用	不適用	不適用	1/2
非執行董事					
陳劍波（附註3）	3	不適用	不適用	2/3	2/2
王靖（附註4）	2	不適用	不適用	1/3	0/2
森田隆之	5	不適用	不適用	不適用	2/2
葉峻	2	2/5	不適用	不適用	0/2
杜洋	5	不適用	不適用	不適用	2/2
獨立非執行董事					
張祖同	5	5/5	不適用	不適用	2/2
王桂燦，太平紳士	5	不適用	1/1	3/3	2/2
葉龍蜚	5	5/5	1/1	3/3	2/2

附註1：王煜先生，於二零一九年五月一日辭任本公司執行董事兼總裁。在這之前，王煜先生出席了2次董事會會議。

附註2：唐均君先生，於二零一九年五月一日獲委任本公司執行董事兼總裁。在這之後，唐均君先生出席了3次董事會會議。

附註3：陳劍波先生，於二零一九年六月二十八日辭任非執行董事及薪酬委員會成員。在這之前，陳劍波先生出席了3次董事會會議，以及2次薪酬委員會會議。

附註4：王靖女士，於二零一九年六月二十八日獲委任為非執行董事及薪酬委員會成員。在這之後，王靖女士出席了2次董事會會議，以及1次薪酬委員會會議。

截至二零一九年十二月三十一日止年度，本公司於二零一九年三月二十八日舉行一次股東特別大會，以批准通過有關於二零一八年及二零一九年授出的購股權的普通決議案。

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紀錄令人滿意，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。截至二零一九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履行職責。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。

截至二零一九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)	✓
王靖	✓
杜洋	✓
森田隆之	✓
葉峻	✓
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人員制定特定薪酬待遇，包括非金錢利益、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。

截至二零一九年十二月三十一日止年度，薪酬委員會舉行三次會議以檢討及建議本公司購股權計劃，該計劃由本公司於二零一五年九月一日舉行的股東特別大會批准。薪酬委員會亦已檢討本公司的購股權計劃，並參考可比較上市公司董事的薪酬水平，檢討高級管理層員工及董事的薪酬。

各董事的薪酬詳情已列於財務報表附註8。

提名委員會

提名委員會現時成員包括一名執行董事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。

截至二零一九年十二月三十一日止年度，本公司已召開一次提名委員會會議，以評估本公司獨立非執行董事的獨立性、就退任董事在股東週年大會上的重選資格向董事會提供推薦建議及批准王靖女士以本公司非執行董事身份加入董事會的提名，以填補陳劍波先生辭任所產生的空缺。會上亦已審查提名政策、董事會的規模及組成以及董事會多元化政策，隨後已批准提名政策，並認為董事會多元化政策為適當且有效。

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

截至二零一九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56萬美元及13萬美元。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。亦請參閱審核委員會於二零一九年一月一日起生效的經修訂職權範圍。

截至二零一九年十二月三十一日止年度，審核委員會已舉行五次會議，大多數成員均出席。審核委員會於截至二零一九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、審查截至二零一九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、審查截至二零一八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

於二零一九年一月一日，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。於二零一九年，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。

於截至二零一九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

原公司秘書王小軍先生於二零一九年十一月十二日辭任本公司之公司秘書及授權代表。李瑞霞女士於二零一九年十一月十二日獲委任為本公司之公司秘書及授權代表。

李瑞霞女士目前為君合律師事務所合夥人。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。

公司秘書向董事會負責，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。

截至二零一九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

電子郵件：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。

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「三道防線」的監控體系。它包含下列多個不同層面的角色和責任：

第一道防線	業務部門
	<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；• 協助風險管理條線開展風險管理工作，包括提供必要的資料與樣本，確定與本部門相關的重大風險，並確定重大風險應對措施；
第二道防線	風險管理條線
	<ul style="list-style-type: none">• 制定／修訂公司風險管理各項制度和規定，提交公司經營管理層與審核委員會審議；• 設定／更新通用的風險管理語言，包括風險管理過程中的各項名詞、術語，並向風險管理相關部門及時宣導和貫徹；• 每年基於風險評估結果，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踪；
第三道防線	內部審計條線
	<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；• 對於審計過程中的發現點，督促相關部門或機構進行整改，並持續跟踪整改情況；• 向審核委員會匯報各項審計結果。



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。

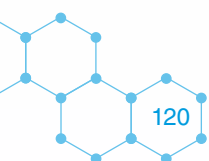
為根據證券及期貨條例識別、處理及傳播內幕消息，本集團已實施若干程序，包括管理層指定人員進行本公司證券交易須獲得事先批准、告知相關董事及僱員常規禁售期及證券交易限制、通過代號識別項目以及按既定目的及按須知基準傳播信息，以防範本集團內部可能出現的內幕消息處理失誤。

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。在編製截至二零一九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185及192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

董事會謹提呈本集團二零一九年度報告（二零一九年一月一日～二零一九年十二月三十一日），和經審核的財務報表（「財務報表」）

主要業務

截至二零一九年底，華虹半導體是一家兼容200毫米與300毫米的純晶圓代工企業。正如前文「致股東的信」所提到的，並將在「董事會報告」中詳細說明，本公司如期在二零一九年四季度開始交付300毫米晶圓給客戶。華虹半導體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。其主要子公司的業務說明請參考財務報表附註1（第201-202頁）

業務回顧

營收分析

華虹半導體二零一九年度的營業收入為9.326億美元，再創公司歷史營收新高。與二零一八年相比，二零一九年本公司營收同比增長0.2%。二零一九年度是本公司毛利率連續第五年保持在30%以上。據美國著名市場研究機構IC Insights公司預測，在全球純晶圓代工行業前八大企業中，本公司是兩家保持年度銷售額正增長的公司之一。本公司二零一九年度不凡的業績來源於技術的創新、技術組合的持續優化、公司產能的擴充，以及半導體市場對本公司差異化技術需求的持續增長，主要包括MCU、超級結MOSFET、通用MOSFET和IGBT等產品。

	按服務劃分營業收入					
	二零一九年 千美元	二零一九年 %	二零一八年 千美元	二零一八年 %	同比變化 千美元	同比變化 %
半導體晶圓	906,550	97.2%	911,435	98.0%	(4,485)	(0.5)%
其他	26,017	2.8%	18,833	2.0%	7,184	38.1%
合計	932,567	100.0%	930,268	100.0%	2,299	0.2%

- 二零一九年，公司97.2%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					
	二零一九年 千美元	二零一九年 %	二零一八年 千美元	二零一八年 %	同比變化 千美元	同比變化 %
系統公司和無廠芯片設計公司	730,720	78.4%	721,334	77.5%	9,386	1.3%
整合器件製造商	201,847	21.6%	208,934	22.5%	(7,087)	(3.4)%
合計	932,567	100.0%	930,268	100.0%	2,299	0.2%

- 二零一九年來自系統公司和無廠芯片設計公司的營業收入佔比為78.4%，與二零一八年相比，同比增長1.3%。
- 來自整合器件製造商的營業收入佔比為21.6%，與二零一八年相比，同比下降3.4%。

董事會報告

按區域劃分營業收入

	二零一九年 千美元	二零一九年 %	二零一八年 千美元	二零一八年 %	同比變化 千美元	同比變化 %
中國區	546,029	58.5%	525,795	56.4%	20,234	3.8%
北美區	150,392	16.1%	161,428	17.4%	(11,036)	(6.8)%
亞洲其他區域	115,256	12.4%	117,963	12.7%	(2,707)	(2.3)%
歐洲區	70,818	7.6%	70,660	7.6%	158	0.2%
日本區	50,072	5.4%	54,422	5.9%	(4,350)	(8.0)%
合計	932,567	100.0%	930,268	100.0%	2,299	0.2%

- 二零一九年中國區是公司營收最大的市場，營收同比增長3.8%，營收增長主要來自嵌入式閃存MCU與分立器件。
- 北美區營收下滑6.8%。
- 亞洲其他區域營收下滑2.3%。
- 日本區營收下滑8.0%。

按技術類型劃分營業收入

	二零一九年 千美元	二零一九年 %	二零一八年 千美元	二零一八年 %	同比變化 千美元	同比變化 %
嵌入式非易失性存儲器	350,477	37.5%	361,341	38.7%	(10,864)	(3.0)%
分立器件	354,470	38.0%	310,488	33.4%	43,982	14.2%
模擬與電源管理	123,945	13.3%	142,131	15.3%	(18,186)	(12.8)%
邏輯與射頻	91,012	9.8%	94,549	10.2%	(3,537)	(3.7)%
獨立式非易失性存儲器	11,805	1.3%	21,261	2.3%	(9,456)	(44.5)%
其他	858	0.1%	498	0.1%	360	72.3%
合計	932,567	100.0%	930,268	100.0%	2,299	0.2%

- 二零一九年嵌入式非易失性存儲器技術是公司的主要營收來源之一，同比營收下滑3.0%。其中，MCU類產品增長突出。
- 分立器件營收同比增長達到14.2%，營收增長主要來自超級結MOSFET、IGBT和通用型MOSFET。
- 模擬和電源管理營收下滑12.8%。

按工藝節點劃分營業收入

	二零一九年 千美元	二零一九年 %	二零一八年 千美元	二零一八年 %	同比變化 千美元	同比變化 %
≤0.13μm	326,165	35.0%	331,521	35.6%	(5,356)	(1.6)%
0.15μm & 0.18μm	117,308	12.6%	131,300	14.1%	(13,992)	(10.7)%
0.25μm	10,910	1.2%	15,482	1.7%	(4,572)	(29.5)%
≥0.35μm	478,184	51.2%	451,965	48.6%	26,219	5.8%
合計	932,567	100.0%	930,268	100.0%	2,299	0.2%

- 二零一九年來自0.13微米及以下工藝節點的營收下降1.6%。
- 來自0.35微米及以上節點營收佔比進一步增加至51.2%，營收增長主要來自分立器件。
- 0.15微米與0.18微米節點營收下降10.7%。

按終端市場劃分營業收入

	二零一九年 千美元	二零一九年 %	二零一八年 千美元	二零一八年 %	同比變化 千美元	同比變化 %
消費電子	581,094	62.2%	598,031	64.3%	(16,937)	(2.8)%
工業和汽車電子	212,278	22.8%	187,930	20.2%	24,348	13.0%
通信	99,537	10.7%	99,777	10.7%	(240)	(0.2)%
計算機	39,658	4.3%	44,530	4.8%	(4,872)	(10.9)%
合計	932,567	100.0%	930,268	100.0%	2,299	0.2%

- 二零一九年公司的營業收入中最大的是消費電子市場，同比下降2.8%。其中，分立器件和嵌入式閃存MCU業績增長突出。
- 來自工業和汽車電子市場的營收持續增長13.0%，主要來自分立器件和國內MCU等的業務增長。
- 通信市場營收基本持平。
- 計算機市場營收下滑10.9%。

董事會報告

晶圓廠 (千片晶圓每月)	產能及產能利用率		
	二零一九年	二零一八年	同比變化
華虹一廠	65	65	0
華虹二廠	60	59	1
華虹三廠	53	50	3
8吋晶圓月產能合計	178	174	4
華虹七廠	10	0	10
產能利用率 (折合8吋)	91.2%	99.2%	(8.0)%

- 由於華虹七廠新產能於第四季度加入，二零一九年度產能利用率為91.2%。

千片晶圓	付運晶圓		
	二零一九年	二零一八年	同比變化
付運晶圓 (折合8吋)	1,974	2,016	(2.1)%

- 二零一九年公司付運晶圓同比下降2.1%。

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(Embedded non-volatile memory)、分立器件(Discrete)、模擬和電源管理(Analog and power management)、邏輯(Logic)和射頻(Radio Frequency, RF)等差異化技術，持續為客戶提供滿足市場需求、成本效益高的工藝技術和服務。二零一九年，華虹半導體「8吋+12吋」戰略進入了實質的發展與實施階段。

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二零一九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。在智能卡芯片方面，二零一九年90納米嵌入式閃存晶圓出貨量同比增長78%，強勢上漲，進入收獲期。具有自主知識產權的90nm嵌入式閃存技術順利完成第三代技術開發，閃存單元面積縮小40%，使得客戶在智能卡市場上繼續保持優勢，也為第三代技術轉移到12吋工廠做好準備；以95nm SONOS EEPROM技術為基礎的銀行卡產品在國產代替的市場上取得極大的成功，年出貨量近2億顆。除了進一步精進8吋平台開發外，華虹無錫廠12吋90nm嵌入式閃存工藝平台於二零一九年第四季度完成技術轉移，超過預期良率的首款智能卡芯片產品已於二零一九年底交付給客戶。65納米eFlash平台工藝與器件開發順利推進，產品所需相關配套IP正在驗證階段。

在微控制器方面，二零一九年嵌入式閃存MCU銷售額持續兩位數增長，二零一四年至二零一九年銷售額年複合增長與出貨量年複合增長率均保持兩位數增長。在智能化趨勢與物聯網應用的推動下，行業領先的0.11微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，應用在通用型MCU、Type-C接口控制芯片、攝像頭防抖控制芯片、觸控芯片、智能電表控制芯片等領域。同時，為了滿足大容量、超低漏電MCU的需求，8吋90nm超低漏電嵌入式閃存工藝已於二零一九年第四季度驗證完畢，更加豐富且細化了公司在嵌入式閃存工藝平台佈局，提升競爭力的同時為客戶提供更好的差異化服務。

華虹半導體分立器件平台主要包括通用型MOSFET、超級結MOSFET(DT-SJNFET)和IGBT等主流技術，在二零一九年繼續引領營收表現，銷售額同比增長14.2%，已經連續5年保持兩位數增長率。其中，超級結MOSFET和IGBT在二零一五年到二零一九年的銷售額以及出貨量的年複合增長率均超過50%。在二零一九年，公司持續引入了國內外領先、著重於工業與汽車電子的數家IGBT企業合作夥伴。

得益於在超級結(Super Junction, SJ)工藝方法的創新，本公司獨特的深溝槽加外延填充的優勢更加顯現出來。二零一九年，公司第4代超級結工藝研發順利，工程樣品試製成功，關鍵性能指標進一步優化30%，因此可以進一步降低客戶產品的成本和開關損耗。同時，與數家IGBT客戶在1700V溝槽式場截止(Trench Field-Stop)IGBT上展開了合作，也成功實現了規模量產，並應用於大功率工業使用場景，如風電。

二零一九年，華虹半導體功率分立器件技術在汽車電子市場屢有斬獲，低電壓MOSFET在汽車車身穩定系統(Electronic Stability Program, ESP)、SJ和IGBT在電動汽車的充電樁和逆變器市場的需求均持續成長，車用功率器件銷售額增長率同比超過100%，公司已經成為全球汽車電子功率器件客戶的可靠合作夥伴。

華虹半導體模擬和電源管理技術平台，電壓範圍從5伏特至700伏特，工藝節點覆蓋1微米至90納米。緊貼電源管理技術高集成度和智能化的趨勢，在0.35微米以及0.18微米BCD(Bipolar-CMOS-DMOS)量產技術的基礎上，推進了0.11微米和90納米BCD技術，並投入了較大的研發資源。二零一九年，在已經量產的0.18微米第二代BCD技術基礎上持續優化升級第三代工藝，達到世界領先水平，產品已面向國內外客戶。兼容嵌入式閃存的0.11微米BCD平台定位以汽車供電系統、無線充電等芯片為主，90納米BCD平台定位以數字電源、數字電機驅動等芯片為主，兩個技術平台均已完成工藝開發，並開始導入產品。

在上述主要平台技術之外，華虹半導體仍不斷拓展新的差異化技術領域。隨著智能手機多頻多模的趨勢推升了射頻前端模塊的需求，公司已開發出對應相關芯片的RF-SOI技術並持續優化，已達到國內領先地位。二零一九年隨著市場總量的增加以及旺盛的國內市場需求，已開展與數家國內客戶的緊密合作，有望成為二零二零年在射頻技術領域引領增長的新生力量。

在創新和優化現有8吋技術的同時，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半導體(無錫)有限公司，於二零一九年正式落成並邁入生產運營期。項目總投資100億美元，一期投資25億美元，是聚焦特色工藝、覆蓋90~65納米工藝節點、規劃月產能約4萬片的12吋集成電路生產線。隨著第二季度末廠房建成及設備搬入，65nm邏輯工藝在極短的時間內成功完成前後段全線貫通並投產，在第四季度創造了具有里程碑意義的銷售額貢獻。同時，也完成了90納米嵌入式閃存的技術轉移，並於二零一九年底出貨，全面支持華虹半導體全新的「8吋+12吋」戰略定位。

在專利積累方面，華虹半導體作為特色工藝領軍企業，二零一九年共申請專利370項，累計獲得中美發明授權專利超過3,400件。



董事會報告

展望

展望二零二零年，世界銀行在《全球經濟展望》中給出了世界經濟溫和增長的積極信號。全球半導體產業發展趨勢繼續保持與宏觀經濟接軌。根據市場研究機構預測二零二零年全球半導體市場將會迎來增長，全球Foundry產業也將逐步回暖。然而，由於近期新冠疫情的不確定影響，全球市場預測仍存在著諸多未知性。但非常肯定的是，隨著中國本土IC設計公司的逐步成熟，國家政策的持續支持，創新創業型企業快速增加，國內晶圓代工企業必將長期處於有利的成長環境，並保持增長態勢。

差異化特色工藝將依然是華虹宏力二零二零年的關鍵詞。8吋工藝平台方面，我們將進一步優化現有95納米和90納米等嵌入式非易失性存儲器技術，提供更小的存儲器單元、IP模塊與更精簡的工藝，全方位應對來自MCU市場的多重需求；持續開發第四代超級結技術，並針對高質量、車用IGBT導入氫注入工藝、研發逆導型IGBT(RC-IGBT)、SJ-IGBT等新一代功率分立器件技術。除了追求高壓功率器件所需的更高功率密度和更低損耗，更精益求精地開發片上集成傳感器的智能化IGBT工藝技術與更高可靠性的新型散熱IGBT技術；加大力度提高0.18微米BCD第三代工藝參數性能達到業界先進水平並滿足汽車電子要求，整合0.11微米嵌入式閃存與BCD技術，達到車規級應用要求，全面迎接混動車、電動車市場對半導體器件的成長性需求；推動RF-SOI第四代工藝向更高可靠性與持續量產方向發展，為5G等新興市場提供新生的中國力量。

華虹半導體（無錫）有限公司是華虹半導體「8吋+12吋」戰略的重要組成部分，隨著華虹無錫12吋產線的建成投產，代表著華虹半導體已經擁有了中國大陸最先進的12吋特色工藝生產線，同時也是大陸第一條12吋功率器件生產線。12吋IC + Power定位將成為公司業績成長雙引擎，提供給客戶更廣泛的差異化技術與更充足的產能。充分發揮12吋平台更小線寬特性，持續開發與優化65納米邏輯射頻工藝、90納米嵌入式閃存工藝、90納米電源管理BCD工藝、通用型MOSFET、超級結、IGBT、CIS、65納米嵌入式閃存工藝、65納米RF-SOI工藝等技術，將陸續於二零二零年進入試產與量產階段。隨著市場向好，公司也加快了12吋產線的產能擴充進度，預期能更快更好的掌握相關技術的市場機會。

在鞏固8吋平台持續創新的基礎上，12吋平台產能及差異化特色工藝的加入，使華虹半導體「8吋+12吋」戰略進入了實質的發展與實施階段。二零二零年我們將繼續推動該戰略快速有序發展，加速研發，持續為我們的客戶提供更值得信賴的產品與服務，更加多元化的工藝選擇。公司致力成為全球最具競爭力的特色工藝晶圓代工企業。

管理層討論及分析

財務表現

	二零一九年 千美元	二零一八年 千美元	變動
銷售收入	932,567	930,268	0.2%
銷售成本	(650,107)	(619,114)	5.0%
毛利	282,460	311,154	(9.2)%
其他收入及收益	69,091	43,613	58.4%
投資物業的公平值收益	163	247	(34.0)%
銷售及分銷費用	(8,828)	(7,771)	13.6%
管理費用	(169,796)	(122,323)	38.8%
其他費用	(406)	(11,106)	(96.3)%
財務費用	(1,242)	(2,203)	(43.6)%
分佔一家聯營公司溢利	10,131	9,444	7.3%
稅前溢利	181,573	221,055	(17.9)%
所得稅開支	(26,588)	(35,447)	(25.0)%
年內溢利	154,985	185,608	(16.5)%
以下各項應佔：			
母公司擁有人	162,237	183,158	(11.4)%
非控股權益	(7,252)	2,450	(396.0)%

銷售收入

銷售收入創歷史新高，達9.326億美元，較上年度增長0.2%。

毛利

毛利率30.3%，較二零一八年下降3.1個百分點，主要由於產能利用率的下降、人工費用、原材料單位成本，及折舊成本的上升，部分被平均銷售價格上升所抵銷。

其他收入及收益

其他收入及收益為6,910萬美元，較二零一八年上升58.4%，主要由於政府補貼、按公平值計入損益的金融資產取得公平值變動收益及利息收入增加。

銷售及分銷費用

銷售及分銷費用為880萬美元，較二零一八年上升13.6%，主要由於人工費用增加所致。

管理費用

管理費用為1.698億美元，較二零一八年上升38.8%，主要由於無錫工廠的人工費用、研發工程片及折舊費用增加所致。

其他費用

其他費用為40萬美元，較二零一八年下降96.3%，主要由於匯兌損失減少所致。

董事會報告

財務費用

財務費用為120萬美元，較二零一八年下降43.6%，主要由於銀行借款減少所致。

所得稅開支

所得稅開支為2,660萬美元，較二零一八年減少25.0%，主要由於應課稅溢利減少所致。

年內溢利

在上述因素的累計影響下，年內溢利由二零一八年的1.856億美元減少16.5%至1.550億美元。淨利率由20.0%下降至16.6%。

財務狀況

	二零一九年 十二月三十一日 千美元	二零一八年 十二月三十一日 千美元	變動
非流動資產			
物業、廠房及設備	1,558,283	773,180	101.5%
投資物業	168,615	171,225	(1.5)%
使用權資產	74,526	–	不適用
於一家聯營公司的投資	73,142	64,005	14.3%
指定按公平值計入其他全面收益的權益投資	207,689	208,357	(0.3)%
其他非流動資產	34,437	87,432	(60.6)%
非流動資產總額	2,116,692	1,304,199	62.3%
流動資產			
存貨	142,087	129,629	9.6%
貿易應收款項及應收票據	164,968	176,797	(6.7)%
應收關聯方款項	9,262	10,800	(14.2)%
預付款項、其他應收款項及其他資產	113,453	12,479	809.2%
按公平值計入損益的金融資產	519,779	667,033	(22.1)%
已凍結及定期存款	70,776	337	20,901.8%
現金及現金等價物	476,286	777,000	(38.7)%
流動資產總額	1,496,611	1,774,075	(15.6)%
流動負債			
貿易應付款項	86,119	79,470	8.4%
應付關聯方款項	10,655	5,838	82.5%
其他流動負債	372,343	239,890	55.2%
租賃負債	1,922	–	不適用
計息銀行借款	4,300	4,371	(1.6)%
流動負債總額	475,339	329,569	44.2%
流動資產淨額	1,021,272	1,444,506	(29.3)%
非流動負債			
計息銀行借款	21,502	26,227	(18.0)%
租賃負債	16,694	–	不適用
遞延稅項負債	17,176	18,146	(5.3)%
非流動負債總額	55,372	44,373	24.8%
淨資產	3,082,592	2,704,332	14.0%

就二零一八年十二月三十一日至二零一九年十二月三十一日同比變動超過5%的項目的闡釋

物業、廠房及設備

物業、廠房及設備由7.732億美元增至15.583億美元，主要由於建設華虹無錫所致。

使用權資產／租賃負債

使用權資產及租賃負債乃根據於二零一九年一月一日起生效的香港財務報告準則第16號的要求予以確認。根據香港財務報告準則第16號，承租人應當確認使用權資產。使用權資產是指承租人可使用相關租賃資產的權利，而租賃負債是指承租人支付租金的義務。

於一家聯營公司的投資

於一家聯營公司的投資由6,400萬美元增至7,310萬美元，主要由於分佔該聯營公司於二零一九年的溢利所致。

其他非流動資產

其他非流動資產由8,740萬美元減少至3,440萬美元，主要由於重述預付土地租賃款項為使用權資產所致。

存貨

存貨由1.296億美元增至1.421億美元，主要由於華虹無錫於二零一九年投產所致。

貿易應收款項及應收票據

貿易應收款項及應收票據由1.768億美元減少至1.650億美元，主要由於二零一九年下半年銷售收入較上年同期減少所致。

應收關聯方款項

應收關聯方款項由1,080萬美元減少至930萬美元，主要由於應收部分關聯公司的款項減少。

預付款項、其他應收款項及其他資產

預付款項、其他應收款項及其他資產由1,250萬美元增至1.135億美元，主要由於待抵扣進項稅的增加。

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由6.670億美元減少至5.198億美元，主要由於收回金融產品投資所致。

已凍結及定期存款

已凍結及定期存款由30萬美元增加至7,080萬美元，主要由於定期存款投資所致。



董事會報告

現金及現金等價物

現金及現金等價物由7.770億美元減少至4.763億美元，主要由於以下現金流量分析所述之原因。

貿易應付款項

貿易應付款項由7,950萬美元增至8,610萬美元，主要由於華虹無錫採購存貨增加所致。

應付關聯方款項

應付關聯方款項由580萬美元增加至1,070萬美元，主要由於應付華虹無錫關聯供應商的款項增加所致。

其他流動負債

其他流動負債由2.399億美元增至3.723億美元，主要由於資本開支應付款項增加所致。

計息銀行借款

計息銀行借款總額由3,060萬美元減少至2,580萬美元，主要由於償還銀行借款所致。

遞延稅項負債

遞延稅項負債主要包含預估分派股息之代扣代繳稅金，其金額由1,810萬美元減少至1,720萬美元，主要由於(i)轉回以前年度計提的代扣代繳稅金及(ii)二零一八年股息所繳納之稅項，部分被二零一九年計提代扣代繳稅金所抵銷。

現金流量

	二零一九年 千美元	二零一八年 千美元	變動
經營活動所得現金流量淨額	162,934	274,400	(40.6)%
投資活動所用現金流量淨額	(722,587)	(717,239)	0.7%
融資活動所得現金流量淨額	262,898	865,010	(69.6)%
現金及現金等價物(減少)/增加淨額	(296,755)	422,171	(170.3)%
年初現金及現金等價物	777,000	374,890	107.3%
外匯匯率變動影響，淨額	(3,959)	(20,061)	(80.3)%
年末現金及現金等價物	476,286	777,000	(38.7)%

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1.629億美元，較二零一八年減少40.6%，主要由於待抵扣增值稅進項稅的支付、原材料、人工開支，及經營開支增加，部分被貿易應收款項的強力收回所抵銷。

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7.226億美元，主要用於(i)按公平值計入損益的金融資產投資25.325億美元；(ii)資本投資9.223億美元，及(iii)定期存款投資7,000萬美元，被(i)收回按公平值計入損益之金融資產投資26.894億美元；(ii)收到政府補助9,450萬美元；(iii)利息收入1,740萬美元；及(iv)出售設備所得款項80萬美元所抵銷。

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2.629億美元，包括(i)華虹無錫收到注資3.170億美元；及(ii)發行股份所得款項260萬美元，被(i)支付股息5,100萬美元；(ii)償還銀行借款430萬美元；(iii)租賃負債開支90萬美元；及(iv)利息開支50萬美元所抵銷。

現金及現金等價物減少淨額

在上述因素的累計影響下，現金及現金等價物由截至二零一八年十二月三十一日的7.770億美元減少至截至二零一九年十二月三十一日的4.763億美元。



董事會報告

財務風險

外幣風險

我們面臨外匯風險。該等風險主要產生自華虹宏力以美元而非以其功能貨幣－人民幣進行的買賣。截至二零一九年十二月三十一日，倘美元對人民幣升值或貶值5%，而其他變量維持不變，我們的年內稅前溢利將分別增加或減少約1,080萬美元。

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及計入預付款項、按金及其他應收款項、應收關聯方款項以及已凍結及定期存款等金融資產的賬面值。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。於年內，本集團管理資本的目標、政策或程序概無任何變動。

資本負債比率

資本負債比率的詳情見財務報表附註38。

業績

本集團截至二零一九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193至196頁的財務報表。

末期股息

鑒於公司「8吋+12吋」的重要戰略規劃及目前全球經濟受新冠疫情影響的不確定性，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，董事會不建議派發截至二零一九年十二月三十一日止年度之任何股息（二零一八年：每股0.31港元）。公司會保持足夠安全的現金儲備，並持續投資，為疫情過後的市場回暖做好準備，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

截至二零一九年十二月三十一日，本公司並無可供分派儲備可供分派予股東。

銀行貸款及其他借貸

本集團的銀行貸款及其他借貸於二零一九年十二月三十一日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308頁。本摘要並不構成經審核財務報表之一部份。

董事會報告

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二零一九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	按於二零一五年三月八日屆滿的土地使用權持有	100%	91,563.11

報告期後重大事項

本集團於二零一九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

本公司截至二零一九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之金額列入股本中，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。在股票授予日（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，作為購股權授出的代價。

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47,440,029股，佔已發行股份總數的約3.67%。

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（佔本公司截至二零一九年十二月三十一日止已發行股份的2.35%）。

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。

董事會報告

每股行使價6.912港元較以下較高者溢價0%：(i)於購股權授予日期聯交所每日報價表所報每股收市價6.87港元；及(ii)於緊接授予日期前五個交易日聯交所每日報價表所報本公司普通股的平均每股收市價6.912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（佔本公司截至二零一九年十二月三十一日止已發行股份的2.68%）
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）及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)於購股權授予日期聯交所每日報價表所報每股收市價14.440港元；及(ii)於緊接授予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15.056港元；及(iii)股份的面值。

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

授出日期：	二零一九年三月二十九日
所授出購股權的行使價：	18.400港元
所授出購股權的數目：	500,000份（佔本公司截至二零一九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（計七年），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三月二十九日、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

* 二零一九年三月購股權指本報告財務報表所載之「二零一八年A部分」。

每股行使價18.400港元為以下各項的較高者：(i)於購股權授予日期聯交所每日報價表所報每股收市價18.400港元；及(ii)於緊接授予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18.176港元；及(iii)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（佔本公司截至二零一九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)於購股權授予日期聯交所每日報價表所報每股收市價17.260港元；及(ii)於緊接授予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17.952港元；及(iii)股份的面值。

於二零一五年購股權、二零一八年購股權及二零一九年三月購股權中，分別988,000份⁽¹⁾、680,000份⁽²⁾及500,000份購股權已授予本公司董事，惟須待彼等接納。

* 授予董事及主要管理人員之二零一九年十二月購股權以及授予其他僱員之二零一九年十二月購股權分別指本報告財務報表所載之「二零一八年B部分」及「二零一八年C部分」。

(1) 其中，869,000份購股權已授予王煜先生，其已於二零一九年五月一日辭任本公司執行董事兼總裁。

(2) 其中，600,000份購股權已授予王煜先生，其已於二零一九年五月一日辭任本公司執行董事兼總裁。

董事會報告

購股權於截至二零一九年十二月三十一日止年度的變動詳情如下：

參與者之姓名或類別	購股權數目										購股權之行使期	緊接購股權行使日期前的股份加權平均收市價			
	於二零一五年九月四日授出	於二零一八年十二月二十四日授出	於二零一九年三月二十九日授出	於二零一九年十二月二十三日授出	於二零一五年註銷	於二零一六年註銷	於二零一七年註銷	於二零一八年註銷	期內行使	期內註銷			期內失效	於二零一九年一月一日尚未行使	於二零一九年十二月三十一日尚未行使
董事															
廖均君先生			500,000									500,000	二零二一年三月二十九日至二零二六年三月二十八日	18.400港元	-
森田隆之先生	119,000											119,000	二零一七年九月四日至二零二二年九月三日	6.912港元	-
		80,000										80,000	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	15.056港元	-
王煜先生*	669,000								669,000			669,000	二零一七年九月四日至二零二二年九月三日	6.912港元	14.150港元
		600,000								(600,000)		600,000	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	15.056港元	-
其他僱員	29,262,000				(130,000)	(1,458,000)	(1,188,399)	(753,995)	4,198,335	(57,666)	(334)	18,084,362	二零一七年九月四日至二零二二年九月三日	6.912港元	17.022港元
		33,820,000								(1,035,000)		33,820,000	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	15.056港元	-
				2,482,000						(36,000)		2,446,000	二零二一年十二月二十三日	17.952港元	-
總數	30,250,000	34,500,000	500,000	2,482,000	(130,000)	(1,458,000)	(1,188,399)	(753,995)	4,867,335	(1,728,666)	(334)	53,372,362	49,758,027		

* 授出的以權益結算購股權之公平值為2,476,000美元，乃於授出日期採用二項式模式估計。購股權的價值受二項式模式及多項主觀及不確定假設的限制。有關假設變動可對購股權的價值產生重大影響。

王煜先生於二零一九年五月一日辭任本公司執行董事兼總裁。

除上文披露者外，本公司於截至二零一九年十二月三十一日止年度並未採納任何其他購股權計劃。

儲備

本集團截至二零一九年十二月三十一日止年度的儲備變動詳情載於本報告第197至198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書中披露有關與華虹摯芯、矽睿科技、儀電集團、上海華力、華虹置業及上海華錦物業管理有限公司（「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）就有關持續關連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二零一九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	二零一九年 實際交易金額	二零一九年 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)	華虹摯芯為本公司控股股東華虹集團持有90.66%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。	2,895,000美元	13,230,000美元
(2)	二零一七年一月一日	矽睿科技(買方) 本公司(賣方)	矽睿科技由本公司控股股東上海聯和持有36.36%權益，其中27.27%權益由上海聯和直接持有，9.09%權益則由本公司直接持有。	本公司(賣方)與矽睿科技(買方)簽署的銷售協議，有關向矽睿科技銷售集成電路及其他半導體產品。	1,810,000美元	9,600,000美元
(3)	二零一七年一月一日	華虹摯芯(賣方) 本公司(買方)	華虹摯芯為本公司控股股東華虹集團持有90.66%權益的子公司。	華虹摯芯(賣方)與本公司(買方)簽署的採購協議，有關採購用於生產本集團半導體產品的原料。	476,000美元	740,000美元
(4)	二零一七年一月一日	儀電集團 (代表其本身及其子公司*)(賣方) 本公司(買方)	儀電集團為本公司控股股東。	儀電集團(賣方)(代表其本身及其子公司)與本公司(買方)簽署的採購協議，有關採購物品和服務。	4,362,000美元	5,800,000美元
(5)	二零一九年 九月二十七日	上海華力(賣方) 華虹無錫(買方)	上海華力53.42%的權益為本公司控股股東華虹集團持有。	上海華力與華虹無錫達成晶圓代工服務協議，在合同約定期間替華虹無錫提供工藝服務以及工程晶圓代工服務。	8,698,000美元	9,000,000美元

* 包括上海儀電智能電子有限公司、上海南洋軟件系統集成有限公司及上海南洋萬邦軟件技術有限公司。

董事會報告

交易	交易日期	交易雙方	關連關係	交易	二零一九年 實際交易金額	二零一九年 建議年度上限
(6)	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(承租方) 本公司(出租方)	上海華力53.42%的權益為本公司控股股東 華虹集團持有。	上海華力(承租方)與本公司(出租方)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86,347,000元 (約12,536,000美元)	人民幣92,000,000元 (約13,295,000美元)
(7)	二零一七年二月十五日	上海華力(承租方) 華虹宏力(出租方)	上海華力53.42%的權益為本公司控股股東 華虹集團持有。	上海華力(承租方)與華虹宏力(出租方) 簽署的租賃協議，有關華虹宏力將總建築 面積為820平方米的若干潔淨室租予上海華 力及向其提供相關能源服務及材料。	人民幣4,135,000元 (約603,000美元)	人民幣22,000,000元 (約3,179,000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(作為出租方) 本公司(作為承租方)	華虹置業為華虹科技發展的全資子公司， 華虹科技發展由我們控股股東華虹集團持 有50%並與其合併報表及由華虹宏力持有 50%的公司。	華虹置業(作為出租人)與本公司(作為承 租人)訂立的租賃協議，內容有關本公司向 華虹置業租賃位於中國上海浦東新區錦綉 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11,198,000元 (約1,625,000美元)*	人民幣13,000,000元 (約1,879,000美元)
(9)	二零一九年一月一日	華錦物業管理 (作為物業管理公司) 本公司(作為承包商)	華錦物業管理為華虹科技發展的全資子公 司，華虹科技發展由我們控股股東華虹集 團持有50%並與其合併報表及由華虹宏力 持有50%的公司。	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，內 容有關本集團委聘華錦物業管理就宿舍物 業提供物業管理服務。	人民幣1,502,000元 (約218,000美元)	人民幣2,000,000元 (約289,000美元)

* 本集團就華虹置業的若干宿舍物業訂立一項為期二十年的租約。本集團根據該項租約應付的租金為每年1,625,000美元。隨著香港財務報告準則第16號的初步採納，本集團已於二零一九年一月一日就經營租賃確認使用權資產16,922,000美元及租賃負債17,049,000美元。於二零一九年十二月三十一日，該等使用權資產及租賃負債的結餘分別為15,538,000美元及17,595,000美元。於二零一九年一月一日前，本集團已根據香港會計準則第17號按租賃年期以直線法確認經營租賃項下租金開支。

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二零一九年持續進行：

- (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，認為就上文所述於二零一九年訂立之持續關連交易：

- (i) 核數師並不知悉任何事項使核數師相信，已披露的持續關連交易尚未得到本公司董事會的批准；
- (ii) 就涉及本集團提供商品或服務的交易而言，核數師並不知悉任何事項使核數師相信，這些交易未能在所有重大方面符合本公司的定價政策；
- (iii) 核數師並不知悉任何事項使核數師相信，這些交易的訂立未能在所有重大方面符合關於這些交易的相關協議的規定；及
- (iv) 就各持續關連交易之總額而言，核數師並不知悉任何事項使核數師相信，對於已披露的持續關連交易，其交易金額已超過招股章程所披露的相應年度交易總額上限。

關聯方交易

於截至二零一九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。本集團於截至二零一九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」一段所披露者外，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

股權投資及按公平值計入損益之表現

下表載列截至二零一九年十二月三十一日止年度有關股權投資及按公平值計入損益之表現詳情。

	上海華力 (千美元)	矽睿科技 (千美元)	從銀行購買的 保本的結構性存款 和理財產品(「產品」) (千美元)
初始投資成本	229,133	1,704	516,040
於年初之賬面值	205,973	2,384	667,033
購買	-	-	2,532,504
贖回	-	-	(2,689,442)
公平值變動	2,708	-	23,989
匯兌調整	(3,337)	(39)	(14,305)
於年末之賬面值	205,344	2,345	519,779
已收股息	-	-	-
出售之收益	-	-	19,965
股份百分比*	6.3428%	2.18%	不適用
與本公司資產總值比較之規模	5.7%	0.1%	14.4%

* 分別指本公司於上海華力及矽睿科技所持股份之百分比

截至二零一九年十二月三十一日止年度，本集團並未出售上海華力或矽睿科技之任何股份。本公司於上海華力及矽睿科技股權投資之公平值增值分別為2,708,000美元及零。

上海華力起步於2010年。作為行業內領先的積體電路晶片製造企業，上海華力擁有先進的工藝制程和完備的解決方案，專注於為涉及公司、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片製造技術服務。上海華力在中國有兩座12吋全自動晶圓工廠。

於二零一九年財政年度，儘管本公司於上海華力股權投資公平值增加2,708,000美元，但由於人民幣貶值，本公司股權投資賬面值減少629,000美元。總體而言，二零一九年上海華力穩步發展。因此，董事會認為，上海華力於二零一九年財政年度之表現符合預期。

矽睿科技致力於研製用於物聯網以及工業及汽車應用的優質傳感器、新興傳感器及智能傳感器系統。二零一八年，矽睿科技被評為中國十大MEMS企業。與於上海華力投資類似，匯率上升導致外幣報表虧損約39,000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二零一九年的業績表現及戰略規劃符合預期。

就按公平值計入損益的產品而言，該等產品通常為保本型短期低風險投資產品，其利率高於現行利率。該等產品於二零一九年的公平值增加23,989,000美元。該等金融產品於二零一九年的表現與其條款及條件所載的預期回報率一致，且符合管理層的預期。

本公司確認，其已遵守本公司截至二零一九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（根據香港財務報告準則第9號自二零一八年一月一日起適用的政策）。

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

股東週年大會將於二零二零年五月十四日（星期四）舉行。

暫停辦理股份過戶登記手續

為確保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

暫停辦理股份過戶登記手續

記錄日期

二零二零年五月八日下午四時三十分

二零二零年五月十一日至十四日（包括首尾兩日）

二零二零年五月十四日

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：

杜洋先生

森田隆之先生

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

董事會報告

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。

王靖女士、森田隆之先生、葉峻先生及王桂壘先生將於股東週年大會上輪席退任董事職務，王靖女士、森田隆之先生、葉峻先生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104至110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。

董事及最高行政人員於本公司股份及相關股份的權益

於二零一九年十二月三十一日，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%
森田隆之先生	實益擁有人	199,000	0.02%

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二零一九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，董事確認他們於二零一九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。

子公司的董事

於截至二零一九年十二月三十一日止年度或於二零一九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



董事會報告

子公司名稱	註冊成立地點	董事姓名
力鴻科技有限公司（「力鴻科技」）	中國香港	王鼎先生 傅城先生
HHGrace Semiconductor USA, Inc.（「HHGrace USA」）	美國加州	王鼎先生 傅城先生
HHGrace Semiconductor Japan Co., Ltd. （「HHGrace Japan」）	日本東京	中村真紀女士 王鼎先生 傅城先生
上海華傑芯片技術服務有限公司（「上海華傑」）	中國上海	范恒先生
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 魏麟懿先生 王靖女士 湯興良先生 袁紅霞女士

主要股東及其他人士於本公司股份和相關股份的權益

於二零一九年十二月三十一日，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⁾	27.19%
上海華虹（集團）有限公司（「華虹集團」） ⁽²⁾	受控制法團權益	350,401,100 ⁽¹⁾	27.19%
上海儀電（集團）有限公司（「儀電集團」） ⁽²⁾	受控制法團權益	350,401,100 ⁽¹⁾	27.19%
Sino-Alliance International, Ltd. （「Sino-Alliance International」）	法定及實益擁有人	160,545,541 ⁽¹⁾⁽³⁾	12.46%
Sino-Alliance International, Ltd. （「Sino-Alliance International」）	受控制法團權益	34,919,354 ⁽¹⁾	2.71%
上海聯和投資有限公司（「上海聯和」）	受控制法團權益	545,865,995 ⁽¹⁾⁽⁴⁾	42.35%
鑫芯（香港）投資有限公司	法定及實益擁有人	242,398,925 ⁽¹⁾	18.81%
巽鑫（上海）投資有限公司	受控制法團權益	242,398,925 ⁽¹⁾	18.81%
國家集成電路產業投資基金股份有限公司	受控制法團權益	242,398,925 ⁽¹⁾	18.81%
NEC Corporation	法定及實益擁有人	99,038,800 ⁽¹⁾	7.68%

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。於二零一九年十二月三十一日，華虹集團由上海聯和擁有81.34%股權。根據證券及期貨條例第XV部，上海聯和被視為於有關股份中擁有權益。
- (3) Sino-Alliance International股數包含因託管安排而代為持有3,084股股份。
- (4) 除透過華虹國際間接持有350,401,100股股份(27.19%)外，上海聯和透過四家全資子公司包括Sino-Alliance International間接持有本公司權益。

* 百分比乃按本公司於二零一九年十二月三十一日已發行的股份總數（即1,288,819,560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，於二零一九年十二月三十一日，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

於截至二零一九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

於截至二零一九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

截至二零一九年十二月三十一日，本集團僱用合共5,138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二零一九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

截至二零一九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。

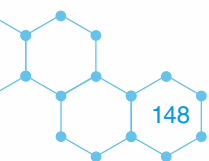
企業管治

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。

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

環境、社會及管治因素是評估一間企業的三大關鍵指標。本公司相信環境、社會及管治措施至關重要，可為我們的業務帶來成功並為本公司創造長久的價值。有關本公司二零一九年度所採納的環境、社會及管治常規的詳細資料，載於二零一九年度環境、社會及管治報告。

華虹半導體致力於通過綠色、有效的運營實踐，降低自身經營對環境所造成的負面影響。公司建立了完善的環境管理體系，建立廢氣處理系統，委託有處理資質的第三方公司對運營廢棄物進行處理，積極開展各類節能、節水技改，並持續投入綠色產品的開發與推廣。

二零一九年，公司榮獲美國綠色建築委員會(USGBC)認證的「能源與環境設計先鋒」(LEED v4)金獎、中國城市科學研究院認證的「二星級綠色建築設計標識證書」以及上海市節能減排標桿企業殊榮。為促進清潔生產，公司在節能減排方面持續投入，有效實現溫室氣體減排。此外，在綠色產品推廣方面，公司二零一九年客戶有害物質調查符合率達100%，所有製造設施均被認為符合QC 080000電子電器組件和產品危害物質減免標準和要求。

遵守不競爭契據及優先購買權契據

本公司的控股股東華虹集團、上海聯和及儀電集團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。本公司於截至二零一九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。

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
二零二零年三月二十六日

2019年環境、社會及管治報告

緒論

我們的可持續發展理念是在經濟、環境及社會三個方面同時取得成就，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，及時呼應客戶、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。

1 社會責任管理體系

1.1 社會責任政策

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。

1.2 社會責任管理機制

有效的社會責任管理離不開高層重視與全員參與。我們成立企業社會責任工作組，形成管理層參與，橫向協調各職能部門，縱向覆蓋各下屬公司的企業社會責任組織體系，工作組人員來自各職能部門的負責人。



責任管理架構



2019年環境、社會及管治報告

在社會責任決策層董事會制定的公司願景－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：

為客戶創造“芯”夢想

品質產品服務
客戶權益保障
繁榮產業經濟



為股東創造“新”利潤

創新驅動發展
夯實誠信經營
共享中國發展



為員工實現“心”價值

尊重員工價值
關愛員工成長
保障職業健康



為社會構建“欣”生態

推動綠色發展
資源高效利用
共促社會和諧



華虹半導體社會責任規劃實施重點



2019年環境、社會及管治報告

1.2 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、職代會活動、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

1.3 風險管理／實質性議題識別與分析

風險管理

我們不斷完善風險管理的組織體系，改進流程與制度，切實提升全面風險管理能力。自二零一六年，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。

二零一九年，公司啟動對子公司華虹半導體（無錫）有限公司的風控體系建設，依據三道防線理論，初步形成風控體系；開展覆蓋上海與無錫兩地的年度全面風險評估；通過設計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；開展兩次風險培訓，上海、無錫兩地公司各級管理人員共20人參與，培訓內容包括現有風險管理體系的運作、探討典型風險事件等。

2019年環境、社會及管治報告

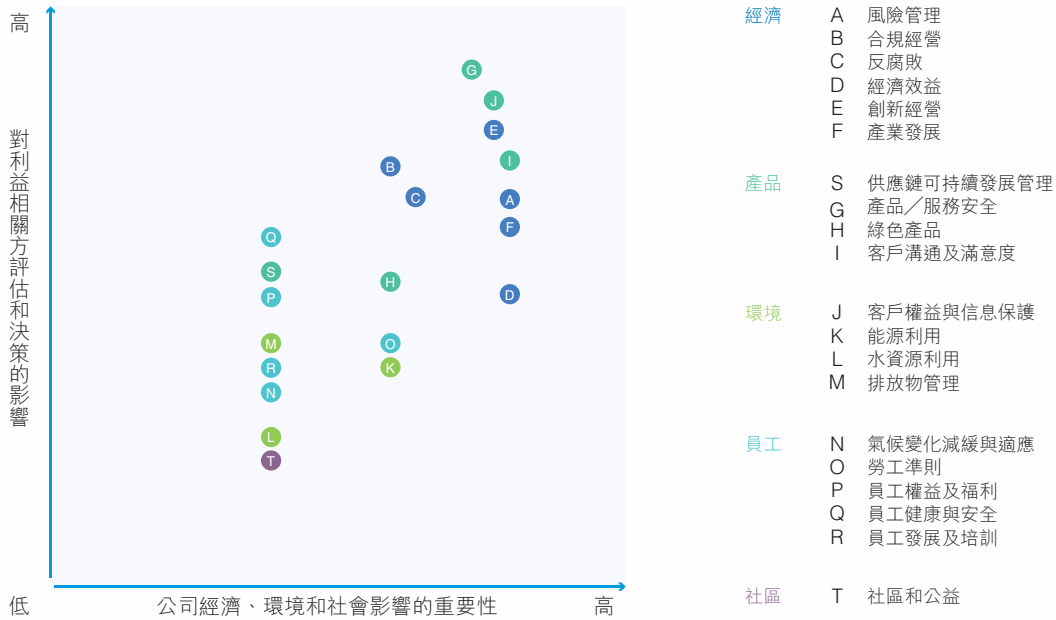
公司的主要運營風險及管理方法

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
	投資決定	我們進行審慎的投前分析、持續的流程監督和有效的投後評估，以多管齊下的方式將投資風險控制在可接受的範圍內
	監督與管理體系	完善的制度及流程，三道防線風險管理體系，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
	信息安全	公司根據信息安全管理規則，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，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	完善的研發機閉環制，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
	知識產權	完善的知識產權保護意識及管理流程，合理保護公司自身及客戶的知識產權
財務	資金流動	每月現金流動表，記錄現金流動，併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
工程風險	無錫工程項目管理	公司管理層始終高度關注無錫工程項目並優先調配資源，在項目進度、投資支出、採購合規等重要控制節點均有專人持續監控，確保工程進度、質量及成本控制達到既定目標。

2019年環境、社會及管治報告

實質性議題識別與分析

我們定期進行社會責任議題檢查工作，通過定期分析，綜合考慮公司戰略和運營方向，利益相關方關注的重點和期望，以及應當遵循的國內、國際標準和政策等內外部因素，按照識別、評估和篩選的程序，界定具有較強實質性的社會責任議題作為我們的行動及報告披露重點。



2019年環境、社會及管治報告

2 環境責任

公司以保護環境為己任，遵守環境保護相關法律法規及行業準則，高效利用能源和其他資源，重視污染預防，持續投入綠色產品的開發與推廣，降低自身經營對環境所造成的負面影響，為實現企業和社會的可持續發展努力。




2.1 環境管理體系

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ISO 14001:2015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，該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，進行後續整改的跟蹤記錄。

二零一九年，公司堅持創新發展、綠色發展的宗旨，通過開展各類節能減排小組活動，實現清潔生產，並在上海市節能減排(JJ)小組活動中榮獲上海市節能減排標桿企業殊榮。

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。

環境責任相關認證情況

環境管理	認證單位	初次通過認證時間
 ISO 14001 : 2015 環境管理體系	British Standards Institutions (BSI)	2002/4/26
綠色建築	認證單位	初次通過認證時間
 “能源與環境設計先鋒” (LEED v4) 金獎	美國綠色建築委員會 (USGBC)	2019/10
 二星級綠色建築設計標識證書	中國城市科學研究院	2019/12
綠色產品	認證單位	初次通過認證時間
 QC 080000 有害物質過程管理體系	BSI	2009/11/18

2019年環境、社會及管治報告

綠色建築

公司致力於打造成為綠色技術、綠色生產、綠色建築、綠色產業等全方位的綠色企業。華虹半導體（無錫）有限公司承攬的12英寸生產線（華虹七廠）嚴格遵照LEED認證的要求進行設計與建造以其建築及配套廠務設施設計的綠色節能的特點，榮獲美國綠色建築委員會(USGBC)認證的「能源與環境設計先鋒」(LEED v4)金獎。同時，在工程師樓(E1)設計和建造中堅持綠色與節能理念，加大創新力度和新材料、新設備、新技術的推廣運用，最終憑借100%的生活熱水的可再生能源利用率，65%的建築節能率，56.19%的非傳統水源利用率等優秀環境績效，獲得中國城市科學研究院認證的「二星級綠色建築設計標識證書」。

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，實行環保措施。

綠色文化實踐

節約辦公用紙

- 推行信息化辦公，減少紙張使用。
- 大力提倡使用再生紙張，包括打印員工名片等，以支持循環再造。

節約用電

- 下班或長時間離開時關閉電源。
- 合理設置空調溫度，夏季不低於26℃，冬季不高於20℃。

節約用水

- 培養員工的節約意識，張貼節約用水貼士。

廢棄物處置

- 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

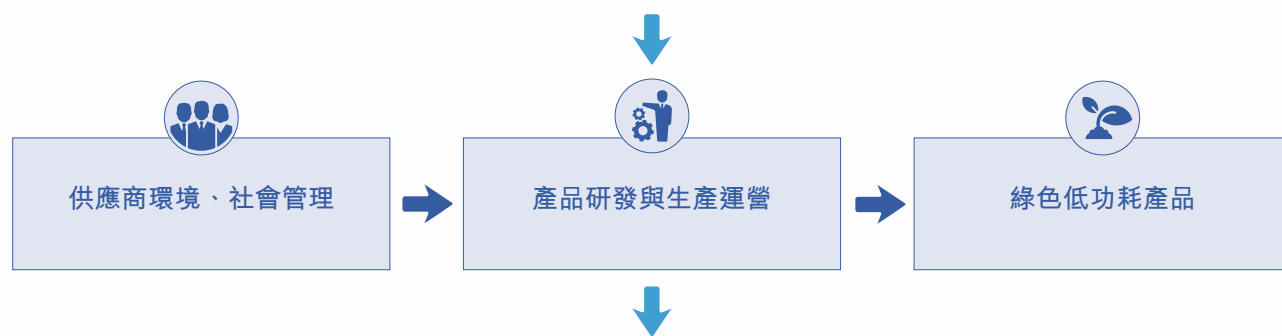
- 鼓勵員工使用公共交通上下班。
- 公司班車使用新能源汽車。

2019年環境、社會及管治報告

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，我們也考慮促進供應商的環境管理，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。

水資源	
用水總量	7,724,830 立方米
其中·市政用水	4,791,336 立方米
廢水回用	2,933,494 立方米
單位產品用水量	2.46 立方米/8 英寸晶圓
循環用水量	2,823,278 立方米
能源	
用電總量	528,044 兆瓦時
單位產品用電量	271.14 千瓦時/8 英寸晶圓
天然氣用量	8,138,435 立方米
單位產品天然氣用量	4.18 立方米/8 英寸晶圓
包裝材料	
製成品包裝材料使用總量	110 噸
其他原材料	
硅片、石英、靶材、氣體、化學品等生產原材料	



廢棄物	
有害廢棄物總量	5,013 噸
單位產品有害廢棄物產生量	2.57 千克/8 英寸晶圓
無害廢棄物總量	3,595 噸
單位產品無害廢棄物產生量	1.80 千克/8 英寸晶圓
廢氣	
廢氣排放總量	1,257,074 立方米
氮氧化物 (NO _x) 排放量	19,383 千克
二氧化硫 (SO ₂) 排放量	72.50 千克
溫室氣體	
溫室氣體排放量	449,339 噸二氧化碳當量
單位產品溫室氣體排放量	0.23 噸二氧化碳當量/8 英寸晶圓
廢水	
廢水排放總量	431 萬立方米

2019年環境、社會及管治報告

2.2 清潔生產

廢氣與廢水排放

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，我們已建立廢氣處理系統，全部滿足達標排放的管理要求，其中VOCs的設計去除效率達到90%以上。在廢水排放方面，公司於二零一七年開始執行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。

二零一九年，公司修訂《廢氣排放管理規程》、《廢氣排放管理規程》，進一步完善對廢氣、廢水的排放控制與處理。此外，華虹二廠、華虹三廠完成了清潔生產審核，並根據審核結果採取一系列改善措施，包括落實安裝VOCs在線檢測裝置等。

污染物排放管理

類型	處理方式
廢氣	酸性廢氣 鹼性廢氣（主要為氨氣） 有機廢氣 粉塵廢氣（主要為二氧化矽的細小顆粒物）
廢水	pH，COD，氨氮，氟離子等

2019年減少排放工作及成果

具體措施	取得成效
鍋爐煙氣再循環改造	↓ 80% 氮排放量
鍋爐低NO _x 改造	≤50毫克／立方米 鍋爐NO _x 排放值保持

2019年環境、社會及管治報告

廢棄物管理

晶圓的生產過程會產生廢酸、廢異丙醇等危險廢棄物，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。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。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。公司自二零一七年開始每年開展針對各類危險廢棄物的削減排放工作，二零一九年完成削減廢光刻膠、含砷廢物等共96.13噸。

此外，公司委託上海市浦東新區廢棄物管理中心定期對生活垃圾、廚餘垃圾進行統一清運。

有害廢棄物處理方式

處理方式	有害廢棄物類型
利用	如，廢酸液、異丙醇、廢磷酸
物化	如，廢玻璃瓶、200L化學桶、實驗室廢液
焚燒	如，抹布、塑料瓶、有機廢液、廢活性炭、廢樹脂、含砷廢物

碳排放

CO₂等溫室氣體的大量排放是造成全球氣候變化的重要原因。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。我們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。二零一九年公司已完成二零一八年度的碳額度履約量約為449,343噸。

公司亦依照上海市發改委碳交易管理辦法制定了減排目標，通過開展節能減排項目減少溫室氣體排放，二零一九年在節能減排技術改造上共投入約580萬元人民幣。

2019年環境、社會及管治報告

2.3 節約資源

能源管理

公司能源消耗主要是電力、熱力、天然氣（及少量汽油、柴油），制定了《資源、能源管理程序》，明確了資源、能源管理的原則，即本着節能降耗減廢的原則，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時減少對環境的影響。該等措施將促進與環境相和諧的持續發展。此外，公司響應上海市政府二零二零年能源總量控制和能源利用效率提升目標，制定了公司在「十三五」期間的節能目標，即到二零二零年，公司萬元產值綜合能耗將較二零一五年下降12%，8英寸集成電路晶圓生產單耗較2015年下降13%，並委託第三方機構對公司進行能源審計，提出節能技改方案。

2019年能源節約工作及成果

工廠	具體措施	取得成效
華虹一廠	• DRK ASP-CH取消WALL CHILLER	171,000 千瓦時 全年節電
	• WAT測試時間消滅	147,000 千瓦時 全年節電
華虹二廠	• 延長鋁銅套件使用壽命，減少套件清洗用水和化學品項目	228,000 千瓦時 全年節電
	• 純水定量槽由冷純水（電加熱）改為溫純水	25,000 千瓦時 全年節電
華虹三廠	• 各電氣室、DUPS、發電機機房照明節能管制	199,000 千瓦時 全年節電
	• 閃存平台源漏離子注入光刻工藝制程優化	350,000 千瓦時 全年節電

註：

華虹七廠因二零一九年9月份正式投產，截至報告期末還沒有全年節能成效數據，故未包含在此表中。

2019年環境、社會及管治報告

水資源管理

公司的用水主要來源是市政供水，此外還有少部分來源於純水製造過程中的回收用水和空調冷凝水。我們通過技術改進、循環利用等方式，積極尋求企業自身節水和水資源利用效率的提高。公司開展水循環利用，將純水回收用於工藝制程、其他（空調冷凝水）用於冷卻塔補水，全年循環用水量282萬立方米。

2019年水資源節約工作及成果^註

工廠	具體措施	取得成效
華虹一廠	• MN0665X銀行卡產品良率提升	1,100噸 全年節水
	• POWER MOS Poly 12K轉8K	300噸 全年節水
	• 冷卻塔節水項目	85,000噸 全年節水
華虹二廠	• 純水RO-3濃水再利用於EPI Scrubber	52,300噸 全年節水
	• 純水RO-4濃水再利用於含氟廢水處理系統石灰溶解和稀釋	29,200噸 全年節水
華虹三廠	• 分柵溝槽功率器件轉移以及清洗工藝優化	7,200噸 全年節水
	• Ebara tool cleaner 2 pencil self-clean水流量降低項目	1,200噸 全年節水

註：

華虹七廠因二零一九年九月份正式投產，截至報告期末還沒有全年節水成效數據，故未包含在此表中。

2.4 綠色產品

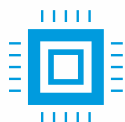
面對全球氣候變化帶來的風險以及社會日益旺盛的節能減排需求，降低電子電器產品的高能耗成為當前業界關注的焦點之一。在專業集成電路製造服務領域，公司致力於實施覆蓋從原材料採購及生產到廢棄環節的全生命周期環境管理，不斷優化其晶圓製造技術、降低產品體積，提高產品在終端運用的能效，為客戶創造功耗、效能以及芯片尺寸優化的競爭優勢的同時，降低科技進步對環境所造成的衝擊，助力構造低碳環保社會。

產品全生命周期環境管理



原材料入庫

- 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》。



產品生產

- 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。



產品運輸

- 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。



終端產品使用

- 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



產品廢棄

- 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。



2019年環境、社會及管治報告

有害物質管控

我們根據歐盟制定的《關於限制在電子電器設備中使用某些有害成分的指令》(RoHS, Restriction of Hazardous Substances)、《化學品的註冊、評估、授權和限制》(REACH, Registration, Evaluation, Authorisation and Restriction of Chemicals)以及客戶要求等，建立了有害物質管理體系以及有害物質管理標準。

公司建立電子化系統，針對不同的原材料做分級管理，要求供應商定期提供相應的《不含有害物質承諾書》以及相關檢測報告，從源頭管控，確保產品符合法規和客戶對有害物質管理的要求。

此外，公司每年委託認證服務機構SGS (Société Générale de Surveillance S.A.) 對生產的產品進行有害物質的檢測，二零一九年客戶有害物質調查符合率達100%。公司的所有製造設施均被認定為符合QC 080000電子電器組件和產品危害物質減免標準和要求。

3 員工責任

員工是公司的寶貴資源，我們遵照相關法律法規，致力於打造和諧、友好、共贏的文化氛圍。保障員工權益，採取各種措施保障員工的職業健康和 safety，構建多元化職業發展路徑，並提供溫馨舒適的工作環境，促進個人目標和企業價值雙實現。

截至報告期末，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。

3.1 員工權益與福利

我們在員工招聘和僱傭中堅持公平、公正、公開的原則，承諾在招聘、錄用、晉升、調動、薪資等方面提供平等機會，不因國籍、地域、膚色、民族、宗教、年齡、家庭狀況或其他因素而存在歧視政策或行為。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；我們嚴格遵循《中華人民共和國勞動法》、《女職工勞動保護特別規定》等法律法規，杜絕一切強制勞動行為的發生。截止報告期末，公司擁有正式員工5,138人。

員工權益與福利制度概覽



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。



福利

五險一金、意外險等商業補充保險、員工療養、節日慰問禮品、幫助外地員工落戶等。



工時

標準工時制度，部分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。



休息休假

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。

和諧關係

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。

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。

2019年環境、社會及管治報告

3.2 健康、安全與員工福祉

職業健康與安全管理

公司建立了符合OHSAS 18001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。二零一九年，為應對OHSAS 18001向ISO 45001的升級轉版，公司按照新標要求對內部管理制度進行完善，涉及風險、機遇和危險源的識別和評價等內容，並組織員工系統學習新版標準。

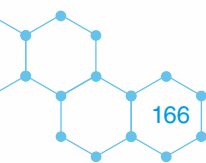
職業健康與安全管理體系

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。

組織體系	成立安全健康環境委員會，並落實安全例會制度。	制度建設	逐級簽署《安全責任書》和全體員工的《安全承諾書》，落實安全生產責任。	管理要素	危險源／環境因素緊急響應；化學品管理；特殊設備與特殊崗位；施工作業；職業健康等。	宣傳教育	安全教育培訓；應急演練；開展「安康杯」勞動競賽系列活動等。
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公司主要從消防設施、報警監控系統、個人防護、應急措施4大方面消除或控制員工生產活動中的安全風險。二零一九年，公司開展了以勞動防護用品、急救、消防等為專題的教育和考核活動；準備培訓材料；以內部人力資源培訓系統平台為載體建立培訓題庫；並於每季度開展典型案例及隱患識別培訓，營造企業良好的安全文化氛圍。



2019年環境、社會及管治報告

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。



個人防護

- 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。



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，對發現問題及時整改。

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。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。

公司運營過程中會使用硝酸、氨水等化學品，我們制定了《化學品管理程序》、《化學物質審查規程》等相關管理制度，定期完成年度作業場所害因素檢測與現狀評價，並開展各類安全生產事故應急演練，共計10,767人次參與。截至報告期末，公司未發生安全生產事故。



3,132萬元
全年安全投入



100%
員工安全培訓覆蓋率



100%
安全隱患整改率



100%
員工體檢覆蓋率

2019年環境、社會及管治報告

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。

3.3 培訓與職業發展

員工培訓

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。

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，按照培訓循環，不斷提高培訓效果，並根據戰略發展和員工需求不斷進行完善。

二零一九年，公司的新進大學生特訓營以滬錫聯動雙營並行模式展開，兩地特訓營為學員提供了半導體理論知識、製造實踐、職業素養、戶外拓展等內容豐富形式多樣的課程，幫助企業新人迅速融入團隊、初步但全面的掌握半導體相關知識、並以飽滿的熱情迎接未來工作的挑戰。

2019年環境、社會及管治報告

員工培訓方案

培訓對象	培訓內容	2019年績效
基層管理者	角色認知、自我管理、管理他人、工作管理	100% 員工培訓覆蓋率
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	100.5小時 人均培訓小時數
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序列。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，也支持從技術走向管理等。此外，我們支持員工接受教育和繼續深造，為所有勞動合同制員工提供在職學歷教育補貼，二零一九共有7人獲得工程碩士、博士學歷教育補貼。

4 產品與客戶

我們持續追蹤產品與客戶相關的國際公約及經營地法律法規，定期對產品和服務的健康與安全、標籤及隱私等方面的管理制度進行更新，建立質量保證體系和客戶服務體系。截至二零一九年末，公司未發生過侵犯客戶權益的訴訟，也未發生因客戶對產品質量問題而引發的訴訟。

2019年環境、社會及管治報告

4.1 產品責任

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ISO 9001質量管理體系和IATF 16949汽車質量管理體系認證。

公司致力推行涵蓋質量系統及客戶滿意、供應商管理及原材料分析、質量工程、可靠性保證、故障分析5個綜合科室的全方位質量管理模式。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有害物質不合規的產品，客戶可於質保期內退還不合格產品。截至二零一九年，公司產品在終端客戶端的失效率低於十億分之一。

品質管制方針

全面推行卓越績效管理，大力推進工業化與資訊化融合；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。

產品責任相關認證情況

產品品質	認證單位	初次通過認證時間
 ISO 9001 品質管制體系	BSI	2001/11/6
 IATF 16949 汽車行業品質管制體系	BSI	2005/8/2

資訊安全	認證單位	初次通過認證時間
 ISO 27001 資訊安全管理體系	BSI	2004/7/2

2019年環境、社會及管治報告

科技創新

公司歷來重視科研創新和開放合作，自主創新下走出創「芯」之路。公司成立了上海市集成電路行業第一家院士專家工作站、第一家企業科協，通過專家引進、項目合作、人才培養、學術交流等多種形式努力全面建設產學研技術創新體系，促進科技成果向實際生產力轉化。

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。

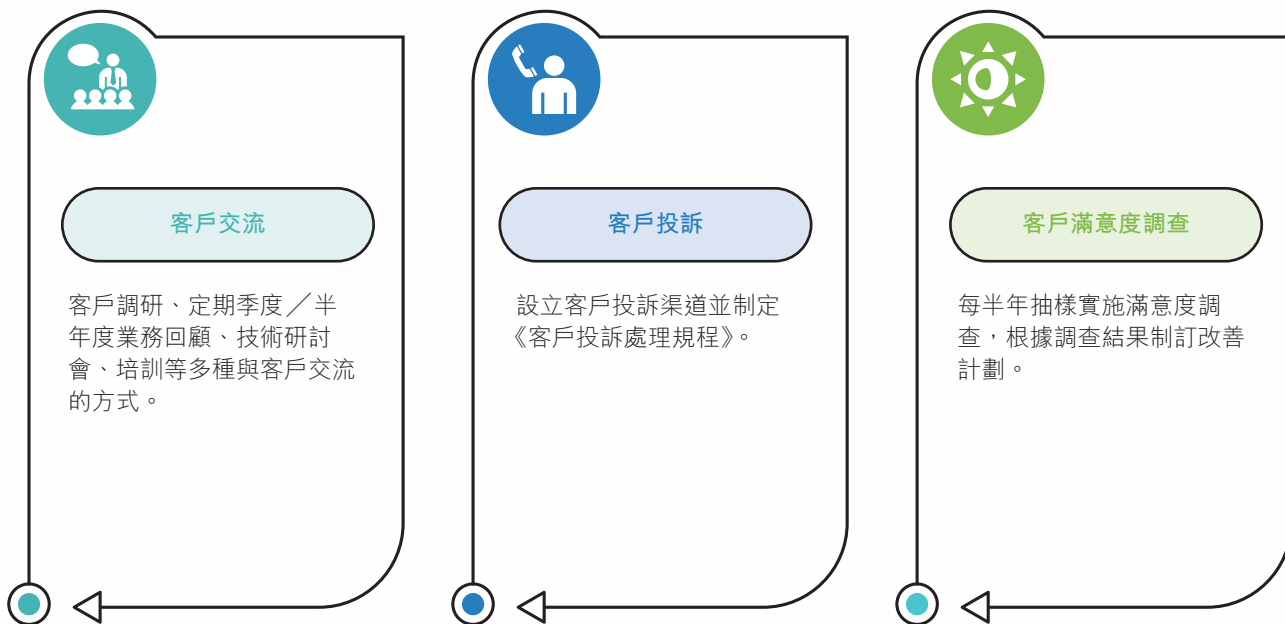
為避免因製造涉及侵犯他人知識產權的半導體器件或終端產品而遭到申訴的風險，我們接受來自聲譽良好的客戶及未發現潛在風險的產品訂單，並與主要技術公司訂立多項技術授權協議。

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。

客戶服務體系



2019年環境、社會及管治報告

公司制定《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。

客戶投訴處理流程



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

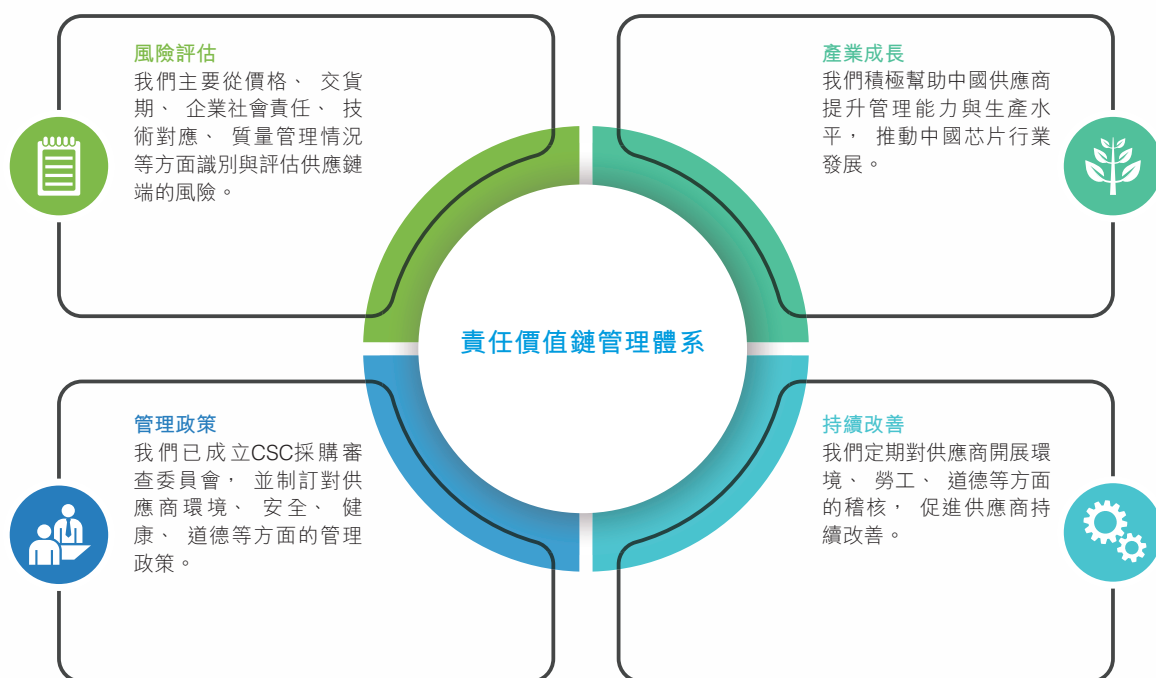
公司非常重視維護客戶信息安全，我們已建立了ISMS信息安全管理體系，從信息資產管理、人員安全、物理管控、邏輯管控等方面層層把控信息安全風險，保障信息安全，並通過了ISO 27001認證。公司內部設立信息安全委員會，信息安全委員會主要職責包括對緊急重大安全事故進行響應決策；定期開展信息安全管理體系評審；對合作光罩廠進行審核，確保光罩廠數據管理和存儲的安全性；對於晶片生產過程中產生的廢棄掩膜板，我們採取寄回客戶或者進行銷毀的處理方式，從而最大程度的防止廢棄掩膜板內客戶信息的外洩。公司全年未發生侵犯客戶隱私的違反法律法規事件。

5 合規運營

公司嚴格遵守《中華人民共和國刑法》、《中華人民共和國合同法》、《中華人民共和國反不正當競爭法》等合規運營法律法規，加強落實供應商審核，積極進行廉潔從業宣傳和反腐治理。截至報告期末，公司未發生商業賄賂或貪污訴訟相關案件。

5.1 責任價值鏈

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，對供應商的環境、社會風險進行全面的評估與管控，並致力於扶持供應商的成長，推動國內芯片行業發展。



公司已成立CSC採購審查委員會，主要採購均採取公開招標的形式進行，保證採購過程公正、公開、公平；作為法國ECOVadis組織的成員以監察供應商的環境社會風險；並與供應商簽訂《反商業賄賂書》，嚴格杜絕不正當競爭行為。

公司根據Responsible Business Alliance (原EICC) 行為準則持續對供應商提出勞動、健康與安全、環境、倫理、管理系統等方面的要求並進行相關的培訓。通過每年一次的供應商考核制度，公司對不合格的供應商要求整改，進一步推動綠色供應鏈的發展。

2019年環境、社會及管治報告

我們積極支持中國供應商的成長和發展，持續幫助供應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、硅片等關鍵原材料本土供應，培養了一大批本土原材料供應商和設備供應商，有力地推動了中國芯片設計業的發展。

衝突礦產管理

根據多德－弗蘭克華爾街改革和消費者保護法和部分國際非政府組織的研究報告指出，金屬的開採在某些地區會造成嚴重的社會與環境問題，如剛果民主共和國境內開採的金、鈹、鎢、錫、鉍等，很可能被ICT產業應用於手機、電腦等電子電氣產品中。

公司承諾拒絕採購衝突礦產，參照負責任商業聯盟（RBA，原EICC）與全球電子永續倡議（GeSI）聯合創建的衝突礦產報告模板（CMRT），對供應商衝突原材料使用情況進行盡職調查，並持續更新衝突礦產調查相關報告。二零一九年，經調查與審核，符合不使用衝突礦產要求的供應商數量佔比100%。

5.2 反貪污

公司長期致力於黨風廉政和誠信文化建設，無論是對外部的客戶廠商還是對內部的幹部管理。公司制定了《關於治理商業賄賂的管理規定》，明確要求與公司有經營活動的合作單位需簽署《反商業賄賂承諾書》，以及內部相關人員需簽署《拒絕商業賄賂承諾書》。此外，為保證員工舉報渠道的暢通以及舉報事項處理規範有序，公司發佈了《紀委辦信查案管理辦法》，涉及舉報範圍、舉報應知事項、舉報處理工作要求和處理流程等內容。

二零一九年，公司持續向全體員工開展廉潔從業方面的培訓與教育；積極推進《反商業賄賂承諾書》、《拒絕商業賄賂承諾書》簽署工作；定期進行訪問和抽查；堅持廉潔從業宣傳，組織開展反腐倡廉培訓；並通過內網發佈廉政宣傳文章。

不使用非法礦產聲明

“華虹宏力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應承擔以下責任：

- 1) 承諾人將承擔起社會與環境責任。
- 2) 承諾使用的金(Au)、鈹(Ta)、鎢(W)、錫(Sn) 金屬不來自於「衝突礦產」。
- 3) 承諾將推進產品供應商提供金(Au)、鈹(Ta)、鎢(W)、錫(Sn)金屬不來自「衝突礦產」的聲明，進行衝突礦產的調查，完成EICC-GeSI衝突礦產報告的工作。”

反腐及誠信建設2019年度工作成果



制度建設

- 制定工作計劃分工表並在公司內網進行公示。
- 落實《廉潔從業承諾書》、《拒絕商業賄賂承諾書》等的簽署工作，確保按要求簽署率達100%。



信訪舉報

- 按照重新修訂後的《辦案查信管理辦法》處理來信來訪，對員工的信件及時送交紀委處理。



宣傳教育

- 內網建立專欄，下設「紀檢制度、警鐘長鳴、紀檢信箱」等欄目，不斷完善和及時更新相關信息。
- 舉辦為期三天的專項業務培訓班。



專項檢查

- 2019年成功完成七廠幹部提任程序專項檢查；領導幹部履職待遇、業務支出專項檢查等。

投訴及舉報管理

為了規範投訴及舉報管理工作，公司的《員工投訴與舉報管理辦法》提供郵件、電話、信箱等清晰的舉報渠道，鼓勵員工舉報可疑的內部違規行為。在對舉報人的保護方面，公司依照《紀委辦信查案管理辦法》的要求，對舉報處理過程與結果的公平公正性負責，並嚴格保護舉報人的個人隱私。

2019年環境、社會及管治報告

反貪污監督及舉報處理程序



6 公益與社區

我們堅持對社區持續關注和深度融合，將關注社區需求、尋求與社區的共同發展作為企業社會責任的重要方面，包括與社會各界協力回饋社會。在社區投資上，我們主要專注於精準扶貧、社區共建和志願服務。

公司鼓勵員工積極參與志願服務，由工會部門牽頭組織各類員工志願者活動，並落實到《華虹宏力工會會員福利制度》中。

精準扶貧

二零一九年，公司響應華虹集團城鄉結對幫扶的號召，於春節期間前往崇明區豎新鎮油橋村慰問當地困難家庭，並現場舉辦了城鄉黨組織結對幫扶（共建）簽約儀式。未來，公司將與油橋村繼續開展互幫互助、共建聯建活動，實現資源共享、優勢互補，更好地推動和促進企業與社區的和諧共建。

2019年環境、社會及管治報告

社區共建

為了增加社區居民安全意識，公司連續三年在總部運營所在地社區開展《兒童意外急救課程》，包括兒童急救常識及兒童心肺復蘇術應用等。公司作為科技型企業，聯合公司科協開啟社區STEM科學工作坊試點項目，二零一九年繼續為社區兒童提供編程啟蒙活動，內容包括基礎編程，機器人控制與智能植物澆灌等，提升社區兒童探索精神與創新能力。

志願者服務

我們鼓勵員工服務當地社區、傳遞關懷，成立了志願者小組，二零一九年共提供志願服務659小時。

自二零零六年開始，公司員工利用業餘時間，每年每季到浦東新區美馨敬老院上門慰問。二零一九年，公司員工為老人送上製作的純草藥艾草香囊、小青柑普洱茶等禮品，並自編自導文藝節目，為敬老院老人生活帶來歡聲和笑語。

7 2019年所獲社會認可

序號	獲獎名稱
全國及行業獎項	
1	2019全國電子信息行業標桿企業
2	能源與環境設計先鋒獎
3	中國城市科學院二星級綠色建築設計標識書
4	2018年度中國半導體創新產品和技術獎
5	中國新能源汽車用IGBT最具發展潛力企業獎
6	2019年度中國IC設計成就獎之年度卓越表現晶圓代工企業
省部級獎項	
7	2018年度上海市質量金獎
8	上海市科學技術獎二等獎
9	2017~2018年度上海市文明單位
10	上海市浦東新區科技創新突出貢獻獎
11	上海市節能減排JJ小組活動十周年標桿企業
12	張江科學城優秀企業經濟貢獻獎
13	2019上海市企業社會責任報告發佈會科技創新獎

2019年環境、社會及管治報告

8 績效數據

環境

績效指標	單位	2017年	2018年	2019年
排放物				
廢氣排放總量	萬立方米	1,121,958	1,145,074	1,257,074
氮氧化物(NO _x)排放量	千克	26,374	26,821	19,383
二氧化硫(SO ₂)排放量	千克	62	68	72.5
廢水排放總量	萬立方米	436	473	431
溫室氣體排放量	噸CO ₂ 當量	424,151	434,834	449,339
單位產量溫室氣體排放量	噸CO ₂ 當量／8英吋晶圓	0.22	0.21	0.23
有害廢棄物總量	噸	4,641	5,122	5,013
單位產量有害廢棄物產生量	千克／8英吋晶圓	2.43	2.47	2.57
無害廢棄物總量 ¹	噸	3,982	4,017	3,595
單位產量無害廢棄物產生量	千克／8英吋晶圓	/	2	1.80
資源使用				
用電總量	兆瓦時	509,877	528,402	528,044
單位產品用電量 ²	千瓦時／8英吋晶圓	268	259	271
天然氣用量	立方米	7,155,253	7,481,586	8,138,435
單位產品用天然氣量	立方米／8英吋晶圓	3.75	3.66	4.18
用水總量	立方米	4,898,783	9,267,637	7,724,830
其中，來源於市政供水的水量	立方米	4,898,783	6,325,999	4,791,336
廢水回用	立方米	/	2,941,638	2,933,494
單位產品用水量 ³	立方米／8英吋晶圓	2.57	3.10	2.46
循環／再利用水量	立方米	2,820,686	2,923,067	2,823,278
成品出貨所用包裝材料的總量	噸	75	78	110
成品出貨所用包裝材料的回收量	噸	15	16	8

註：

- 1 無害廢棄物為廢水處理產生的污泥量。
- 2 《華虹半導體有限公司二零一八年度環境、社會及管治報告》中披露的二零一八年單位產品用電量數字已在本報告中更正為259千瓦時／8英吋晶圓。
- 3 單位產品用水量的統計口徑僅包含市政供水。

2019年環境、社會及管治報告

僱傭與勞工實踐

績效指標	單位	2017年	2018年	2019年
僱傭				
員工總數	人	4,138	4,512	5,138
其中，男性員工數	人	2,914	3,227	3,720
女性員工數	人	1,224	1,285	1,418
勞動合同制員工數	人	4,138	4,512	5,138
勞務派遣制員工數	人	215	209	130
小於30歲員工數	人	2,001	2,129	2,354
30-50歲員工數	人	2,054	2,284	2,676
大於50歲員工數	人	83	99	108
大陸員工數	人	4,128	4,503	5,129
海外員工數	人	10	9	9
健康與安全				
員工職業病發病率	%	0	0	0
因工作關係而死亡的人數	人	0	0	0
因工傷損失工作天數	天	193.0	206.0	23.0
發展與培訓				
全體員工人均接受培訓時長	小時	72.3	77.0	99.5
其中：普通員工人均培訓時長	小時	72.6	78.0	100.5
管理層員工人均培訓時長	小時	11.6	13.0	33.6
女性員工人均培訓時長	小時	69.9	66.0	87.7
男性員工人均培訓時長	小時	74.3	82.0	104.0
全體員工受訓覆蓋率	%	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

2019年環境、社會及管治報告

產品責任與客戶服務

績效指標	單位	2017年	2018年	2019年
產品責任				
產品退貨率	%	0.3	0.104	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				
客戶投訴事件	件	10	8	3
客戶投訴辦結率	%	100	100	100

供應鏈管理

績效指標	單位	2017年	2018年	2019年
供應鏈管理				
供應商總數	家	508	520	532
本土供應商數	家	385	393	399
海外供應商數	家	123	127	133
接受評估的供應商數目 ¹	家	115	112	110
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	%	23	26	28

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應商數目。
- 2 原材料採購包括：硅片、石英、靶材、氣體、化學品等生產原材料。

2019年環境、社會及管治報告

反貪污

績效指標	單位	2017年	2018年	2019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	2017年	2018年	2019年
社區投資				
員工參與志願服務的人數	人	178	176	245
志願者活動累計時長	小時	356	352	659

合規

領域	主要法律法規名稱
EHS	《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》、《中華人民共和國安全生產法》、《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》、《中華人民共和國職業病防治法》、《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》、《關於化學品註冊、評估、許可和限制的法規》(簡稱「REACH」、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
信息安全	《中華人民共和國專利法》、《中華人民共和國著作權法》、《中華人民共和國商標法》、《中華人民共和國網絡安全法》、《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》等
質量	《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》等
RBA	《中華人民共和國反不正當競爭法》、《中華人民共和國就業促進法》、《中華人民共和國社會保險法》、《中華人民共和國合同法》、《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



2019年環境、社會及管治報告

9 編製說明

報告簡介

《華虹半導體有限公司二零一九年度環境、社會及管治報告》(以下簡稱「本報告」)披露了公司二零一九年履行企業社會責任所秉持的原則及推行的工作績效，包括重要利益相關方所關注的有關經濟、環境及社會的可持續發展議題。

編寫依據

本報告依據香港聯合交易所有限公司刊發的《環境、社會及管治報告指引》，並參考全球報告倡議組織(GRI)《可持續發展報告標準(2016)》編寫。

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(統稱「公司」或「我們」)，與上市公司年度報告合併財務報表範圍一致。

時間範圍： 2019年1月1日至2019年12月31日

發佈周期： 本報告為年度報告

數據說明

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。



10 香港聯交所《環境、社會及管治報告指引》索引表

層面、一般披露及關鍵績效指標	披露章節
層面A1. 排放物	
一般披露A1	8績效數據
KPI A1.1	2.1環境管理體系 8績效數據
KPI A1.2	2.1環境管理體系 8績效數據
KPI A1.3	2.1環境管理體系 8績效數據
KPI A1.4	2.1環境管理體系 8績效數據
KPI A1.5	2.2清潔生產
KPI A1.6	2.2清潔生產
層面A2. 資源使用	
一般披露A2	2.3節約資源
KPI A2.1	2.1環境管理體系 8績效數據
KPI A2.2	2.1環境管理體系 8績效數據
KPI A2.3	2.3節約資源
KPI A2.4	2.3節約資源
KPI A2.5	8績效數據
層面A3. 環境及天然資源	
一般披露A3	2.1環境管理體系 2.4綠色產品
KPI A3.1	2.1環境管理體系 2.4綠色產品
層面B1. 僱傭	
一般披露B1	3.1員工權益與福利 8績效數據
KPI B1.1	8績效數據
KPI B1.2	8績效數據
層面B2. 健康與安全	
一般披露B2	3.2健康、安全與員工福祉 8績效數據
KPI B2.1	8績效數據
KPI B2.2	8績效數據
KPI B2.3	3.2健康、安全與員工福祉
層面B3. 發展及培訓	
一般披露B3	3.3培訓與職業發展
KPI B3.1	8績效數據
KPI B3.2	8績效數據
層面B4. 勞工準則	
一般披露B4	8績效數據

2019年環境、社會及管治報告

層面、一般披露及關鍵績效指標	披露章節
KPI B4.1	3.1員工權益與福利
KPI B4.2	3.1員工權益與福利
層面B5.供應鏈管理	
一般披露B5	5.1責任供應鏈
KPI B5.1	8績效數據
KPI B5.2	5.1責任供應鏈
層面B6.產品責任	
一般披露B6	4.2客戶服務與權益保護
	8績效數據
KPI B6.1	8績效數據
KPI B6.2	4.2客戶服務與權益保護
	8績效數據
KPI B6.3	4.1產品責任
KPI B6.4	4.1產品責任
KPI B6.5	4.2客戶服務與權益保護
層面B7.反貪污	
一般披露B7	5.2反貪污
	8績效數據
KPI B7.1	8績效數據
KPI B7.2	5.2反貪污
層面B8.社區投資	
一般披露B8	6公益與社區
KPI B8.1	6公益與社區
KPI B8.2	8績效數據

INDEPENDENT AUDITORS' 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 193 to 307, which comprise the consolidated statement of financial position as at 31 December 2019, 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 2019, 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193至307頁的綜合財務報表，當中包括於二零一九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，包括主要會計政策概要。

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二零一九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 AUDITORS' 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 AUDITORS' 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 2019 included an unlisted equity investment amounting to US\$205 million. The Group measures it 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 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, 19 and 37 to the financial statements, which specifically explain the key assumptions that management used in the valuation.

Our audit procedures included, amongst others, assessing the competency and objectivity of the independent external valuer engaged by the Group and involving our internal specialists to assist our work to evaluate the methodology of the valuation and the key assumptions used in the valuation such as determination of comparable public companies (peers), selection of the price multiple and 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

於二零一九年十二月三十一日，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2.05億美元。本集團於各報告期末按公平值對其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、19及37，其中特別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)。

INDEPENDENT AUDITORS' 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\$169 million as at 31 December 2019. 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 specifically explain the key assumptions that management used in the valuation.

Our audit procedures included, amongst others, assessing the competency 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 our work to evaluate 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

於二零一九年十二月三十一日，貴集團錄得投資物業1.69億美元。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，其中特別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 AUDITORS' 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 will 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，吾等亦將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 AUDITORS' 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 AUDITORS' 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, related safeguards.

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相關保障措施(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 AUDITORS' 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
26 March 2020

安永會計師事務所
執業會計師
香港
二零二零年三月二十六日

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

綜合損益表

Year ended 31 December 2019
截至二零一九年十二月三十一日止年度

			2019 二零一九年 (US\$'000) 千美元	2018 二零一八年 (US\$'000) 千美元
Revenue	銷售收入	5	932,567	930,268
Cost of sales	銷售成本		(650,107)	(619,114)
Gross profit	毛利		282,460	311,154
Other income and gains	其他收入及收益	5	69,091	43,613
Fair value gain on an investment property	投資物業的公平值收益		163	247
Selling and distribution expenses	銷售及分銷費用		(8,828)	(7,771)
Administrative expenses	管理費用		(169,796)	(122,323)
Other expenses	其他費用	5	(406)	(11,106)
Finance costs	財務費用	7	(1,242)	(2,203)
Share of profit of an associate	分佔一家聯營公司溢利		10,131	9,444
PROFIT BEFORE TAX	稅前溢利	6	181,573	221,055
Income tax expense	所得稅開支	10	(26,588)	(35,447)
PROFIT FOR THE YEAR	年內溢利		154,985	185,608
Attributable to:	下列人士應佔：			
Owners of the parent	母公司擁有人		162,237	183,158
Non-controlling interests	非控股權益		(7,252)	2,450
			154,985	185,608
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\$0.126 0.126美元	US\$0.171 0.171美元
Diluted	攤薄			
– For profit for the year	– 年內溢利		US\$0.125 0.125美元	US\$0.169 0.169美元

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

綜合全面收益表

Year ended 31 December 2019
截至二零一九年十二月三十一日止年度

		2019 二零一九年 (US\$'000) 千美元	2018 二零一八年 (US\$'000) 千美元
PROFIT FOR THE YEAR	年內溢利	154,985	185,608
OTHER COMPREHENSIVE LOSS	其他全面虧損		
Other comprehensive loss that may be reclassified to profit or loss in subsequent periods:	於其後期間可能重新分類至損益的其他全面虧損		
Exchange differences on translation of foreign operations	換算海外業務產生的外匯差額	(55,733)	(107,744)
Net other comprehensive loss that may be reclassified to profit or loss in subsequent periods	於其後期間可能重新分類至損益的其他全面虧損淨額	(55,733)	(107,744)
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	2,708	1,764
Income tax effect	所得稅影響	(406)	(265)
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虧損的其他全面收益淨額	2,302	1,499
OTHER COMPREHENSIVE LOSS FOR THE YEAR, NET OF TAX	年內其他全面虧損，扣除稅項	(53,431)	(106,245)
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	年內全面收益總額	101,554	79,363
Attributable to:	下列人士應佔：		
Owners of the parent	母公司擁有人	129,422	105,794
Non-controlling interests	非控股權益	(27,868)	(26,431)
		101,554	79,363

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

綜合財務狀況表

31 December 2019
截至二零一九年十二月三十一日止年度

			31 December 2019 二零一九年 十二月三十一日 (US\$'000) 千美元	31 December 2018 二零一八年 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	1,558,283	773,180
Investment property	14	投資物業	168,615	171,225
Prepaid land lease payments	15	預付土地租賃款項	—	58,989
Right-of-use assets	16	使用權資產	74,526	—
Intangible assets	17	無形資產	13,322	9,571
Investment in an associate	18	於聯營公司的投資	73,142	64,005
Equity investments designated at fair value through other comprehensive income	19	指定按公平值計入其他 全面收益的股權投資	207,689	208,357
Long term prepayments to third parties		應付第三方之長期預付款項	6,740	3,762
Long term prepayments to related parties	35(c)	向關聯方長期預付款項	6,808	8,747
Deferred tax assets	28	遞延稅項資產	7,567	6,363
Total non-current assets		非流動資產總額	2,116,692	1,304,199
CURRENT ASSETS		流動資產		
Inventories	20	存貨	142,087	129,629
Trade and notes receivables	21	貿易應收款項及應收票據	164,968	176,797
Prepayments, other receivables and other assets	22	預付款項、其他應收款項 及其他資產	113,453	12,479
Due from related parties	35(c)	應收關聯方款項	9,262	10,800
Financial assets at fair value through profit or loss	19	按公平值計入損益的 金融資產	519,779	667,033
Restricted and time deposits	23	已凍結及定期存款	70,776	337
Cash and cash equivalents	23	現金及現金等價物	476,286	777,000
Total current assets		流動資產總額	1,496,611	1,774,075
CURRENT LIABILITIES		流動負債		
Trade payables	24	貿易應付款項	86,119	79,470
Other payables and accruals	25	其他應付款項及暫估費用	303,614	165,370
Interest-bearing bank borrowings	26	計息銀行借款	4,300	4,371
Lease liabilities	27	租賃負債	1,922	—
Government grants	29	政府補助	40,641	44,406
Due to related parties	35(c)	應付關聯方款項	10,655	5,838
Income tax payable		應付所得稅	28,088	30,114
Total current liabilities		流動負債總額	475,339	329,569
NET CURRENT ASSETS		流動資產淨額	1,021,272	1,444,506
TOTAL ASSETS LESS CURRENT LIABILITIES		資產總值減 流動負債	3,137,964	2,748,705

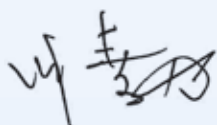
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CONSOLIDATED STATEMENT OF FINANCIAL POSITION

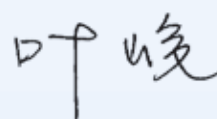
綜合財務狀況表

31 December 2019
截至二零一九年十二月三十一日止年度

			31 December 2019	31 December 2018
			二零一九年 十二月三十一日	二零一八年 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	21,502	26,227
Lease liabilities	租賃負債	27	16,694	-
Deferred tax liabilities	遞延稅項負債	28	17,176	18,146
Total non-current liabilities	非流動負債總額		55,372	44,373
Net assets	淨資產		3,082,592	2,704,332
EQUITY	權益			
Share capital	股本	30	1,966,095	1,960,159
Reserves	儲備	32	279,146	195,097
Total equity attributable to owners of the parent	母公司擁有人應佔權益總額		2,245,241	2,155,256
Non-controlling interests	非控股權益	40	837,351	549,076
Total equity	權益總額		3,082,592	2,704,332



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 2019
截至二零一九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											
		Share capital	Merger reserve	Share option reserve	Other contributed surplus	Fair value reserve of financial assets at fair value through other comprehensive income	Revaluation surplus#	Statutory reserve funds	Exchange fluctuation reserve	Accumulated losses	Total	Non-controlling interests	Total equity
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		(附註30)		(附註31)				(附註32)					
At 1 January 2019 as previously reported	於二零一九年一月一日 (如先前呈列)	1,960,159	645,494	6,607	34,590	2,545	99,257	71,595	34,655	(699,646)	2,155,256	549,076	2,704,332
Effect of adoption of HKFRS 16	採用香港財務報告準則第16號的影響	2.2	-	-	-	-	-	-	-	(1,570)	(1,570)	-	(1,570)
At 1 January 2019 (restated)	於二零一九年一月一日 (重列)	1,960,159	645,494	6,607	34,590	2,545	99,257	71,595	34,655	(701,216)	2,153,686	549,076	2,702,762
Profit/(loss) for the year	年內溢利/(虧損)	-	-	-	-	-	-	-	-	162,237	162,237	(7,252)	154,985
Other comprehensive loss for the year:	年內其他全面虧損												
Exchange differences related to foreign operations	有關海外業務的外匯差額	-	-	-	-	-	-	-	(35,117)	-	(35,117)	(20,616)	(55,733)
Net gain on 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收益淨額，扣除稅項	-	-	-	-	2,302	-	-	-	-	2,302	-	2,302
Total comprehensive income for the year	年內全面收益總額	-	-	-	-	2,302	-	-	(35,117)	162,237	129,422	(27,868)	101,554
Final 2018 dividend declared	最終宣派二零一八年股息	-	-	-	-	-	-	-	-	(50,772)	(50,772)	-	(50,772)
Issue of shares	發行股份	30	5,936	(1,634)	-	-	-	-	-	-	4,302	-	4,302
Equity-settled share option arrangements	以權益結算的購股權安排	31	-	7,508	-	-	-	-	-	-	7,508	238	7,746
Capital contribution from non-controlling interests	非控股權益注資	-	-	-	1,095	-	-	-	-	-	1,095	315,905	317,000
Transfer from retained profits generated by a subsidiary	轉撥自一間子公司產生的留存溢利	-	-	-	-	-	-	17,591	-	(17,591)	-	-	-
At 31 December 2019	於二零一九年十二月三十一日	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

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

綜合權益變動表

Year ended 31 December 2019
截至二零一九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											Total equity
		Share capital	Merger reserve	Share option reserve	Share and contributed surplus	Other reserve through other comprehensive income	Revaluation surplus#	Statutory reserve funds	Exchange fluctuation reserve	Accumulated losses	Total	Non-controlling interests	
	Notes	US\$'000 千美元 (附註30)	US\$'000 千美元	US\$'000 千美元 (附註31)	US\$'000 千美元	US\$'000 千美元	US\$'000 千美元	US\$'000 千美元 (附註32)	US\$'000 千美元	US\$'000 千美元	US\$'000 千美元	US\$'000 千美元	US\$'000 千美元
At 1 January 2018	於二零一八年一月一日	1,554,870	645,494	7,083	45,097	1,046	99,257	52,173	113,518	(822,287)	1,696,251	-	1,696,251
Profit for the year	年內溢利	-	-	-	-	-	-	-	-	183,158	183,158	2,450	185,608
Other comprehensive income for the year:	年內其他全面收益												
Exchange differences related to foreign operations	有關海外業務的外匯差額	-	-	-	-	-	-	-	(78,863)	-	(78,863)	(28,881)	(107,744)
Net gain on 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收益淨額，扣除稅項	-	-	-	-	1,499	-	-	-	-	1,499	-	1,499
Total comprehensive income for the year	年內全面收益總額	-	-	-	-	1,499	-	-	(78,863)	183,158	105,794	(26,431)	79,363
Final 2017 dividend declared	最終宣派二零一七年股息	-	-	-	-	-	-	-	-	(41,095)	(41,095)	-	(41,095)
Issue of shares	發行股份	30	405,289	(1,774)	-	-	-	-	-	-	403,515	-	403,515
Equity-settled share option arrangements	以權益結算的購股權安排	31	-	1,298	-	-	-	-	-	-	1,298	-	1,298
Capital contribution from non-controlling interests	非控股權益注資	-	-	-	(10,507)	-	-	-	-	-	(10,507)	575,507	565,000
Transfer from retained profits generated by a subsidiary	轉撥自一間子公司產生的留存溢利	-	-	-	-	-	-	19,422	-	(19,422)	-	-	-
At 31 December 2018	於二零一八年十二月三十一日	1,960,159	645,494*	6,607*	34,590*	2,545*	99,257*	71,595*	34,655*	(699,646)*	2,155,256	549,076	2,704,332

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\$279,146,000 (2018: US\$195,097,000) 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279,146,000美元(二零一八年: 195,097,000美元)。

CONSOLIDATED STATEMENT OF CASH FLOWS

綜合現金流量表

Year ended 31 December 2019
截至二零一九年十二月三十一日止年度

	Notes 附註	2019 二零一九年 (US\$'000) 千美元	2018 二零一八年 (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	181,573	221,055
Adjustments for:	就以下各項作出的調整		
Finance costs	財務費用	7	2,203
Share of profit of an associate	分佔一家聯營公司溢利	(10,131)	(9,444)
Interest income	利息收入	5	(9,489)
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	(11,412)
Fair value gains on financial assets at fair value through profit or loss	按公平值計入損益的金融資產公平值收益	5	(4,200)
(Gain)/loss on disposal of items of property, plant and equipment	出售物業、廠房及設備項目所得(收益)/虧損	5	96
Depreciation of property, plant and equipment	物業、廠房及設備折舊	13	116,187
Amortisation of intangible assets	無形資產攤銷	17	3,006
Recognition of prepaid land lease payments	預付土地租賃款項確認	15	666
Depreciation of right-of-use assets	使用權資產折舊	16	-
Changes in fair value of an investment property	投資物業公平值變動	14	(247)
Write-down of inventories to net realisable value	存貨撇減至可變現淨值	6	646
Impairment of trade receivables	貿易應收款項減值	6	25
Impairment of items of property, plant and equipment	物業、廠房及設備項目減值	13	6,151
Equity-settled share option expense	以權益結算的購股權開支	31	1,298
		270,354	316,541
Increase in inventories	存貨增加	(13,646)	(14,199)
Decrease/(increase) in trade and notes receivables	貿易應收款項及應收票據減少/(增加)	11,804	(64,382)
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	(99,551)	(3,657)
Decrease in amounts due from related parties	應收關聯方款項減少	1,538	36,188
(Increase)/decrease in pledged deposits	已抵押存款(增加)/減少	(458)	19
Increase in trade payables	貿易應付款項增加	6,649	11,346
Increase in other payables and accruals	其他應付款項及暫估費用增加	14,580	18,955
(Decrease)/increase in government grants	政府補貼(減少)/增加	(2,380)	6,011
Increase/(decrease) in amounts due to related parties	應付關聯方款項增加/(減少)	4,817	(5,047)
Cash generated from operations	經營活動產生的現金	193,707	301,775
Income tax paid	已付所得稅	(30,773)	(27,375)
Net cash flows generated from operating activities	經營活動所得現金流量淨額	162,934	274,400

CONSOLIDATED STATEMENT OF CASH FLOWS

綜合現金流量表

Year ended 31 December 2019
截至二零一九年十二月三十一日止年度

	Notes 附註	2019 二零一九年 (US\$'000) 千美元	2018 二零一八年 (US\$'000) 千美元
CASH FLOWS FROM INVESTING ACTIVITIES			
Interest received		17,441	10,300
Purchases of items of property, plant and equipment, prepaid lease payments and intangible assets		(922,281)	(229,837)
Increase in long-term prepayments to related parties		–	(8,747)
Proceeds from disposal of items of property, plant and equipment		796	4
Receipt of government grants for property, plant and equipment		94,519	–
Purchases of financial assets at fair value through profit or loss		(2,532,504)	(1,959,653)
Proceeds from disposal of financial assets at fair value through profit or loss		2,689,442	1,279,352
(Increase)/decrease in time deposits		(70,000)	191,342
Net cash flows used in investing activities		(722,587)	(717,239)
CASH FLOWS FROM FINANCING ACTIVITIES			
Proceeds from issue of shares		2,550	403,956
Capital contribution from non-controlling interests		317,000	565,000
Dividends paid to shareholders		(50,963)	(41,066)
Interest paid		(481)	(2,259)
Increase in pledged deposits		(22)	(8)
Repayment of bank loans		(4,332)	(60,613)
Principal portion of lease payments		(854)	–
Net cash flows generated from financing activities		262,898	865,010
NET (DECREASE)/INCREASE IN CASH AND CASH EQUIVALENTS		(296,755)	422,171
Cash and cash equivalents at beginning of year		777,000	374,890
Effect of foreign exchange rate changes, net		(3,959)	(20,061)
CASH AND CASH EQUIVALENTS AT END OF YEAR	23	476,286	777,000
ANALYSIS OF BALANCES OF CASH AND CASH EQUIVALENTS			
Cash and bank balances	23	211,409	171,781
Non-pledged time deposits with original maturity of less than three months when acquired		264,877	605,219
Cash and cash equivalents as stated in the statement of financial position and in the statement of cash flows	23	476,286	777,000

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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 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.

In the opinion of the directors, the parent and the ultimate parent of the Company are Shanghai Alliance Investment Ltd. (“SAIL”) and INESA (Group) Co., Ltd. (“INESA”) respectively, which are state-owned companies established in the People’s Republic of China (“PRC”), supervised by the State-owned Assets Supervision and Administration Commission.

Information about subsidiaries

Particulars of the Company’s principal 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。

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。

董事認為，本公司的母公司及最終控股公司分別為上海聯和投資有限公司（「上海聯和」）及上海儀電（集團）有限公司（「儀電集團」，上海聯和及儀電集團均為於中華人民共和國（「中國」）成立並由國有資產監督管理委員會（「國資委」）監管的國有公司。

有關子公司的資料

本公司旗下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")*	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	RMB5,865,538 人民幣5,865,538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
Shanghai Huajie IC Technology Service Co., Ltd. ("Shanghai Huajie")** 上海華傑芯片技術服務有限公司（「上海華傑」）**	PRC/Mainland China 中國／中國內地	RMB41,385 人民幣41,385元	-	100%	Inactive 停業
Global Synergy Technology Limited ("GST") 力鴻科技有限公司（「力鴻科技」）	Hong Kong 香港	HK\$10 10港元	100%	-	Trading 貿易

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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	
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日元	100%	-	Sales office 銷售辦事處

* No audited financial statements have been prepared for these entities for the year ended 31 December 2019, as these entities were not subject to any statutory audit requirements under the relevant rules and regulations in their jurisdictions of incorporation.

* 於截至二零一九年十二月三十一日止年度，概無編製該等實體的經審核財務報表，因為根據其註冊成立的司法權區的相關法律及法規，該等實體毋須進行任何法定審核。

** HHGrace, Hua Hong Wuxi and Shanghai Huajie are respectively registered as a wholly-foreign-owned company, a Sino-foreign joint company and a domestic company under PRC law.

** 華虹宏力、華虹無錫及上海華傑分別根據中國法律註冊為外商獨資公司、中外合資公司及內資公司。

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 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 2019. 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」）截至二零一九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的能力）。

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。

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 derecognizes (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 recognizes (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 recognized 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.

2.1 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公司。子公司的所有權權益變動（沒有失去控制權），按權益交易入賬。

倘本集團失去對一間子公司的控制權，則其取消確認(i)該子公司的資產（包括商譽）及負債、(ii)任何非控制權益的賬面值及(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)損益賬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。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

2.2 Changes in Accounting Policies and Disclosures

The Group has adopted the following new and revised HKFRSs for the first time for the current year's financial statements.

Amendments to HKFRS 9	<i>Prepayment Features with Negative Compensation</i>
HKFRS 16	<i>Leases</i>
Amendments to HKAS 19	<i>Plan Amendment, Curtailment or Settlement</i>
Amendments to HKAS 28	<i>Long-term Interests in Associates and Joint Ventures</i>
HK(IFRIC)-Int 23	<i>Uncertainty over Income Tax Treatments</i>
<i>Annual Improvements to HKFRSs 2015-2017 Cycle</i>	Amendments to HKFRS 3, HKFRS 11, HKAS 12 and HKAS 23

Except for HKFRS 16 *Leases*, the new and revised HKFRSs had no significant impact on the Group's financial statements. The nature and the impact of HKFRS 16 are described below:

HKFRS 16 replaces HKAS 17 *Leases*, HK(IFRIC)-Int 4 *Determining whether an Arrangement contains a Lease*, HK(SIC)-Int 15 *Operating Leases – Incentives* and HK(SIC)-Int 27 *Evaluating the Substance of Transactions Involving the Legal Form of a Lease*. The standard sets out the principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases under a single on-balance sheet model to recognize and measure right-of-use assets and lease liabilities, except for certain recognition exemptions. Lessor accounting under HKFRS 16 is substantially unchanged from HKAS 17. Lessors continue to classify leases as either operating or finance leases using similar principles as in HKAS 17.

2.2 會計政策的變動及披露

本集團於本年度財務報表內首次採納下列新訂及經修訂香港財務報告準則。

香港財務報告準則第9號 (修訂本)	具有負補償之提前還款特性
香港財務報告準則第16號	租賃
香港會計準則第19號 (修訂本)	計劃修訂、縮減或結算
香港會計準則第28號 (修訂本)	於聯營公司及合營企業的長期權益
香港 (國際財務報告詮釋委員會) – 詮釋第23號	所得稅處理的不確定性
香港財務報告準則二零一五年至二零一七年週期年度改進	香港財務報告準則第3號、香港財務報告準則第11號、香港會計準則第12號及香港會計準則第23號 (修訂本)

除香港財務報告準則第16號租賃外，新訂及經修訂香港財務報告準則對本集團財務報表並無任何重大影響。香港財務報告準則第16號的性質及影響如下：

香港財務報告準則第16號取代香港會計準則第17號租賃、香港 (國際財務報告詮釋委員會) – 詮釋第4號釐定安排是否包括租賃、香港 (常務詮釋委員會) – 詮釋第15號經營租賃 – 優惠及香港 (常務詮釋委員會) – 詮釋第27號評估涉及租賃法律形式交易的內容。該準則載有租賃確認、計量、呈列和披露原則，並要求承租人在單一資產負債表的模型中計算所有租賃，以確認及計量使用權資產及租賃負債，惟若干確認豁免除外。香港財務報告準則第16號大致沿用香港會計準則第17號內出租人的會計處理方式。出租人將繼續使用與香港會計準則第17號類似的原則將租賃分類為經營租賃或融資租賃。

2.2 Changes in Accounting Policies and Disclosures (continued)

HKFRS 16 did not have any significant impact on leases where the Group is the lessor.

The Group has adopted HKFRS 16 using the modified retrospective method with the date of initial application of 1 January 2019. Under this method, the standard has been applied retrospectively with the cumulative effect of initial adoption recognized as an adjustment to the opening balance of accumulated losses at 1 January 2019, and the comparative information for 2018 was not restated and continued to be reported under HKAS 17 and related interpretations.

New definition of a lease

Under HKFRS 16, a contract is, or contains, a lease if the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration. Control is conveyed where the customer has both the right to obtain substantially all of the economic benefits from use of the identified asset and the right to direct the use of the identified asset. The Group elected to use the transition practical expedient allowing the standard to be applied only to contracts that were previously identified as leases applying HKAS 17 and HK(IFRIC)-Int 4 at the date of initial application. Contracts that were not identified as leases under HKAS 17 and HK(IFRIC)-Int 4 were not reassessed. Therefore, the definition of a lease under HKFRS 16 has been applied only to contracts entered into or changed on or after 1 January 2019.

2.2 會計政策的變動及披露 (續)

香港財務報告準則第16號並未對本集團作為出租人的租賃產生任何財務影響。

本集團採用經修訂追溯採納法採納香港財務報告準則第16號，並於二零一九年一月一日首次應用。根據該方法，本集團已追溯應用該準則，並將首次採納的累計影響確認為對於二零一九年一月一日之累計虧損期初結餘的調整，且概不會重列二零一八年的比較資料，而繼續根據香港會計準則第17號及相關詮釋作出報告。

租賃之新定義

根據香港財務報告準則第16號，倘合約為換取代價而給予在一段時間內控制可識別資產使用的權利，則該合約是租賃或包含租賃。當客戶有權從使用可識別資產獲得絕大部分經濟利益以及擁有指示使用可識別資產的權利時，即有控制權。本集團選擇應用過渡性的實際權宜辦法以允許該準則僅適用於先前於首次應用日期已根據香港會計準則第17號及香港（國際財務報告詮釋委員會）－詮釋第4號確定為租賃之合約。根據香港會計準則第17號及香港（國際財務報告詮釋委員會）－詮釋第4號未確定為租賃的合約不會重新評估。因此，香港財務報告準則第16號項下的租賃定義僅適用於在二零一九年一月一日或之後訂立或變更的合約。

2.2 Changes in Accounting Policies and Disclosures (continued)

As a lessee – Leases previously classified as operating leases

Nature of the effect of adoption of HKFRS 16

The Group has lease contracts for various items of property. As a lessee, the Group previously classified leases as either finance leases or operating leases based on the assessment of whether the lease transferred substantially all the rewards and risks of ownership of assets to the Group. Under HKFRS 16, the Group applies a single approach to recognize and measure right-of-use assets and lease liabilities for all leases, except for two elective exemptions for leases of low-value assets (elected on a lease-by-lease basis) and leases with a lease term of 12 months or less (“short-term leases”) (elected by class of underlying asset). Instead of recognizing rental expenses under operating leases on a straight-line basis over the lease term commencing from 1 January 2019, the Group recognizes depreciation (and impairment, if any) of the right-of-use assets and interest accrued on the outstanding lease liabilities (as finance costs).

Impact on transition

Lease liabilities at 1 January 2019 were recognized based on the present value of the remaining lease payments, discounted using the incremental borrowing rate at 1 January 2019. The right-of-use assets were recognized based on the carrying amount as if the standard had always been applied, except for the incremental borrowing rate where the Group applied the incremental borrowing rate at 1 January 2019.

2.2 會計政策的變動及披露 (續)

作為承租人 – 先前分類為經營租賃的租賃

採納香港財務報告準則第16號的影響性質

本集團擁有各種物業之租賃合約。作為承租人，本集團先前根據對租賃是否將資產所有權的絕大部分回報及風險轉移至本集團的評估，將租賃分類為融資租賃或經營租賃。根據香港財務報告準則第16號，本集團採用單一方法確認及計量所有租賃的使用權資產及租賃負債，惟低價值資產租賃（按個別租賃基準選擇）及租期為或少於十二個月的租賃（「短期租賃」）（按相關資產類別選擇）的兩項選擇性豁免除外。本集團確認使用權資產折舊（及減值，如有）及尚未償還租賃負債之應計利息（為融資成本），而非於自二零一九年一月一日開始之租期內按直線法於經營租賃項下確認租金開支。

過渡影響

於二零一九年一月一日之租賃負債按剩餘租賃付款的現值，使用二零一九年一月一日的遞增借款利率貼現後予以確認。使用權資產按賬面值確認，猶如該準則一直獲應用，惟增量借貸利率除外，而本集團已於二零一九年一月一日應用增量借貸利率。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

2.2 Changes in Accounting Policies and Disclosures (continued)

As a lessee – Leases previously classified as operating leases (continued)

Impact on transition (continued)

All these assets were assessed for any impairment based on HKAS 36 on that date. The Group elected to present the right-of-use assets separately in the statement of financial position.

The Group has used the following elective practical expedients when applying HKFRS 16 at 1 January 2019:

- Applying the short-term lease exemptions to leases with a lease term that ends within 12 months from the date of initial application; and
- Applying a single discount rate to a portfolio of leases with reasonably similar characteristics.

Financial impact at 1 January 2019

The impact arising from the adoption of HKFRS 16 as at 1 January 2019 was as follows:

2.2 會計政策的變動及披露 (續)

作為承租人 – 先前分類為經營租賃的租賃 (續)

過渡影響 (續)

所有該等資產於該日均根據香港會計準則第36號就任何減值作出評估。本集團選擇於財務狀況表中單獨列示使用權資產。

於二零一九年一月一日應用香港財務報告準則第16號時，本集團已使用以下選擇性實際權宜辦法：

- 對於租期自初步應用之日起十二個月內終止的租賃應用短期租賃豁免；及
- 對特徵相當相似的租賃組合使用單一貼現率。

於二零一九年一月一日的財務影響

於二零一九年一月一日採納香港財務報告準則第16號所產生的影響如下：

		Increase/(decrease) 增加/(減少) US\$'000 千美元
Assets	資產	
Increase in right-of-use assets	使用權資產增加	77,377
Decrease in prepayments included in prepayments, other receivables and other assets	計入預付款項、其他應收款項及其他資產的預付款項減少	(1,711)
Decrease in the current portion of prepaid land lease payment included in prepayments, other receivables and other assets	計入預付款項、其他應收款項及其他資產的預付土地租賃款項即期部分減少	(642)
Increase in deferred tax assets	遞延稅項資產增加	277
Decrease in the non-current portion of prepaid land lease payments	預付土地租賃款項非即期部分減少	(58,989)
Increase in total assets	資產總值增加	16,312
Liabilities	負債	
Increase in lease liabilities	租賃負債增加	(17,882)
Increase in accumulated losses	累計虧損增加	1,570

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

2.2 Changes in Accounting Policies and Disclosures (continued)

2.2 會計政策的變動及披露 (續)

Financial impact at 1 January 2019 (continued)

The lease liabilities as at 1 January 2019 reconciled to the operating lease commitments as of 31 December 2018 are as follows:

於二零一九年一月一日的財務影響 (續)
於二零一九年一月一日的租賃負債與於二零一八年十二月三十一日的經營租賃承擔對賬如下：

		US\$'000 千美元
Operating lease commitments as at 31 December 2018	於二零一八年十二月三十一日的經營租賃承擔	27,116
Less: Commitments relating to short-term leases	減：有關短期租賃的承擔	(587)
		26,529
Weighted average incremental borrowing rate as at 1 January 2019	於二零一九年一月一日的加權平均增量借貸利率	4.9%
Discounted operating lease commitments as at 1 January 2019	於二零一九年一月一日的貼現經營租賃承擔	19,593
Less: Prepayments included in prepayments, other receivables and other assets as at 31 December 2018	減：於二零一八年十二月三十一日計入預付款項、其他應收款項及其他資產的預付款項	(1,711)
Lease liabilities as at 1 January 2019	於二零一九年一月一日的租賃負債	17,882

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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>Definition of a Business</i> ¹
Amendments to HKFRS 9, HKAS 39 and HKFRS 7	<i>Interest Rate Benchmark Reform</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 HKAS 1 and HKAS 8	<i>Definition of Material</i> ¹

¹ Effective for annual periods beginning on or after 1 January 2020

² Effective for annual periods beginning on or after 1 January 2021

³ No mandatory effective date yet determined but available for adoption

While the adoption of some of the new and revised HKFRSs may result in changes in accounting policies, none of these HKFRSs is expected to have a significant impact on the Group's results of operations and financial position.

2.3 已頒佈但尚未生效的香港財務報告準則

本集團並無於該等財務報表應用以下已頒佈但尚未生效的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)	<i>業務的定義</i> ¹
香港財務報告準則第9號、香港會計準則第39號及香港財務報告準則第7號 (修訂本)	<i>利率基準改革</i> ¹
香港財務報告準則第10號及香港會計準則第28號 (修訂本) (二零一一年)	<i>投資者與其聯營公司或合營公司之間的資產出售或貢獻</i> ³
香港財務報告準則第17號	<i>保險合約</i> ²
香港會計準則第1號及香港會計準則第8號 (修訂本)	<i>重大的定義</i> ¹

¹ 於二零二零年一月一日或之後開始的年度期間生效

² 於二零二一年一月一日或之後開始的年度期間生效

³ 尚未釐定強制生效日期，惟可供採納

儘管採納部份新訂及經修訂香港財務報告準則或會導致會計政策變動，惟該等香港財務報告準則預期不會對本集團的經營業績及財務狀況造成重大影響。

2.4 Summary of Significant Accounting Policies

Investment in an associate

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 investment in an associate is 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.

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 recognized directly in the equity of the associate, the Group recognizes its share of any changes, when applicable, in the consolidated statement of changes in equity. Unrealised gains and losses resulting from transactions between the Group and its associate are eliminated to the extent of the Group's investment in the associate, except where unrealised losses provide evidence of an impairment of the assets transferred. Goodwill arising from the acquisition of an associate is included as part of the Group's investment in an associate.

If an investment in an associate becomes an investment in a joint venture, the retained interest is not remeasured. Instead, the investment continues to be accounted for under the equity method. In all other cases, upon loss of significant influence over the associate, the Group measures and recognizes 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 recognized 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。

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等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。收購一間聯營公司產生的商譽計為本集團於一間聯營公司投資的一部份。

倘於聯營公司的投資變成於合營公司的投資，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。

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。計量公平值時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）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。

2.4 Summary of Significant Accounting Policies (continued)

Fair value measurement (continued)

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 – based on quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2 – based on valuation techniques for which the lowest level input that is significant to the fair value measurement is observable, either directly or indirectly
- Level 3 – based on valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognized 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.

2.4 重大會計政策概要 (續)

公平值計量 (續)

公平值於財務報表確認或披露的所有資產及負債，均基於對計量公平值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 – 相同資產或負債於活躍市場的市場報價 (未經調整)
- 第2級 – 採用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 – 採用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。

**2.4 Summary of Significant Accounting Policies
(continued)****Impairment of non-financial assets (continued)**

An impairment loss is recognized 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 recognized impairment losses may no longer exist or may have decreased. If such an indication exists, the recoverable amount is estimated. A previously recognized 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 recognized 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, unless the asset is carried at a revalued amount, in which case the reversal of the impairment loss is accounted for in accordance with the relevant accounting policy for that revalued asset.

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，惟倘該項資產以重估價值列賬，則減值虧損撥回會按該項重估資產適用的有關會計政策入賬。

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

2.4 Summary of Significant Accounting Policies (continued)

Related parties (continued)

A party is considered to be related to the Group if: (continued)

- (b) the party is an entity where any of the following conditions applies:
- (i) the entity and the Group are members of the same group;
 - (ii) one entity is an associate or joint venture of the other entity (or of a parent, subsidiary or fellow subsidiary of the other entity);
 - (iii) the entity and the Group are joint ventures of the same third party;
 - (iv) one entity is a joint venture of a third entity and the other entity is an associate of the third entity;
 - (v) the entity is a post-employment benefit plan for the benefit of employees of either the Group or an entity related to the Group;
 - (vi) the entity is controlled or jointly controlled by a person identified in (a);
 - (vii) a person identified in (a)(i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity); and
 - (viii) the entity, or any member of a group of which it is a part, provides key management personnel services to the Group or to the parent of the Group.

2.4 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。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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 recognizes 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% – 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的重大部份,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%-19.0%
辦公設備	19.0%
汽車	19.0%
租賃物業裝修	20.0%

倘物業、廠房及設備項目其中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。

2.4 Summary of Significant Accounting Policies (continued)

Property, plant and equipment and depreciation (continued)

An item of property, plant and equipment including any significant part initially recognized is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on disposal or retirement recognized in the statement of profit or loss in the year the asset is derecognized 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 (2018: leasehold property under an operating lease) 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 recognized 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為物業、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(二零一八年：經營租賃項下的租賃物業))，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。

2.4 Summary of Significant Accounting Policies (continued)

Intangible assets

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

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會在本集團能夠顯示其在技術上能夠完成無形資產能供使用或出售、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。倘未能符合以上標準，產品研發開支會在產生時費用化。

2.4 Summary of Significant Accounting Policies (continued)

Leases (applicable from 1 January 2019)

The Group assesses at contract inception whether a contract is, or contains, a lease. That is, 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 recognizes 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 recognized 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 recognized, 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 right	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 (自二零一九年一月一日起適用)

本集團於合約開始時評估合約是否為或包含租賃，即合約為換取代價是否給予在一段時間內控制已識別資產使用的權利。

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款項，而使用權資產指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、初步已產生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獎勵。使用權資產於其租期及估計可使用年期 (以較短者為準) 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購股權獲行使，則折舊使用資產的估計可使用年期計算折舊。

2.4 Summary of Significant Accounting Policies (continued)

Leases (applicable from 1 January 2019) (continued)

Group as a lessee (continued)

(b) Lease liabilities

Lease liabilities are recognized 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 variable lease payments that do not depend on an index or a rate are recognized 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 lease of low-value assets recognition exemption to leases of office equipment that are considered to be low value.

Lease payments on short-term leases and leases of low value assets are recognized as an expense on a straight-line basis over the lease term.

2.4 主要會計政策概要 (續)

租賃 (自二零一九年一月一日起適用) (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計予以確認。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。租賃付款亦包括本集團合理地肯定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、租賃期限發生變化、租賃付款變化（即租賃付款日後因指數或比率變動出現變動）或購買相關資產的購股權評估變更，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。

短期租賃的租賃款項及低價值資產租賃在租期內按直線法確認為支出。

2.4 Summary of Significant Accounting Policies (continued)

Leases (applicable from 1 January 2019) (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 recognized over the lease term on the same basis as rental income. Contingent rents are recognized 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.

Leases (applicable before 1 January 2019)

Leases that transfer substantially all the rewards and risks of ownership of assets to the Group, other than legal title, are accounted for as finance leases. At the inception of a finance lease, the cost of the leased asset is capitalised at the present value of the minimum lease payments and recorded together with the obligation, excluding the interest element, to reflect the purchase and financing. Assets held under capitalised finance leases are included in property, plant and equipment, and depreciated over the shorter of the lease terms and the estimated useful lives of the assets. The finance costs of such leases are charged to the statement of profit or loss so as to provide a constant periodic rate of charge over the lease terms.

2.4 主要會計政策概要 (續)

租賃 (自二零一九年一月一日起適用) (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。

所有本集團並未轉讓資產所有權所附帶的絕大部分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。

倘租賃實質上將與相關資產所有權附帶的所有風險及回報轉移至承租人，則作為融資租賃入賬。

租賃 (自二零一九年一月一日前適用)

融資租賃乃指資產所有權回報與風險 (法定業權除外) 幾乎全部轉移至本集團之租約。於融資租賃開始時，租賃資產之成本值乃按最低租賃款項之現值撥充資本及與債務一同記錄 (利息除外)，以反映是項購置及融資。資本化融資租賃下之資產乃計入物業、廠房及設備，就租期及資產估計可使用年期之較短者折舊。該等租賃之融資成本乃就租期長短自損益表扣除，以得出不變之週期收費率。

2.4 Summary of Significant Accounting Policies (continued)

Leases (applicable before 1 January 2019) (continued)

Assets acquired through hire purchase contracts of a financing nature are accounted for as finance leases, but are depreciated over their estimated useful lives.

Leases where substantially all the rewards and risks of ownership of assets remain with the lessor are accounted for as operating leases. Where the Group is the lessor, assets leased by the Group under operating leases are included in non-current assets, and rentals receivable under the operating leases are credited to the statement of profit or loss on the straight-line basis over the lease terms. Where the Group is the lessee, rentals payable under operating leases net of any incentives received from the lessor are charged to the statement of profit or loss on the straight-line basis over the lease terms.

Prepaid land lease payments under operating leases are initially stated at cost and subsequently recognized on the straight-line basis over the lease terms.

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 主要會計政策概要 (續)

租賃 (自二零一九年一月一日起適用) (續)

以融資性質租購合約購入之資產乃列作融資租賃，惟會就其估計可使用年期折舊。

出租人仍保留資產所有權的絕大部份回報及風險的租賃均入賬列為經營租賃。倘本集團為出租人，本集團根據經營租賃出租的資產列入非流動資產，而經營租賃項下應收租金按租賃年期以直線法計入損益表。倘本集團為承租人，經營租賃項下應付租金扣除從出租人收取的任何優惠後按租賃年期以直線法於損益表內扣除。

經營租賃項下的預付土地租賃款項初始按成本列賬，其後於租賃年內按直線法確認。

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。

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 recognized 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集合約現金流量、出售金融資產，或兩者兼有。按攤銷成本分類及計量的金融資產於一種業務模式中持有，旨在持有金融資產以收取合約現金流量，而以公平值計入其他綜合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。

2.4 Summary of Significant Accounting Policies (continued)

Investments and other financial assets (continued)

Subsequent measurement

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

Financial assets at amortised cost (debt instruments)

Financial assets at amortised cost are subsequently measured using the effective interest method and are subject to impairment. Gains and losses are recognized in profit or loss when the asset is derecognized, 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 recognized 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 recognized in other comprehensive income. Upon derecognition, the cumulative fair value change recognized 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 recognized 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。當確立支付權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。

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 recognized 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 recognized 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 recognized 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接受付款的權利確立、與股息相關的經濟利益有可能流入本集團且股息金額能夠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）的衍生工具具備與主體不緊密相關的經濟特徵及風險；具備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；且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。

2.4 Summary of Significant Accounting Policies (continued)

Derecognition of financial assets

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognized (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 recognize the transferred asset to the extent of the Group's continuing involvement. In that case, the Group also recognizes 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較低者計算。

2.4 Summary of Significant Accounting Policies (continued)

Impairment of financial assets

The Group recognizes 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 recognized 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.

For debt investments at fair value through other comprehensive income, the Group applies the low credit risk simplification. At each reporting date, the Group evaluates whether the debt investments are considered to have low credit risk using all reasonable and supportable information that is available without undue cost or effort. In making that evaluation, the Group reassesses the external credit ratings of the debt investments. In addition, the Group considers that there has been a significant increase in credit risk when contractual payments are more than 30 days past due.

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）。

就按公平值計入其他全面收益的債務投資而言，本集團採用低信貸風險簡化法。於各報告日期，本集團毋須花費不必要之成本或努力，即可使用所有合理可靠資料評估債務投資是否被視為低信貸風險。在進行評估時，本集團會重新評估債務投資的外部信用評級。此外，本集團認為合約付款逾期超過30日時，信貸風險會大幅增加。

2.4 Summary of Significant Accounting Policies (continued)

Impairment of financial assets (continued)

General approach (continued)

The Group considers a financial asset in default when contractual payments are 90 days 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情況時，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收約現金流量，則撇銷金融資產。

按公平值計入其他全面收益之債務投資及按攤銷成本計量的金融資產乃根據普通法減值，且於以下階段就預期信貸虧損計量予以分類，惟採用下文所述簡化法的貿易應收款項除外。

- 第一階段 – 信貸風險自初始確認起並未大幅增加且其虧損撥備按等於12個月預期信貸虧損的數額計量的金融工具
- 第二階段 – 信貸風險自初始確認起大幅增加但並非信貸減值金融資產且其虧損撥備按等於全期預期信貸虧損的數額計量的金融工具
- 第三階段 – 於報告日期出現信貸減值(但並非購入或源生信貸減值)且其虧損撥備按等於全期預期信貸虧損的數額計量的金融資產

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 recognizes 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 and payables.

All financial liabilities are recognized 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的貿易應收款項或本集團就任何重大融資成分應用不調整交易價格的可行權宜方法而言，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

金融負債初始確認時歸類為按公平值計入損益的金融負債、貸款及借貸以及應付款項。

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及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。

2.4 Summary of Significant Accounting Policies (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 recognized in the statement of profit or loss. The net fair value gain or loss recognized 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 recognized 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 recognized 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 recognized in the statement of profit or loss when the liabilities are derecognized 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 重大會計政策概要 (續)

金融資產減值 (續)

後續計量

金融負債其後按類別以下列方法計量：

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。分開的嵌入式衍生工具亦被分類為持作買賣，惟非其被指定為有效對沖工具。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，及僅於符合國際財務報告準則第9號所規定的標準情況下方會進行。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損益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。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

2.4 Summary of Significant Accounting Policies (continued)

Derecognition of financial liabilities

A financial liability is derecognized 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 recognized 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 recognized 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. Net realisable value is based on estimated selling prices less any estimated costs to be incurred to completion and disposal.

2.4 重大會計政策概要 (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

倘（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，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。可變現淨值為估計售價減去任何在完成及出售過程中產生的估計費用。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

2.4 Summary of Significant Accounting Policies (continued)

Cash and cash equivalents

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.

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 recognized 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 recognized 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 recognized outside profit or loss is recognized 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 重大會計政策概要 (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，以及一般期限為自購入起計三個月內及可隨時轉換為已知數額現金且價值變動風險較低的短期高流動性投資。

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

倘因過往事件而須承擔法定或推定責任，而履行該責任可能導致未來資源外流，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入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。

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 recognized 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 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 recognized 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, deferred tax assets are only recognized 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 重大會計政策概要 (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財務報告所示賬面值的所有暫時差額撥備。

除下列情況外，遞延稅項負債會就所有應課稅暫時差額確認：

- 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，且於可見未來不會撥回暫時差額。

遞延稅項資產於有可能動用應課稅溢利以抵銷可扣減暫時差額的情況下，就所有可扣稅暫時差額以及未動用稅項抵免及未動用稅項虧損結轉確認，而未動用稅項抵免及未動用稅項虧損結轉可以動用，惟下列情況除外：

- 倘涉及可扣減暫時差額的遞延稅項資產乃因初始確認非業務合併、且於交易時不影響會計溢利或應課稅損益的交易的資產或負債而產生；及
- 就於子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。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

2.4 Summary of Significant Accounting Policies (continued)

Income tax (continued)

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognized deferred tax assets are reassessed at the end of each reporting period and are recognized 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 recognized 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 recognized as income on a systematic basis over the periods that the costs, which it is intended to compensate, are expensed.

Where the grant relates to an asset, the fair value is 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 重大會計政策概要 (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，並在具備足夠應課稅溢利以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按預期適用於變現資產或清償負債期間的稅率，依據於報告期末已頒佈或實質上已頒佈的稅率（及稅法）計量。

僅當本集團有可合法執行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各未來期間預期待有大額遞延稅項負債或資產需要結算或清償時，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，則於有關期間內確認為收入，以按系統基準將補助與擬補償的相關成本抵銷。

倘補助與資產有關，則公平值於該項資產賬面值中扣除，並通過減少折舊開支方式撥回損益表。

2.4 Summary of Significant Accounting Policies (continued)

Government grants (continued)

Where the Group receives government loans granted with no or at a below-market rate of interest for the construction of a qualifying asset, the initial carrying amount of the government loans is determined using the effective interest rate method, as further explained in the accounting policy for “Financial liabilities” above. The benefit of the government loans granted with no or at a below-market rate of interest, which is the difference between the initial carrying value of the loans and the proceeds received, is treated as a government grant and released to the statement of profit or loss over the expected useful life of the relevant asset by equal annual instalments.

Revenue recognition

Revenue from contracts with customers

Revenue from contracts with customers is recognized 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.

When the consideration in a contract includes a variable amount, the amount of consideration is estimated to which the Group will be entitled in exchange for transferring the goods or services to the customer. The variable consideration is estimated at contract inception and constrained until it is highly probable that a significant revenue reversal in the amount of cumulative revenue recognized will not occur when the associated uncertainty with the variable consideration is subsequently resolved.

When the contract contains a financing component which provides the customer with a significant benefit of financing the transfer of goods or services to the customer for more than one year, revenue is measured at the present value of the amount receivable, discounted using the discount rate that would be reflected in a separate financing transaction between the Group and the customer at contract inception. When the contract contains a financing component which provides the Group a significant financial benefit for more than one year, revenue recognized under the contract includes the interest expense accreted on the contract liability under the effective interest method. For a contract where the period between the payment by the customer and the transfer of the promised goods or services is one year or less, the transaction price is not adjusted for the effects of a significant financing component, using the practical expedient in HKFRS 15.

2.4 重大會計政策概要 (續)

政府補助 (續)

倘本集團就建造合資格資產而收取的政府貸款不付息或按低於市場利率計息，則政府貸款的初始賬面值使用實際利率法釐定，進一步詳情載述於上文「金融負債」的會計政策。授出的政府貸款福利不付息或按低於市場利率計息（為貸款的初始賬面值與所收取的所得款項的差額）視作政府補貼及於有關資產的預期可使用年期內逐年按等額分期撥回損益表。

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。

當合約代價包含可變金額時，代價金額估計為本集團就向客戶轉讓貨品或服務而有權在交換中獲取的數額。可變代價於合約開始時估計並受到約束，直至其後關乎可變代價的不確定因素獲得解決時確認累計收益金額不大可能發生重大收益撥回。

倘合約包含就向客戶轉讓貨品或服務為客戶提供超過一年的重大融資利益的融資部份，則收益按應收金額的現值計量，並使用本集團與客戶於合約開始時單獨融資交易中反映的貼現率貼現。倘合約包含為本集團提供超過一年的重大融資利益的融資部份，則根據該合約確認的收益包括按實際利率法計算的合約負債所產生的利息開支。就客戶付款與承諾貨品或服務轉移期間為一年或一年以下的合約而言，交易價格無須因重大融資成分的影響而調整，採納香港財務報告準則第15號中實用的權宜之策。

2.4 Summary of Significant Accounting Policies (continued)

Revenue recognition (continued)

Revenue from contracts with customers (continued)

The Group is involved in the business of the manufacture and sale of semiconductor products. Revenue from the sale of semiconductor products is recognized at the point in time when control of the asset is transferred to the customer, generally on delivery of the semiconductor products. The normal credit term is 30 to 45 days upon delivery, extending up to 150 days for major customers. Payment in advance is required for some contracts.

Revenue from other sources

Rental income is recognized on a time proportion basis over the lease terms. Variable lease payments that do not depend on an index or a rate are recognized as income in the accounting period in which they are incurred.

Other income

Interest income is recognized 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.

Dividend income is recognized when the shareholders' right to receive 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.

Contract liabilities

A contract liability is recognized 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 recognized as revenue when the Group performs under the contract (i.e., transfers control of the related goods or services to the customer).

2.4 重大會計政策概要 (續)

銷售收入確認 (續)

客戶合約收益 (續)

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)確認。一般信貸期限為交付後30至45天,對主要客戶的信貸期延長至150天。若干合約須提前付款。

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。

股息收入於股東收取款項之權利被確立時確認,與股利相關的經濟利益很可能流入本集團,且股利的金額能夠可靠計量。

合約負債

倘客戶於本集團轉移相關商品或服務前支付代價,則於作出付款或付款到期時(以較早者為準)確認合約負債。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。

2.4 Summary of Significant Accounting Policies (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 recognized 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 recognized 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 recognized 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 重大會計政策概要 (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。

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 recognized. 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 recognized as if the terms had not been modified, if the original terms of the award are met. In addition, an expense is recognized 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 recognized for the award is recognized immediately. This includes any award where non-vesting conditions within the control of either the Group or the employee are not met. However, if a new award is substituted for the cancelled award, and is designated as a replacement award on the date that it is granted, the cancelled and new awards are treated as if they were a modification of the original award, as described in the previous paragraph.

The dilutive effect of outstanding options is reflected as additional share dilution in the computation of earnings per share.

Other employee benefits

Pension scheme

The employees of the Group's subsidiary which operates in Mainland China are required to participate in a central pension scheme operated by the local municipal government. This subsidiary is required to contribute a certain percentage of its payroll costs to the central pension scheme. The contributions are charged to the statement of profit or loss as they become payable in accordance with the rules of the central pension scheme.

Termination benefits

Termination benefits are recognized at the earlier of when the Group can no longer withdraw the offer of those benefits and when the Group recognizes restructuring costs involving the payment of termination benefits.

2.4 重大會計政策概要 (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。

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。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

2.4 Summary of Significant Accounting Policies (continued)

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.

Dividends

Final dividends are recognized 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 recognized 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. All differences arising on settlement or translation of monetary items are recognized in the statement of profit or loss.

2.4 重大會計政策概要 (續)

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。

股息

末期股息於股東在股東大會上批准時確認作負債。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所有差額於損益表確認。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

2.4 Summary of Significant Accounting Policies (continued)

Foreign currencies (continued)

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 recognized in other comprehensive income or profit or loss is also recognized in other comprehensive income or profit or loss, respectively).

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 recognizes 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 the 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 weighted average exchange rates for the year.

The resulting exchange differences are recognized 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 recognized 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 重大會計政策概要 (續)

外幣 (續)

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入或損益確認的項目的換算差額亦分別於其他全面收入或損益確認)。

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，而其損益表按年內加權平均匯率換算為美元。

由此產生的匯兌差額於其他全面收入確認，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入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。

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 recognized 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.

Classification between investment property and owner-occupied property

The Group determines whether a property qualifies as an investment property, and has developed criteria in making that judgement. Investment property is a property held to earn rentals or for capital appreciation or both. Therefore, the Group considers whether a property generates cash flows largely independently of the other assets held by the Group. Some property comprises a portion that is held to earn rentals or for capital appreciation and another portion that is held for use in the production or supply of goods or services or for administrative purposes. If these portions could be sold separately or leased out separately under a finance lease, the Group accounts for the portions separately. If the portions could not be sold separately, the property is an investment property only if an insignificant portion is held for use in the production or supply of goods or services or for administrative purposes. Judgement is made on an individual property basis to determine whether ancillary services are so significant that a property does not qualify as an investment property.

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。

投資物業與自用物業的分類

本集團釐定物業是否符合投資物業的資格，並已制訂作出此判斷的準則。投資物業是為賺取租金或資本增值或同時為此兩項目的而持有的物業。因此，本集團會考慮一項物業產生現金流量時是否基本上與本集團所持有的其他資產無關。某些物業的部份是為賺取租金或資本增值而持有，而物業內另一些部份是為用於生產或供應貨品或服務或作行政用途而持有。倘若此等部份可以分開出售或根據融資租賃分開出租，本集團會將有關部份分開入賬。倘若該等部份無法分開出售，則只會用於生產或供應貨品或服務或作行政用途而持有的部份並不重要時，有關物業才會列作投資物業。本集團對各項物業作出判斷，以決定配套服務是否重要以使物業並不符合投資物業的資格。

3. Significant Accounting Estimates and Assumptions (continued)

Estimation uncertainty

The key assumptions concerning the future and other key sources of estimation uncertainty at the end of the reporting period, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below.

Impairment of non-financial assets

The Group assesses whether there are any indicators of impairment for all non-financial assets (including the right-of-use assets) at the end of each reporting period. Non-financial assets are tested for impairment when there are indicators that the carrying amounts may not be recoverable. An impairment exists when the carrying value of an asset or a cash-generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The calculation of the fair value less costs of disposal is based on available data from binding sales transactions in an arm's length transaction of similar assets or observable market prices less incremental costs for disposing of the asset. When value-in-use calculations are undertaken, management must estimate the expected future cash flows from the asset or cash-generating unit and choose a suitable discount rate in order to calculate the present value of those cash flows.

Fair value of unlisted equity investments

The unlisted equity investments have been valued based on a market-based valuation technique as detailed in note 37 to the financial statements. The valuation requires the Group to determine the comparable public companies (peers) and select the price multiple. In addition, the Group makes estimates about the discount for illiquidity and size differences. The Group classifies the fair value of these investments as Level 3. Further details are included in notes 19 and 37 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。

非金融資產減值

本集團於各報告期末評估所有非金融資產（包括使用權資產）是否出現任何減值跡象。非金融資產於有跡象顯示賬面值可能無法收回時測試減值。資產或現金產生單位賬面值超逾其可收回金額（即其公平值減出售成本與使用價值的較高者）時，則存在減值。計量公平值減出售成本時，按以公平基準就類似資產進行具有約束力的銷售交易可得數據，或可得市價減出售資產的已增加成本得出。當計算使用價值時，管理層必須估計來自資產或現金產生單位的預期未來現金流量，並選擇合適的貼現率，以計算該等現金流量的現值。

非上市股本投資的公平值

非上市股本投資已根據財務報表附註37所詳述的市場基準估值技術進行估值。有關估值需要本集團確定可資比較的公眾公司（同業公司）及選擇價格倍數。此外，本集團須就流動性不足及規模差異的貼現作出估計。本集團將該等工具的公平值歸類為第3級。進一步詳情載於財務報表附註19及37。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

3. Significant Accounting Estimates and Assumptions (continued)

Estimation uncertainty (continued)

Fair value of investment property

In the absence of current prices in an active market for similar properties, the Group considers information from a variety of sources, including:

- (a) current prices in an active market for properties of a different nature, condition or location, adjusted to reflect those differences;
- (b) recent prices of similar properties on less active markets, with adjustments to reflect any changes in economic conditions since the date of the transactions that occurred at those prices; and
- (c) 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 2019 was US\$168,615,000 (2018: US\$171,225,000). Further details, including the key assumptions used for fair value measurement and a sensitivity analysis, are given in note 14 to the financial statements.

3. 重要會計估計及假設 (續)

估計不確定性 (續)

投資物業公平值

倘類似物業於活躍市場中並無現行市價，則本集團會考慮各項資料來源，包括：

- (a) 於活躍市場中，不同性質、狀況或地點的物業的現行價格，並就有關差別作出調整；
- (b) 於較非活躍的市場中，同類物業的近期價格，並就自按該等價格進行交易日期以來經濟環境變動作出調整；及
- (c) 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。

於二零一九年十二月三十一日，投資物業的賬面值為168,615,000美元(二零一八年：171,225,000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。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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, the PRC. Therefore, no segment information based on the geographical location of assets is presented for the year.

Revenues are attributed to geographical areas based on the locations of customers. Revenues by geographical segments based on the locations of customers for the year are presented as follows:

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
China (including Hong Kong)	中國(包括香港)	546,029	525,795
United States of America	美利堅合眾國	150,392	161,428
Asia (excluding China and Japan)	亞洲(不包括中國及日本)	115,256	117,963
Europe	歐洲	70,818	70,660
Japan	日本	50,072	54,422
		932,567	930,268

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 2019 (2018: 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，故並無按資產的地理位置於年內呈列分部分資料。

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：

有關主要客戶的資料

截至二零一九年十二月三十一日止年度並無對單一客戶的銷售所得收益金額達本集團收入的10%或以上(二零一八年：無)。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

5. Revenue, Other Income and Gains and Other Expenses

An analysis of revenue, other income and gains and other expenses is as follows:

5. 收入、其他收入及收益及其他費用

對收入、其他收入及收益及其他費用的分析如下：

	2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Revenue from contracts with customers		
Sale of goods	932,567	930,268
Other income		
Gross rental income from investment property operating leases:		
Fixed lease payments	12,642	-
Rental income	-	13,063
Interest income	17,676	9,489
Other interest income from financial assets at fair value through profit or loss	19,965	11,412
Government subsidies	13,455	4,277
Sale of scrap materials	241	299
Others	490	873
	64,469	39,413
Gains		
Fair value gains on financial assets at fair value through profit or loss	4,024	4,200
Gain on disposal of items of property, plant and equipment	598	-
	4,622	4,200
	69,091	43,613
Other expenses		
Foreign exchange loss, net	406	11,010
Net loss on disposal of items of property, plant and equipment	-	96
	406	11,106

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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）

	2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Type of goods Sales of semiconductor products and total revenue from contracts with customers	932,567	930,268
Timing of revenue recognition Goods transferred at a point in time and total revenue from contracts with customers	932,567	930,268

The disaggregation of the Group's revenue based on the geographical region for the year ended 31 December 2019 is given in note 4.

截至二零一九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。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

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：

			2019	2018
		<i>Notes</i>	二零一九年	二零一八年
		<i>附註</i>	(US\$'000)	(US\$'000)
			(千美元)	(千美元)
Cost of inventories sold	已售存貨成本		650,107	619,114
Depreciation of property, plant and equipment	物業、廠房及設備折舊	13	122,630	116,187
Depreciation of right-of-use assets	使用權資產折舊	16	2,637	-
Recognition of prepaid land lease payments	確認預付土地租賃款項	15	-	666
Amortisation of intangible assets	無形資產攤銷	17	3,444	3,006
Research and development costs	研發成本		63,126	44,732
Minimum lease payments under operating leases	經營租賃最低租賃款項		-	3,933
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)	1,625	-
Auditor's remuneration	核數師薪酬		557	497
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		205,814	168,646
Equity-settled share option expense	以權益結算的購股權開支	31	7,746	1,298
Pension scheme contributions	退休金計劃供款		22,640	18,692
			236,200	188,636
Impairment of items of property, plant and equipment	物業、廠房及設備項目減值	13	2,222	6,151
Impairment of trade receivables	貿易應收款項減值	21	47	25
Write-down of inventories to net realisable value	存貨撇減至可變現淨值		1,370	646
Changes in fair value of an investment property	投資物業公平值變動	14	(163)	(247)

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

7. Finance Costs

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Interest on bank borrowings	銀行借款利息	358	2,203
Interest on lease liabilities	租賃負債利息	884	–
		1,242	2,203

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:

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Fees	袍金	219	231
Other emoluments:	其他酬金：		
Salaries, allowances and benefits in kind	薪酬、津貼及實物利益	148	150
Performance related bonuses	與表現掛鉤的花紅	351	196
Equity-settled share option expense	以權益結算的購股權開支	139	58
Pension scheme contributions	退休金計劃供款	8	8
		646	412
		865	643

During the year and the 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 recognized 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.

7. 財務費用

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：

於年內及過往年度，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。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

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:

	2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Stephen Tso Tung Chang 張祖同	73	77
Kwai Huen Wong, JP 王桂燦，太平紳士	73	77
Long Fei Ye 葉龍蜚	73	77
	219	231

There were no other emoluments payable to the independent non-executive directors during the year (2018: Nil).

年內並無應付予獨立非執行董事的其他酬金（二零一八年：無）。

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

	Fees 袍金 US\$'000 千美元	Salaries, allowances and benefits in kind 薪酬、津貼及 實物利益 US\$'000 千美元	Performance related bonuses 與表現掛鉤 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
2019 Non-executive director: Mr. Takayuki Morita 二零一九年 非執行董事： 森田隆之先生	-	-	-	16	-	16
Chief executive: Mr. Junjun Tang 最高行政人員： 唐均君先生 (appointed on 1 May 2019) (於二零一九年 五月一日獲委任)	-	100	299	-	5	404
Mr. Yu Wang 王煜先生 (resigned on 1 May 2019) (於二零一九年 五月一日辭任)	-	48	52	123	3	226
	-	148	351	139	8	646

(b) 非執行董事及最高行政人員

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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

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

		Salaries, allowances and benefits in kind	Performance related bonuses	Equity-settled share option expense	Pension scheme contributions	Total remuneration
	Fees	袍金	與表現掛鉤的花紅	以權益結算的購股權開支	退休金計劃供款	薪酬總額
	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
2018	二零一八年					
Non-executive director:	非執行董事：					
Mr. Takayuki Morita	森田隆之先生	-	-	7	-	7
Chief executive:	最高行政人員：					
Mr. Yu Wang	王煜先生	-	196	51	8	405
		-	150	58	8	412

Save as disclosed above, none of the directors received any emoluments during 2019 and 2018.

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) 執行董事、非執行董事及最高行政人員 (續)

除前述披露者外，概無董事於二零一九年及二零一八年收取任何薪酬。

於年內，概無董事作出安排放棄或同意放棄任何薪酬。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

9. Five Highest Paid Employees

The five highest paid employees during the year included one director, who is also the chief executive (2018: 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 (2018: four) highest paid employees who are not directors of the Company are as follows:

		2019	2018
		二零一九年	二零一八年
		(US\$'000)	(US\$'000)
		(千美元)	(千美元)
Salaries, allowances and benefits in kind	薪酬、津貼及實物利益	1,207	1,123
Performance related bonuses	與表現掛鈎的花紅	836	458
Equity-settled share option expense	以權益結算的購股權開支	339	128
Pension scheme contributions	退休金計劃供款	22	16
		2,404	1,725

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	
		2019	2018
		二零一九年	二零一八年
HK\$2,000,001 to HK\$2,500,000	2,000,001港元至2,500,000港元	–	1
HK\$2,500,001 to HK\$3,000,000	2,500,001港元至3,000,000港元	3	2
HK\$4,000,001 to HK\$4,500,000	4,000,001港元至4,500,000港元	1	1
		4	4

During the year and 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 recognized 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）（二零一八年：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（二零一八年：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：

於年內及過往年度，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。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

10. Income Tax

Profits arising in Hong Kong were subject to profits tax at the rate of 16.5% during the year (2018: 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 (2018: 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 Group'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 an enterprise producing integrated circuits of 0.25 μm below in width and is therefore entitled to a preferential tax rate of 15% from 2017 to 2020.

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.

The Company's subsidiary incorporated and operating in Japan was subject to corporation tax at a rate of 25.5% (2018: 25.5%).

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 (2018: 21%), as well as state tax at 8.84% (2018: 8.84%).

10. 所得稅

於年內的香港溢利須按16.5% (二零一八年：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 (二零一八年：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」)。

所有本集團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生產工藝技術節點小於0.25 μm 集成電路的企業，故有權於二零一七年至二零二零年期間按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%。

本公司在日本註冊成立及營運的子公司應按25.5% (二零一八年：25.5%) 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% (二零一八年：21%) 的聯邦企業所得稅率及8.84% (二零一八年：8.84%) 的州稅稅率繳稅。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

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：

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Current income tax – PRC	當期所得稅 – 中國	24,048	26,887
Current income tax – elsewhere	當期所得稅 – 其他地區	287	364
Withholding tax on the distribution dividend from a PRC subsidiary	中國子公司分派股息的預扣稅	4,656	4,245
Deferred tax (note 28)	遞延稅項 (附註28)	(2,403)	3,951
		26,588	35,447

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：

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Profit before tax	稅前溢利	181,573	221,055
Tax at the statutory tax rate of 25%	按法定稅率25%計算的稅項	45,393	55,264
Lower tax rates for specific provinces or enacted by local authority	特定省份或地方當局頒佈的較低稅率	(15,764)	(22,450)
Adjustments in respect of current tax of previous periods	就上一期間當期稅項的調整	(14)	(219)
Profits attributable to an associate	一家聯營公司應佔溢利	(1,520)	(1,417)
Expenses not deductible for tax	不可扣稅開支	219	244
Tax losses not recognized	未確認稅項虧損	217	306
Temporary differences not recognized	未確認暫時差額	339	923
Additional deduction of research and development costs	研發成本其他扣減	(5,553)	(5,032)
Effect of withholding tax at 10% (2018: 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% (二零一八年: 10%) 計算預扣稅影響	3,271	7,828
Tax charge at the Group's effective rate	按本集團實際稅率計算的稅項開支	26,588	35,447

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

11. Dividend

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Proposed final – Nil (2018: HK31 cents) per ordinary share	建議末期股息 – 每股普通股零 (二零一八年：31港仙)	–	50,741

The Board did not recommend the payment of any dividend for the year ended 31 December 2019.

The Board recommended a final 2018 dividend of HK\$31 cents per share amounting to HK\$398,302,640, which was equivalent to US\$50,741,129.

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 1,285,586,255 (2018: 1,070,699,301) 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 no consideration on the deemed exercise or conversion of all dilutive potential ordinary shares into ordinary shares.

11. 股息

董事會不建議派付截至二零一九年十二月三十一日止年度之任何股息。

董事會建議派付二零一八年末期股息每股31港仙，合計為398,302,640港元，相當於50,741,129美元。

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1,285,586,255股（二零一八年：1,070,699,301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零代價發行之普通股加權平均數。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

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：

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (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	162,237	183,158
Number of shares 股份數目			
		2019 二零一九年	2018 二零一八年
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	1,285,586,255	1,070,699,301
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	9,953,000	11,752,000
		1,295,539,255	1,082,451,301

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

13. Property, Plant and Equipment

13. 物業、廠房及設備

		Buildings 樓宇 (US\$'000) (千美元)	Plant and machinery 廠房及機器 (US\$'000) (千美元)	Office equipment 辦公設備 (US\$'000) (千美元)	Motor vehicles 汽車 (US\$'000) (千美元)	Leasehold improvements 租賃物業裝修 (US\$'000) (千美元)	Construction in progress 在建工程 (US\$'000) (千美元)	Total 總計 (US\$'000) (千美元)
31 December 2019	二零一九年十二月三十一日							
At 31 December 2018 and at 1 January 2019:	於二零一八年十二月三十一日及二零一九年一月一日:							
Cost	成本	300,531	3,821,085	44,661	1,903	3,945	139,223	4,311,348
Accumulated depreciation and impairment	累計折舊及減值	(173,318)	(3,310,934)	(31,735)	(1,567)	(3,945)	(16,669)	(3,538,168)
Net carrying amount	賬面淨值	127,213	510,151	12,926	336	-	122,554	773,180
At 1 January 2019, net of accumulated depreciation and impairment	於二零一九年一月一日，扣除累計折舊及減值	127,213	510,151	12,926	336	-	122,554	773,180
Additions	添置	-	-	-	-	-	937,685	937,685
Transfers	轉撥	120,166	525,810	2,706	138	-	(648,820)	-
Disposals	處置	-	(189)	(7)	(2)	-	-	(198)
Depreciation provided during the year	年內計提折舊	(11,147)	(108,443)	(3,001)	(39)	-	-	(122,630)
Impairment	減值	-	(2,204)	(18)	-	-	-	(2,222)
Exchange realignment	匯兌調整	(3,947)	(16,917)	(252)	(8)	-	(6,408)	(27,532)
At 31 December 2019, net of accumulated depreciation and impairment	於二零一九年十二月三十一日，扣除累計折舊及減值	232,285	908,208	12,354	425	-	405,011	1,558,283
At 31 December 2019:	於二零一九年十二月三十一日:							
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

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

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 2018	二零一八年十二月三十一日							
At 31 December 2017 and at 1 January 2018:	於二零一七年十二月三十一日及二零一八年一月一日：							
Cost	成本	315,187	3,923,939	45,280	2,041	4,143	36,507	4,327,097
Accumulated depreciation and impairment	累計折舊及減值	(171,733)	(3,368,445)	(30,851)	(1,783)	(3,314)	(17,509)	(3,593,635)
Net carrying amount	賬面淨值	143,454	555,494	14,429	258	829	18,998	733,462
At 1 January 2018, net of accumulated depreciation and impairment	於二零一八年一月一日，扣除累計折舊及減值	143,454	555,494	14,429	258	829	18,998	733,462
Additions	添置	-	-	-	-	-	200,220	200,220
Transfers	轉撥	468	88,820	2,482	130	-	(91,900)	-
Disposals	處置	-	(36)	(55)	(9)	-	-	(100)
Depreciation provided during the year	年內計提折舊	(10,157)	(102,292)	(2,895)	(27)	(816)	-	(116,187)
Impairment	減值	-	(5,806)	(345)	-	-	-	(6,151)
Exchange realignment	匯兌調整	(6,552)	(26,029)	(690)	(16)	(13)	(4,764)	(38,064)
At 31 December 2018, net of accumulated depreciation and impairment	於二零一八年十二月三十一日，扣除累計折舊及減值	127,213	510,151	12,926	336	-	122,554	773,180
At 31 December 2018:	於二零一八年十二月三十一日：							
Cost	成本	300,531	3,821,085	44,661	1,903	3,945	139,223	4,311,348
Accumulated depreciation and impairment	累計折舊及減值	(173,318)	(3,310,934)	(31,735)	(1,567)	(3,945)	(16,669)	(3,538,168)
Net carrying amount	賬面淨值	127,213	510,151	12,926	336	-	122,554	773,180

For the year ended 31 December 2019, certain items of the Group's machinery of US\$2,222,000 (2018: US\$6,151,000) 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 2019, certain of the Group's property, plant and equipment with a net carrying value of US\$20,858,000 (2018: US\$22,325,000) were pledged to banks to secure the Group's banking facilities (note 26).

截至二零一九年十二月三十一日止年度，本集團機器中若干項目2,222,000美元（二零一八年：6,151,000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。

於二零一九年十二月三十一日，本集團賬面淨值為20,858,000美元（二零一八年：22,325,000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信貸融資（附註26）。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

14. Investment Property

14. 投資物業

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Carrying amount at 1 January	於一月一日的賬面值	171,225	179,586
Net gain from a fair value adjustment	公平值調整的收益淨額	163	247
Exchange realignment	匯兌調整	(2,773)	(8,608)
Carrying amount at 31 December	於十二月三十一日的賬面值	168,615	171,225

The Group's investment property is situated in Shanghai, the PRC and is held under a medium term lease. 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 2019 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，按中期租約持有。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。

於二零一八年十二月三十一日，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評估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35(b))。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

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 2019 and 2018. 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 (2018: 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)於二零一九年及二零一八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(二零一八年: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 2019	Term and reversion method	Estimated rental value (per sq.m. and per month)	US\$11.9 (equivalent to RMB81.90)
於二零一九年十二月三十一日	年期及復歸法	估計租賃價值 (每平方米及每月)	11.9美元 (相當於人民幣 81.90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 2018	Term and reversion method	Estimated rental value (per sq.m. and per month)	US\$12.8 (equivalent to RMB88.08)
於二零一八年十二月三十一日	年期及復歸法	估計租賃價值 (每平方米及每月)	12.8美元 (相當於人民幣 88.08元)
		Term yield 年期回報率	7.00%
		Reversionary yield 復歸回報率	7.50%
		Long term vacancy rate 長期空置率	5.00%

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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.

15. Prepaid Land Lease Payments

		(US\$'000) (千美元)
Carrying amount at 1 January 2018	於二零一八年一月一日的賬面值	21,308
Additions	添置	43,342
Recognized during the year	年內確認	(666)
Exchange realignment	匯兌調整	(4,353)
Carrying amount at 31 December 2018	於二零一八年十二月三十一日的賬面值	59,631
Current portion included in prepayments, other receivables and other assets	預付款項、其他應收款項及其他資產的即期部份	(642)
Non-current portion	非即期部份	58,989
Carrying amount at 31 December 2018	於二零一八年十二月三十一日的賬面值	59,631
Effect of adoption of HKFRS 16 (note 2.2)	採用香港財務報告準則第16號的影響(附註2.2)	(59,631)
Carrying amount at 1 January 2019 and 31 December 2019	於二零一九年一月一日及二零一九年十二月三十一日的賬面值	-

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。

15. 預付土地租賃款項

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

15. Prepaid Land Lease Payments (continued)

Certain of the Group's prepaid land lease payments with a carrying value of US\$5,750,000 as at 31 December 2018 were pledged to banks to secure the Group's banking facilities (note 26).

15. 預付土地租賃款項 (續)

於二零一八年十二月三十一日，賬面值為5,750,000美元的本集團若干預付土地租賃付款已抵押予銀行以取得本集團的銀行信貸融資（附註26）。

16. Right-of-Use Assets

16. 使用權資產

		Land use right 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 31 December 2018, net of accumulated depreciation	於二零一八年十二月三十一日，扣除累計折舊	-	-	-
Effect of adoption of HKFRS 16 (note 2.2)	採用香港財務報告準則第16號的影響（附註2.2）	59,631	17,746	77,377
At 1 January 2019, net of accumulated depreciation	於二零一九年一月一日，扣除累計折舊	59,631	17,746	77,377
Additions	添置	-	1,233	1,233
Depreciation provided during the year	年內計提折舊	(613)	(2,024)	(2,637)
Exchange realignment	匯兌調整	(1,188)	(259)	(1,447)
At 31 December 2019	於二零一九年十二月三十一日	57,830	16,696	74,526

Certain of the Group's land use right with a carrying value of US\$5,445,000 as at 31 December 2019 were pledged to banks to secure the Group's banking facilities (note 26).

於二零一九年十二月三十一日，賬面值為5,445,000美元的本集團若干土地使用權已抵押予銀行以取得本集團的銀行信貸融資（附註26）。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

17. Intangible Assets

17. 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 2019	二零一九年十二月三十一日			
At 31 December 2018 and at 1 January 2019:	於二零一八年十二月三十一日 及二零一九年一月一日：			
Cost	成本	282,999	93,929	376,928
Accumulated amortisation and impairment	累計攤銷及減值	(282,999)	(84,358)	(367,357)
Net carrying amount	賬面淨值	–	9,571	9,571
At 1 January 2019, net of accumulated amortisation and impairment	於二零一九年一月一日， 扣除累計攤銷及減值	–	9,571	9,571
Additions	添置	3,150	4,226	7,376
Amortisation provided during the year	年內作出攤銷	–	(3,444)	(3,444)
Exchange realignment	匯兌調整	(62)	(119)	(181)
At 31 December 2019, net of accumulated amortisation and impairment	於二零一九年十二月三十一日， 扣除累計攤銷及減值	3,088	10,234	13,322
At 31 December 2019:	於二零一九年十二月三十一日：			
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

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

17. Intangible Assets (continued)

17. 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 2018	二零一八年十二月三十一日			
At 31 December 2017 and at 1 January 2018:	於二零一七年十二月三十一日 及二零一八年一月一日：			
Cost	成本	282,999	88,427	371,426
Accumulated amortisation and impairment	累計攤銷及減值	(282,999)	(81,016)	(364,015)
Net carrying amount	賬面淨值	–	7,411	7,411
At 1 January 2018, net of accumulated amortisation and impairment	於二零一八年一月一日， 扣除累計攤銷及減值	–	7,411	7,411
Additions	添置	–	5,502	5,502
Amortisation provided during the year	年內作出攤銷	–	(3,006)	(3,006)
Exchange realignment	匯兌調整	–	(336)	(336)
At 31 December 2018, net of accumulated amortisation and impairment	於二零一八年十二月三十一日， 扣除累計攤銷及減值	–	9,571	9,571
At 31 December 2018:	於二零一八年十二月三十一日：			
Cost	成本	282,999	93,929	376,928
Accumulated amortisation and impairment	累計攤銷及減值	(282,999)	(84,358)	(367,357)
Net carrying amount	賬面淨值	–	9,571	9,571

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

18. Investment in an Associate

18. 於聯營公司的投資

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Share of net assets	分佔淨資產	73,142	64,005

Particulars of the material associate are as follows:

主要聯營公司詳情如下：

Name of company 公司名稱	Place of registration and business 登記及營業地點	Paid-in capital 實繳股本 RMB'000 人民幣千元	Percentage of equity interest attributable to the Group 本集團應佔股權百分比	Principal activities 主要業務
Shanghai Huahong Technology Development Co., Ltd. ("Huahong Technology Development") 上海華虹科技發展有限公司 ([華虹科技發展])	PRC/Mainland China 中國／中國內地	548,000	50%	Technology development and investment 科技開發及投資

The financial statements of this associate were not audited by Ernst & Young, Hong Kong or another member firm of the Ernst & Young global network.

該聯營公司的財務報表並未經香港安永會計師事務所或安永會計師事務所全球網絡的其他成員公司審核。

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。

The following table illustrates the summarised financial information of the Group's associate:

下表概述本集團聯營公司的財務資料：

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

18. Investment in an Associate (continued)

18. 於聯營公司的投資（續）

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Current assets	流動資產	73,282	113,440
Non-current assets	非流動資產	210,028	185,056
Current liabilities	流動負債	(56,216)	(66,496)
Non-current liabilities	非流動負債	(80,810)	(103,990)
Net assets	淨資產	146,284	128,010
Net assets, excluding goodwill	淨資產，不包括商譽	146,284	128,010
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%
Group's share of net assets of the associate, excluding goodwill	本集團分佔聯營公司淨資產，不包括商譽	73,142	64,005
		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Revenue	收入	19,782	17,188
Profit and total comprehensive income	溢利及全面收益總額	20,262	18,888

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

19. Financial Investments

19. 金融投資

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (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入的股本投資	207,689	208,357
Financial assets at fair value through profit or loss	按公平值計入損益的金融資產	519,779	667,033

Equity investments designated at fair value through other comprehensive income are unlisted equity investments in two fellow subsidiaries, Shanghai Huali Microelectronics Co., Ltd. ("Shanghai Huali") and QST Corporation ("QST"), which were irrevocably designated at fair value through other comprehensive income as the Group considers these investments to be strategic in nature.

Financial assets at fair value through profit or loss represent wealth management products issued by banks in Mainland China. They were mandatorily classified as financial assets at fair value through profit or loss as their contractual cash flows are not solely payments of principal and interest.

指定為按公平值計入其他全面收入的股本投資為兩間同系子公司，即上海華力微電子股份有限公司（「上海華力」）及上海矽睿科技有限公司（「矽睿科技」）的非上市股權投資，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。

按公平值計入損益的金融資產指由中國內地銀行發行的理財產品。其被強制歸類為以公平值計量且其變動計入損益的金融資產，乃由於其合約現金流量不僅是本金和利息的支付。

20. Inventories

20. 存貨

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Raw materials	原材料	75,499	64,818
Work in progress	在製品	52,547	48,621
Finished goods	製成品	25,764	26,725
		153,810	140,164
Provision for inventories	存貨撥備	(11,723)	(10,535)
		142,087	129,629

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

21. Trade and Notes Receivables

21. 貿易應收款項及應收票據

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Trade receivables	貿易應收款項	121,884	123,414
Notes receivable	應收票據	44,613	54,887
		166,497	178,301
Impairment of trade receivables	貿易應收款項減值	(1,529)	(1,504)
		164,968	176,797

The Group's trading terms with its customers are mainly on credit and the credit period is generally 30 to 45 days, extending up to 150 days for major customers. 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.

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，對主要客戶的信貸期延長至最多150天。本集團並無重大集中信用風險。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加強信用措施。貿易應收款項為免息。

An ageing analysis of the trade receivables, based on the invoice date and net of loss allowances, is as follows:

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：

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Within 3 months	3個月以內	120,355	121,910

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：

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
At 1 January	於一月一日	1,504	1,547
Impairment losses, net (note 6)	減值虧損淨額（附註6）	47	25
Exchange realignment	匯兌調整	(22)	(68)
As at 31 December	於十二月三十一日	1,529	1,504

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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 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 Group applies a general approach in calculating ECLs for notes receivable. All of the notes receivable are not past due. The Group classified such instruments as Stage 1 and measured ECLs on a 12-month basis. However, when there has been a significant increase in credit risk since initial recognition, the allowance will be based on the lifetime ECL. For bank acceptance bills, as the relevant financial institutions have a high credit rating, the loss rate is expected to be minimal. For commercial acceptance bills, which were not yet past due, loss rate is expected to be minimal as well.

The credit quality of the trade receivables is as follows:

21. 貿易應收款項及應收票據 (續)

本公司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。逾期或于三個月內到期的貿易應收款項的預期信貸損失率極低。

本集團採用一般方法計算應收票據的預期信貸虧損。所有應收票據均為未逾期。本集團將此類工具分類為第一階段，並按十二個月預期信貸虧損基準計量。然而，自發生以來信貸風險顯著增加時，撥備將以年限內預期信貸虧損為基準。就銀行承兌票據而言，由於相關金融機構的信用評級較高，預計損失率將極低。就未逾期的商業承兌票據而言，預計損失率亦將極低。

貿易應收款項的信貨質量如下：

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Neither past due nor impaired	既未逾期亦未減值	114,841	115,952
Less than 1 month past due	逾期少於1個月	5,514	5,958
Past due and impaired	已逾期及已減值	1,529	1,504
		121,884	123,414

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

22. Prepayments, Other Receivables and Other Assets

22. 預付款項、其他應收款項及其他資產

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Other receivables	其他應收款項	4,004	2,417
Interest receivables	應收利息	2,938	2,218
Prepayments	預付款項	5,171	2,779
Value-added input tax	增值稅進項稅額	102,238	5,331
Current portion of prepaid land lease payments (note 15)	預付土地租賃款項的即期部份 (附註15)	-	642
		114,351	13,387
Impairment of other receivables	其他應收款項減值	(898)	(908)
		113,453	12,479

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：

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
At 1 January	於一月一日	908	940
Exchange realignment	匯兌調整	(10)	(32)
As at 31 December	於十二月三十一日	898	908

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\$898,000 (2018: US\$908,000). 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 loss as at 31 December 2019 is 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898,000美元（二零一八年：908,000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，而截至二零一九年十二月三十一日的預期信貸虧損被視為不重大。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

23. Cash and Cash Equivalents and Restricted and Time Deposits

23. 現金及現金等價物以及已凍結及定期存款

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Cash and bank balances	現金及銀行結餘	211,875	171,781
Time deposits	定期存款	335,187	605,556
		547,062	777,337
Restricted and time deposits:	已凍結及定期存款：		
Pledged deposits for letters of credit	就信用證抵押存款	(749)	(315)
Other pledged deposits for payment of dividends	就支付股息其他已抵押存款	(27)	(22)
Time deposits with original maturity of more than three months	原到期日為三個月以上的定期存款	(70,000)	-
Cash and cash equivalents	現金及現金等價物	476,286	777,000

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\$288,237,000 (2018: US\$269,064,000). 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.

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288,237,000美元（二零一八年：269,064,000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。

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.

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。

Pledged deposits with a carrying value of US\$749,000 as at 31 December 2019 (2018: US\$315,000) were pledged to secure the issuance of letters of credit.

於二零一九年十二月三十一日，已抵押賬面值為749,000美元（二零一八年：315,000美元）的已抵押存款以獲發行信用證。

Other pledged deposits with a carrying value of US\$27,000 as at 31 December 2019 (2018: US\$22,000) were pledged to secure the payment of dividends to shareholders.

於二零一九年十二月三十一日的賬面值為27,000美元（二零一八年：22,000美元）的其他已抵押存款，以向股東支付股息。

There were time deposits of US\$70,000,000 with original maturity of more than three months as at 31 December 2019 (2018: Nil).

於二零一九年十二月三十一日，原到期日三個月以上的定期存款為70,000,000美元（二零一八年：零）。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

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:

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Within 1 month	1個月以內	54,737	26,704
1 to 3 months	1至3個月	18,276	37,713
3 to 6 months	3至6個月	2,901	4,310
6 to 12 months	6至12個月	1,402	2,215
Over 12 months	12個月以上	8,803	8,528
		86,119	79,470

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

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Other payables and accruals	其他應付款項及暫估費用	227,470	102,247
Contract liabilities	合約負債	33,249	27,261
Payroll and bonus payables	應付薪金及花紅	42,868	35,840
Dividend payable	應付股息	27	22
		303,614	165,370

Other payables are unsecured, non-interest-bearing and repayable on demand.

As at 1 January 2018, the carrying amount of contract liabilities was US\$21,344,000.

During the year ended 31 December 2019, contract liabilities of US\$27,261,000 (2018: US\$21,344,000) at the beginning of the year were recognized as revenue. The increase in contract liabilities in 2019 and 2018 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。

於二零一八年一月一日，合約負債賬面值為21,344,000美元。

截至二零一九年十二月三十一日止年度，年初27,261,000美元（二零一八年：21,344,000美元）的合約負債被確認為收入。於二零一九年及二零一八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。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

26. Interest-Bearing Bank Borrowings

26. 計息銀行借款

		2019 二零一九年			2018 二零一八年		
		Effective interest rate (%) 實際利率 (%)	Maturity 到期	US\$'000 千美元	Effective interest rate (%) 實際利率 (%)	Maturity 到期	US\$'000 千美元
Current	流動						
Current portion of long term bank loans – secured	長期銀行貸款的即期部份 – 有抵押	1.20	2020	4,300	1.20	2019	4,371
Non-current	非流動						
Secured bank loans	有抵押銀行貸款	1.20	2021-2025	21,502	1.20	2020-2025	26,227
				25,802			30,598

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (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	4,300	4,371
In the second year	第二年	4,300	4,371
In the third to fifth years, inclusive	第三至第五年（包括首尾兩年）	12,900	13,113
Beyond five years	超過第五年	4,302	8,743
		25,802	30,598

Secured bank loans of US\$25,802,000 as at 31 December 2019 (2018: US\$30,598,000) were denominated in RMB.

於二零一九年十二月三十一日，有抵押銀行貸款為以人民幣計值的25,802,000美元（二零一八年：30,598,000美元）。

As at 31 December 2019 and 2018, the Group's bank loans were secured by pledges of the Group's assets with carrying values as follows:

於二零一九年及二零一八年十二月三十一日，本集團的銀行貸款由抵押本集團的資產作擔保，資產的賬面值如下：

		Notes 附註	2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Property, plant and equipment	物業、廠房及設備	13	20,858	22,325
Right-of-use assets	使用權資產	16	5,445	–
Prepaid land lease payments	預付土地租賃款項	15	–	5,750
			26,303	28,075

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

27. Lease Liabilities

27. 租賃負債

		(US\$'000) (千美元)
Carrying amount at 31 December 2018	於二零一八年十二月三十一日的賬面值	-
Effect of adoption of HKFRS 16 (note 2.2)	採用香港財務報告準則第16號的影響(附註2.2)	17,882
Carrying amount at 1 January 2019	於二零一九年一月一日的賬面值	17,882
Additions	添置	1,233
Accretion of interest	利息增加	884
Payments	付款	(975)
Exchange realignment	匯兌調整	(408)
Carrying amount at 31 December 2019	於二零一九年十二月三十一日的賬面值	18,616

Maturity profile of lease liabilities as at 31 December 2019 is as follows:

租賃負債於二零一九年十二月三十一日的到期情況如下：

		2019 二零一九年 (US\$'000) (千美元)
Within one year	一年內	2,892
In the second year	第二年	1,750
In the third to five years, inclusive	第三至第五年(包括首尾兩年)	4,697
After five years	五年後	15,153
Total undiscounted lease liabilities	未貼現租賃負債總額	24,492
Discount amount	貼現額	(5,876)
Total present value of lease liabilities	租賃負債的總現值	18,616
Current portion	即期部分	(1,922)
Non-current portion	非即期部分	16,694

		2019 二零一九年 (US\$'000) (千美元)
Analysed into:	分析為：	
Lease liabilities:	租賃負債：	
Within one year	一年內	1,922
In the second year	第二年	1,150
In the third to fifth years, inclusive	第三至第五年(包括首尾兩年)	3,133
After five years	五年後	12,411
Total present value of lease liabilities	租賃負債的總現值	18,616

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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 (US\$'000) (千美元)	Fair value gains on investment property (US\$'000) (千美元)	Withholding tax (US\$'000) (千美元)	Total (US\$'000) (千美元)
As at 1 January 2018	於二零一八年一月一日	184	489	13,634	14,307
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)	-	47	3,583	3,630
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	265	-	-	265
Exchange realignment	匯兌調整	-	(56)	-	(56)
As at 31 December 2018 and 1 January 2019	於二零一八年十二月三十一日及二零一九年一月一日	449	480	17,217	18,146
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)	-	24	(1,385)	(1,361)
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	406	-	-	406
Exchange realignment	匯兌調整	-	(15)	-	(15)
As at 31 December 2019	於二零一九年十二月三十一日	855	489	15,832	17,176

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。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

28. Deferred Tax (continued)

28. 遞延稅項 (續)

Deferred tax assets:

遞延稅項資產：

		Write-down of inventories and impairment of receivables 存貨撇減及應收款項減值 (US\$'000) (千美元)	Accruals 暫估費用 (US\$'000) (千美元)	Share options 購股權 (US\$'000) (千美元)	Leases 租賃 (US\$'000) (千美元)	Total 總計 (US\$'000) (千美元)
As at 1 January 2018	於二零一八年一月一日	1,834	3,941	1,299	-	7,074
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)	104	(138)	(287)	-	(321)
Exchange realignment	匯兌調整	(93)	(245)	(52)	-	(390)
As at 31 December 2018 and 1 January 2019 as previously reported	於二零一八年十二月三十一日及二零一九年一月一日(如先前呈列)	1,845	3,558	960	-	6,363
Impact of adopting HKFRS 16 (note 2.2)	採納香港財務報告準則第16號的影響(附註2.2)	-	-	-	277	277
As at 1 January 2019 as restated	於二零一九年一月一日(經重列)	1,845	3,558	960	277	6,640
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)	172	(49)	881	38	1,042
Exchange realignment	匯兌調整	(29)	(65)	(16)	(5)	(115)
As at 31 December 2019	於二零一九年十二月三十一日	1,988	3,444	1,825	310	7,567

Deferred tax assets have not been recognized in respect of the following items:

以下項目並無確認遞延稅項資產：

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Unused tax losses	未動用稅項虧損	10,013	8,698
Deductible temporary differences	可扣稅暫時差額	410,912	417,338
		420,925	426,036

Deferred tax assets have not been recognized 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 utilised.

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該等稅項虧損，故並無就該等虧損確認遞延稅項資產。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

28. Deferred Tax (continued)

The above tax losses are from overseas countries and are available indefinitely for offsetting against future taxable profits of the companies. Deferred tax assets have not been recognized in respect of the temporary differences as it is not considered probable that taxable profits will be available against which the above items can be utilised.

29. Government Grants

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
At 1 January	於一月一日	44,406	40,523
Received during the year	年內收到	93,087	8,040
Released to offsetting research and development costs	撥入以抵銷研發成本	(948)	(2,029)
Offset with long term assets	抵銷長期資產	(94,519)	–
Exchange realignment	匯兌調整	(1,385)	(2,128)
As at 31 December	於十二月三十一日	40,641	44,406

The Group received government funding for several government-sponsored projects focusing on the research and development of advanced technologies.

28. 遞延稅項 (續)

上述稅項虧損來自海外國家且可無限期限地用以抵銷有關公司的未來應課稅溢利。由於不大可能有應課稅溢利可用以抵銷上述項目，故並無就暫時差額確認遞延稅項資產。

29. 政府補助

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。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

30. Share Capital

30. 股本

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Issued and fully paid:	已發行及繳足：		
1,288,819,560 (2018: 1,283,952,225) ordinary shares	1,288,819,560股(二零一八年： 1,283,952,225股)普通股	1,966,095	1,960,159

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 (千股)	Amount of share capital 股本金額 (US\$'000) (千美元)
At 1 January 2018	於二零一八年一月一日	1,037,571	1,554,870
Share options exercised (note (a))	行使購股權(附註(a))	3,982	5,289
New issuance to a designated subscriber (note (b))	新發行予指定認購方(附註(b))	242,399	400,000
At 31 December 2018 and 1 January 2019	於二零一八年十二月三十一日及 二零一九年一月一日	1,283,952	1,960,159
Share options exercised (note (a))	行使購股權(附註(a))	4,868	5,936
At 31 December 2019	於二零一九年十二月三十一日	1,288,820	1,966,095

Notes:

附註：

(a) The subscription rights attaching to 4,868,000 (2018: 3,982,000) share options were exercised at the subscription price of HK\$6.912 per share (2018: HK\$6.912 per share), resulting in the issue of 4,868,000 (2018: 3,982,000) shares for a total cash consideration of US\$4,302,000 (2018: US\$3,515,000). An amount of US\$1,634,000 (2018: US\$1,774,000) was transferred from the share option reserve to share capital upon exercise of the share options.

(a) 4,868,000份(二零一八年：3,982,000份)購股權附帶之認購權已按認購價每股6.912港元(二零一八年：每股6.912港元)行使，引致發行4,868,000股(二零一八年：3,982,000股)股份，總現金代價為4,302,000美元(二零一八年：3,515,000美元)。購股權獲行使後，1,634,000美元(二零一八年：1,774,000美元)款項已由購股權儲備轉撥至股本。

(b) On 3 January 2018, the Company and China Integrated Circuit Industry Investment Fund Co., Ltd (the "Subscriber") entered into an agreement (the "Subscription Agreement"), pursuant to which the Subscriber has conditionally agreed to subscribe for and the Company has conditionally agreed to allot and issue an aggregate of 242,398,925 shares (the "Subscription Shares") at HK\$12.90 per share (the "Subscription Price"). All the conditions set out in the Subscription Agreement have been fulfilled and the subscription took place on 7 November 2018 pursuant to the terms of the Subscription Agreement. All the 242,398,925 Subscription Shares have been allotted and issued to Xin Xin (Hong Kong) Capital Co., Limited, being the Subscriber's designated entity, at the Subscription Price, in accordance with the terms and conditions of the Subscription Agreement. The proceeds from the subscription were approximately US\$400,000,000.

(b) 於二零一八年一月三日，本公司與國家集成電路產業投資基金股份有限公司(「認購方」)訂立一份協議(「認購協議」)，據此，認購方已有條件同意認購且本公司已有條件同意按每股股份12.90港元(「認購價格」)配發及發行合共242,398,925股股份(「認購股份」)。認購協議所載之所有條件已獲達成，且認購事項已於二零一八年十一月七日根據認購協議條款進行。所有242,398,925股認購股份已根據認購協議的條款及條件按認購價配發及發行予認購方指定的實體鑫芯(香港)投資有限公司。認購所得款項約為400,000,000美元。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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 were 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 date.

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 offer of a grant of share options may be accepted within 28 days from the date of offer, upon payment of a nominal consideration of HK\$1 in total by the grantee. 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，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）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。

向各董事、本公司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）超逾500萬港元，則須事先在股東大會上取得股東批准。

承授人須於授出日期起計28日內決定是否接納獲授之購股權，並須於接納時繳交合共1港元之名義代價。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。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

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 share options were outstanding under the 2015 Options 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

於本年度以下購股權尚未根據二零一五年購股權行使：

		2019 二零一九年		2018 二零一八年	
		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	6.912	18,872	6.912	23,610
Forfeited during the year	年內沒收	6.912	(57)	6.912	(756)
Exercised during the year	年內行使	6.912	(4,868)	6.912	(3,982)
At 31 December	於十二月三十一日	6.912	13,947	6.912	18,872

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

31. Share Option Scheme (continued)

2015 Options (continued)

The exercise prices and exercise periods of the share options outstanding under the 2015 Options as at the end of the reporting period are as follows:

2019

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
6,556	6.912	4 September 2018 to 3 September 2022 二零一八年九月四日至二零二二年九月三日
7,391	6.912	4 September 2019 to 3 September 2022 二零一九年九月四日至二零二二年九月三日
13,947		

2018

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
1,842	6.912	4 September 2017 to 3 September 2022 二零一七年九月四日至二零二二年九月三日
8,431	6.912	4 September 2018 to 3 September 2022 二零一八年九月四日至二零二二年九月三日
8,599	6.912	4 September 2019 to 3 September 2022 二零一九年九月四日至二零二二年九月三日
18,872		

* 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.

The Group recognized a share option expense of US\$551,000 (2018: US\$1,298,000) under the 2015 Options during the year.

The 4,868,000 (2018: 3,982,000) share options exercised under the 2015 Options during the year resulted in the issue of 4,868,000 (2018: 3,982,000) ordinary shares of the Company for a total cash consideration of US\$4,302,000 (2018: US\$3,515,000). An amount of US\$1,634,000 (2018: US\$1,774,000) 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：

二零一九年

Exercise price* 行使價* HK\$ per share 每股港元	Exercise period 行使期
6.912	4 September 2018 to 3 September 2022 二零一八年九月四日至二零二二年九月三日
6.912	4 September 2019 to 3 September 2022 二零一九年九月四日至二零二二年九月三日

二零一八年

Exercise price* 行使價* HK\$ per share 每股港元	Exercise period 行使期
6.912	4 September 2017 to 3 September 2022 二零一七年九月四日至二零二二年九月三日
6.912	4 September 2018 to 3 September 2022 二零一八年九月四日至二零二二年九月三日
6.912	4 September 2019 to 3 September 2022 二零一九年九月四日至二零二二年九月三日

* 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。

本集團於年內根據二零一五年購股權確認購股權開支551,000美元(二零一八年：1,298,000美元)。

年內二零一五年購股權項下的4,868,000份(二零一八年：3,982,000份)購股權獲行使，引致本公司發行4,868,000股(二零一八年：3,982,000股)普通股，總現金代價為4,302,000美元(二零一八年：3,515,000美元)。如財務報表附註30所進一步詳述，購股權獲行使後，1,634,000美元(二零一八年：1,774,000美元)款項已由購股權儲備轉撥至股本。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

31. Share Option Scheme (continued)

2015 Options (continued)

At the end of the reporting period, the Company had 13,947,000 share options outstanding under the 2015 Options. The exercise in full of the outstanding share options would, under the present capital structure of the Company, result in the issue of 13,947,000 additional ordinary shares of the Company and additional share capital of US\$17,796,000 (including US\$5,417,000 transferred from the share option reserve to share capital).

At the date of approval of these financial statements, the Company had 11,706,029 share options outstanding under the 2015 Options, which represented approximately 0.9% of the Company's shares in issue as at that date.

2018 Options

The following share options were outstanding under the 2018 Options 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13,947,000份尚未根據二零一五年購股權行使的購股權。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13,947,000股本公司普通股及增加股本17,796,000美元（包括由購股權儲備轉撥至股本的5,417,000美元）。

於批准該等財務報表日期，本公司擁有11,706,029份尚未根據二零一五年購股權行使的購股權，佔該日本公司已發行股份的約0.9%。

二零一八年購股權

於本年度以下購股權尚未根據二零一八年購股權行使：

		2019 二零一九年		2018 二零一八年	
		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	15.056	34,500	-	-
Granted during the year	年內授出	18.027	2,982	15.056	34,500
Forfeited during the year	年內沒收	15.056	(1,671)	-	-
At 31 December	於十二月三十一日	15.303	35,811	15.056	34,500

On 29 March 2019, 500,000 options were granted to the chief executive ("2018 Tranche A") (2018: Nil).

On 23 December 2019, 300,000 options were granted to directors and key management personnel ("2018 Tranche B") (2018: Nil) and 2,182,000 options were granted to other employees ("2018 Tranche C") (2018: Nil).

於二零一九年三月二十九日，500,000份（二零一八年：零）購股權已授予最高行政人員（「二零一八年A部分」）。

於二零一九年十二月二十三日，300,000份（二零一八年：零）購股權已授予董事及主要管理人員（「二零一八年B部分」）及2,182,000份（二零一八年：零）購股權已授予其他僱員（「二零一八年C部分」）。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

31. Share Option Scheme (continued)

2018 Options (continued)

The exercise prices and exercise periods of the share options outstanding under the 2018 Options as at the end of the reporting period are as follows:

2019

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
10,571	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
10,571	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
10,570	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
1,153	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
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	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	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	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
791	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
790	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
790	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	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
35,811		

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：

二零一九年



NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

31. Share Option Scheme (continued)

31. 購股權計劃 (續)

2018 Options (continued)

二零一八年購股權 (續)

2018

二零一八年

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
11,015	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
11,015	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
11,015	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
1,455	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
34,500		

* 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。

The Group recognized a share option expense of US\$7,195,000 (2018: Nil) under the 2018 Options during the year.

本集團於年內根據二零一八年購股權確認購股權開支7,195,000美元（二零一八年：零）。

The fair values of the share options granted during the year were US\$449,000 (US\$0.90 each) for 2018 Tranche A, US\$245,000 (US\$0.82 each) for 2018 Tranche B and US\$1,782,000 (US\$0.82 each) for 2018 Tranche C. The Group did not recognize any share option expense under 2018 Tranche B and Tranche C during the year, which is immaterial.

於年內，根據二零一八年A部分、二零一八年B部分及二零一八年C部分授出購股權的公平值分別為449,000美元（每股0.90美元）、245,000美元（每股0.82美元）及1,782,000美元（每股0.82美元）。於年內，本集團並無確認二零一八年B部分及C部分項下的任何購股權開支，原因為其數額較小。

The fair value of equity-settled share options granted during the year was estimated as at the date of grant, using a binomial model, taking into account the terms and conditions upon which the options were granted. The following table lists the inputs to the model used:

年內授出的以權益結算購股權之公平值，乃於授出日期採用二項式模式估計，並考慮所授出購股權的條款及條件。下表列出所用模式的輸入資料：

	2018 Tranche A 二零一八年A部分	2018 Tranche B 二零一八年B部分	2018 Tranche C 二零一八年C部分	
Dividend yield (%)	股息收益率(%)	1.68	1.80	1.80
Expected volatility (%)	預期波幅(%)	40.90	41.64	41.64
Risk-free interest rate (%)	無風險利率(%)	1.37	1.67	1.67
Annual post-vesting forfeit rate (%)	年度歸屬後沒收率(%)	3	3	4
Exercise multiple	行使倍數	2.8	2.8	2.2
Share price (US\$ per share)	股份價格(每股美元)	2.36	2.22	2.22

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

31. Share Option Scheme (continued)

2018 Options (continued)

The annual post-vesting forfeit rate is based on the historical data and is not necessarily indicative of the exercise patterns that may occur. The expected volatility reflects the assumption that the historical volatility is indicative of future trends, which may also not necessarily be the actual outcome.

No other feature of the options granted was incorporated into the measurement of fair value.

At the end of the reporting period, the Company had 35,811,000 share options outstanding under the 2018 Options. The exercise in full of the outstanding share options would, under the present capital structure of the Company, result in the issue of 35,811,000 additional ordinary shares of the Company and additional share capital of US\$93,486,000 (including US\$23,130,000 transferred from the share option reserve to share capital).

At the date of approval of these financial statements, the Company had 35,734,000 share options outstanding under the 2018 Options, which represented approximately 2.8% 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 197 to 198 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)

年度歸屬後沒收率乃根據歷史數據計算，未必反映可能發生的行使模式。預期波幅指假設歷史波幅反映未來趨勢，且亦未必為實際結果。

並無其他已授購股權特性加入公平值計量。

於報告期末，本公司於二零一八年購股權項下尚未行使的購股權為35,811,000份。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35,811,000股本公司普通股及增加股本93,486,000美元（包括由購股權儲備轉撥至股本的23,130,000美元）。

於批准該等財務報表日期，本公司於二零一八年購股權項下尚未行使的購股權為35,734,000份，佔該日期本公司已發行股份的約2.8%。

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197至198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%。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

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 recognized by the Group during the year was US\$12,643,000 (2018: US\$ 13,063,000), details of which are included in note 5 to the financial statements.

At 31 December 2019, undiscounted lease payments receivable by the Group in future periods under non-cancellable operating leases with its tenant are as follows:

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Within one year	一年內	11,712	12,058
After one year but within two years	一年後但於兩年內	11,712	11,905
After two year but within three years	兩年後但於三年內	11,712	11,905
After three year but within four years	三年後但於四年後	11,712	11,905
After four year but within five years	四年後但於五年內	11,712	11,905
More than five years	超過五年	61,424	74,341
		119,984	134,019

The Group was advanced with the future rentals from Shanghai Huali of US\$3,800,000 as at 31 December 2019 (2018: US\$4,185,000).

As lessee

The Group has various lease contracts for land use right, 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12,643,000美元（二零一八年：13,063,000美元），其詳情載於財務報表附註5。

於二零一九年十二月三十一日，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：

於二零一九年十二月三十一日，本集團收到上海華力預付日後租金3,800,000美元（二零一八年：4,185,000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。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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 16 and 27, respectively, to the financial statements.

(b) The amounts recognized in profit or loss in relation to leases are as follows:

		2019 二零一九年 (US\$'000) (千美元)
Interest on lease liabilities	租賃負債利息	884
Depreciation charge of right-of-use assets	使用權資產折舊開支	2,637
Expense relating to short-term leases and other leases with remaining lease terms ended on or before 31 December 2019	與短期租賃及餘下租期於二零一九年十二月三十一日或之前屆滿的其他租賃有關的開支	1,625
Total amount recognized in profit or loss	於損益確認的總金額	5,146

(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.

(d) Operating lease commitments as at 31 December 2018

The Group leases certain of its offices and dormitory properties under operating lease arrangements, negotiated for terms of one to twenty years.

At 31 December 2018, the Group had total future minimum lease payments under non-cancellable operating leases falling due as follows:

		2018 二零一八年 (US\$'000) (千美元)
Within one year	一年內	2,784
In the second to fifth years, inclusive	第二至第五年(包括首尾兩年)	7,200
More than five years	超過五年	17,132
		27,116

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16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。

(d) 於二零一八年十二月三十一日的經營租賃承擔

本集團根據經營租賃安排租入若干辦公室及宿舍物業，經協商租期為一至二十年。

於二零一八年十二月三十一日，本集團根據不可撤銷經營租約於以下期間應付的未來最低租賃款項總額如下：

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

34. Commitments

In addition to the operating lease commitments detailed in note 33 (b) above, the Group had the following capital commitments at the end of the reporting period:

	2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Contracted, but not provided for: Property, plant and equipment	383,653	409,701

已訂約，但未撥備：
物業、廠房及設備

34. 承擔

除上文附註33(b)所述經營租賃承擔外，本集團於報告期末有以下資本承擔：

35. Related Party Transactions and Balances

(a) Name and relationship

Name of related party 關聯方名稱

Huahong Group and its subsidiaries 華虹集團及其子公司

- Shanghai Huahong (Group) Co., Ltd. ("Huahong Group")
- 上海華虹(集團)有限公司(「華虹集團」)
- Hua Hong International Inc. ("Huahong International")
- 華虹國際有限公司(「華虹國際」)
- Shanghai Huahong Zealcore Electronics Co., Ltd.
(“Huahong Zealcore”)
- 上海華虹摯芯科技有限公司(「華虹摯芯」)
- Shanghai Hongri International Electronics Co., Ltd.
(“Hongri”)
- 上海虹日國際電子有限公司(「虹日」)
- Shanghai Integrated Circuit Research and Development
Center (“ICRD”)
- 上海集成電路研發中心(「集成電路研發」)
- 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」)

NEC Corporation (“NEC”)

NEC Corporation (「NEC」)

- NEC Management Partner, Ltd. (“NEC Management”)
- NEC Management Partner, Ltd. (「NEC Management」)

SAIL and its subsidiaries

上海聯和及其子公司

- Sino-Alliance International Ltd. (“SAIL International”)
- Shanghai Huali
- 上海華力
- QST
- 矽睿科技

35. 關聯方交易及結餘

(a) 名稱及關係

Relationship with the Group 與本集團的關係

- Holding company of Hua Hong International Inc.
華虹國際有限公司的控股公司
- Shareholder of the Company
本公司股東
- Subsidiary of Huahong Group
華虹集團子公司
- Subsidiary of Huahong Group
- Subsidiary of Huahong Group
華虹集團子公司
- Subsidiary of Huahong Group
華虹集團子公司
- Shareholder of the Company
本公司股東
- Subsidiary of NEC
NEC子公司
- Shareholder of the Company
本公司股東
- Subsidiary of SAIL
上海聯和子公司
- Subsidiary of SAIL
上海聯和子公司

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

35. Related Party Transactions and Balances (continued)

35. 關聯方交易及結餘 (續)

(a) Name and relationship (continued)

(a) 名稱及關係 (續)

Name of related party 關聯方名稱	Relationship with the Group 與本集團的關係
INESA and its subsidiaries 儀電集團及其子公司	
– Shanghai INESA Intelligent Electronics Co., Ltd. (“Shanghai INESA”) – 上海儀電智能電子有限公司 (「上海儀電」)	Subsidiary of INESA 儀電集團子公司
– 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」)	Subsidiary of INESA 儀電集團子公司
– Shanghai Nanyang Wanbang Software Technology Co., Ltd. (“Wanbang”) – 上海南洋萬邦軟件技術有限公司 (「萬邦」)	Subsidiary of INESA 儀電集團子公司
Huahong Technology Development 華虹科技發展	
– Huahong Real Estate – 華虹置業	Associate of the Group 本集團聯營公司
– Shanghai Huajin Property Management Co., Ltd. (“Huajin”) – 上海華錦物業管理有限公司 (「華錦」)	Subsidiary of Huahong Technology Development 華虹科技發展子公司
– Shanghai Huajin Property Management Co., Ltd. (“Huajin”) – 上海華錦物業管理有限公司 (「華錦」)	Subsidiary of Huahong Technology Development 華虹科技發展子公司
CEC and its subsidiaries 中國電子及其子公司	
– China Electronics Corporation (“CEC”)* – 中國電子信息產業集團有限公司 (「中國電子」)*	Shareholder of Huahong Group (before 26 October 2018) 華虹集團股東 (二零一八年十月二十六日之前)
– CEC Huada Electronic Design Co., Ltd. (“Huada”)* – 北京中電華大電子設計有限責任公司 (「華大」)*	Subsidiary of CEC 中國電子子公司
– Shanghai Huahong Integrated Circuit Co., Ltd. (“Shanghai Huahong IC”)* – 上海華虹集成電路有限責任公司 (「上海華虹集成電路」)*	Subsidiary of CEC 中國電子子公司
– Shanghai Belling Co., Ltd. (“Shanghai Belling”)* – 上海貝嶺股份有限公司 (「上海貝嶺」)*	Subsidiary of CEC 中國電子子公司
– Hylintek Limited (“Hylintek”)* – 香港海華有限公司 (「香港海華」)*	Subsidiary of CEC 中國電子子公司

* CEC disposed of all of its shareholdings in Huahong Group on 26 October 2018. From then on, CEC and its subsidiaries are no longer related parties to the Group.

* 中國電子於二零一八年十月二十六日出售其於華虹集團的所有股權。自此，中國電子及其子公司不再為本集團的關聯方。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

35. Related Party Transactions and Balances (continued)

35. 關聯方交易及結餘 (續)

(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:

(b) 關聯方交易

除該等財務報表其他部份所披露交易及結餘外，本集團於年內已與關聯方進行以下重大交易：

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Sale 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	8,503	9,076
Huahong Zealcore#	華虹摺芯#	2,895	4,996
QST#	矽睿科技#	1,810	1,607
Huada*	華大*	-	44,589
Shanghai Huahong IC*	上海華虹集成電路*	-	14,536
Shanghai Belling*	上海貝嶺*	-	4,919
Purchases of goods from related parties (note (ii))	自關聯方購買貨品 (附註(ii))		
Shanghai Huali#	上海華力	8,698	-
Hongri	虹日	7,171	7,567
ICRD	集成電路研發	867	-
NEC Management	NEC management	773	748
Huahong Zealcore#	華虹摺芯#	476	651
Jitong	計通	66	98
Hylintek*	香港海華*	-	13,183
Purchases of intangible assets from a related party (note (ii))	自關聯方購買無形資產 (附註(ii))		
ICRD	集成電路研發	3,150	-
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#	13,139	13,448
Service fee charged by related parties (note (iv))	關聯方收取的服務費 (附註(iv))		
Wanbang#	萬邦#	2,461	-
Shanghai INESA#	上海儀電#	1,870	2,183
Huajin#	華錦#	218	227
Huahong Real Estate	華虹置業	142	151
Nanyang Software#	南洋軟件#	31	208
Rental expense charged by a related party (note (iv, vi))	關聯方收取的租金開支 (附註(iv, vi))		
Huahong Real Estate#	華虹置業#	-	1,670

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

35. Related Party Transactions and Balances (continued)

35. 關聯方交易及結餘 (續)

(b) Related party transactions (continued)

(b) 關聯方交易 (續)

	2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Interest expense charge by a related party (note (iv)) 關聯方收取的利息開支 (附註(iv))		
Huahong Real Estate 華虹置業	832	-
Expense paid on behalf of a related party (note (v)) 代關聯方支付的開支 (附註(v))		
Shanghai Huali 上海華力	29,001	31,235

The related party transactions also constitute continuing connected transactions as defined in Chapter 14A of the Listing Rules.

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。

* These related party transactions with CEC's subsidiaries disclosed above were conducted from 1 January 2018 to 26 October 2018.

* 上文所披露與中國電子子公司進行的關聯方交易發生於二零一八年一月一日至為二零一八年十月二十六日期間。

Note (i) The sale of goods to related parties was made according to the prices and terms agreed between the related parties.

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。

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.

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。

Note (iii) The rental income received from a related party was based on the prices and terms agreed between the related parties.

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。

Note (iv) The rental expense, service fees and interest expense charged by related parties were based on the prices and terms agreed between the related parties.

附註(iv) 關聯方收取的租金開支、服務費及利息開支乃根據與關聯方協定的價格及條款支付。

Note (v) The expense paid on behalf of the related party is interest-free and repayable on demand.

附註(v) 代關聯方支付的開支為不計息，及須按要求償還。

Note (vii) The Group entered into a twenty-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\$1,625,000 per year. With the initial adoption of HKFRS 16, the Group recognized right-of-use assets of US\$16,922,000 and lease liabilities of US\$17,049,000 for the operating lease on 1 January 2019. At 31 December 2019, the balances of those right-of-use assets and lease liabilities were US\$15,538,000 and US\$17,595,000, respectively. Before 1 January 2019, the Group recognized rental expenses under operating leases on a straight-line basis over the lease term according to HKAS 17.

附註(vii) 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1,625,000美元。在首次採用香港財務報告準則第16號後，本集團就於二零一九年一月一日的經營租賃確認使用權資產16,922,000美元及租賃負債17,049,000美元。於二零一九年十二月三十一日，該等使用權資產及租賃負債的結餘分別為15,538,000美元及17,595,000美元。於二零一九年一月一日之前，本集團根據香港會計準則第17號於租期內按直線法確認經營租賃項下的租金開支。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

35. Related Party Transactions and Balances (continued)

35. 關聯方交易及結餘 (續)

(c) Outstanding balances with related parties

(c) 與關聯方之間的未結清餘額

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Long-term prepayments to related parties	應付關聯方長期預付款項		
Shanghai Huali	上海華力	6,808	6,920
ICRD	集成電路研發	-	1,827
		6,808	8,747
Amounts due from related parties	應收關聯方款項		
ICRD	集成電路研發	5,818	519
Shanghai Huali	上海華力	2,712	7,841
QST	矽睿科技	373	164
Huahong Zealcore	華虹摯芯	341	558
Shanghai INESA	上海儀電	18	-
Huahong Real Estate	華虹置業	-	1,718
		9,262	10,800
Amounts due to related parties	應付關聯方款項		
Shanghai Huali	上海華力	7,674	4,185
Wanbang	萬邦	700	-
Shanghai INESA	上海儀電	685	352
Hongri	虹日	548	101
ICRD	集成電路研發	521	576
Huahong Zealcore	華虹摯芯	239	256
NEC Management	NEC Management	158	191
Huahong Real Estate	華虹置業	86	148
Jitong	計通	24	7
QST	矽睿科技	18	18
Huajin	華錦	2	-
Nanyang Software	南洋軟件	-	4
		10,655	5,838

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

35. Related Party Transactions and Balances (continued)

(d) Compensation of key management personnel of the Group

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Short term employee benefits	短期僱員福利	4,007	3,686
Pension scheme contributions	退休金計劃供款	60	60
Equity-settled share option expense	以權益結算的購股權開支	952	299
Total compensation paid to key management personnel	支付予主要管理人員的酬金總額	5,019	4,045

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。

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

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Trade and notes receivables	貿易應收款項及應收票據	164,968	176,797
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)	6,044	3,727
Due from related parties	應收關聯方款項	9,262	10,800
Restricted and time deposits	已凍結及定期存款	70,776	337
Cash and cash equivalents	現金及現金等價物	476,286	777,000
		727,336	968,661

35. 關聯方交易及結餘(續)

(d) 本集團主要管理人員的酬金

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

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

36. Financial Instruments by Category (continued)

36. 按類別劃分的金融工具 (續)

Financial assets – at fair value through other comprehensive income without recycling to profit or loss

金融資產 – 按公平值計入其他全面收益 (不得重新計入損益)

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (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	207,689	208,357

Financial assets – at fair value through profit or loss

金融資產 – 按公平值計入損益

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (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	519,779	667,033

Financial liabilities – at amortised cost

金融負債 – 按攤銷成本

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
Trade payables	貿易應付款項	86,119	79,470
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)	227,497	102,269
Interest-bearing bank borrowings	計息銀行借款	25,802	30,598
Lease liabilities	租賃負債	18,616	–
Due to related parties	應付關聯方款項	10,655	5,838
		368,689	218,175

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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	
		2019	2018	2019	2018
		二零一九年	二零一八年	二零一九年	二零一八年
		(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	207,689	208,357	207,689	208,357
Financial assets at fair value through profit or loss	按公平值計入損益的金融資產	519,779	667,033	519,779	667,033
		727,468	875,390	727,468	875,390
Financial liabilities	金融負債				
Interest-bearing bank borrowings	計息銀行借款	25,802	30,598	23,079	26,246
Lease liabilities	租賃負債	18,616	–	18,616	–
		44,418	30,598	41,695	26,246

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 annually for 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、計息銀行借款及租賃負債的流動部份的公平值，彼等均與其賬面值相若，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一次，以進行年度財務申報。

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 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 to 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.

Financial assets at fair value through profit or loss represent wealth management products issued by banks in Mainland China. The Group has estimated their fair value by using a discounted cash flow valuation model based on the market interest rates of instruments with similar terms and risks.

The fair values of the non-current portion of interest-bearing bank borrowings and lease liabilities 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 interest-bearing bank borrowings and lease liabilities as at 31 December 2019 were assessed to be insignificant.

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：

指定為按公平值計入其他全面收益的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。

按公平值計入損益的金融資產指由中國內地銀行發行的理財產品。本集團根據具類似年期及風險的工具的市場利率，採用貼現現金流量估值模型估算其公平值。

計息銀行借款及租賃負債的非流動部份的公平值乃透過採用具有類似年期、信用風險及剩餘到期期限的工具的現行利率貼現預期未來現金流量而計算。本集團評估後認為，於二零一九年十二月三十一日因其自身的計息銀行借款及租賃負債不履約風險而導致的公平值變動並不重大。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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 2019

		Fair value measurement categorised into 分類為以下層級之公平值計量			
		Level 1 第1級 (US\$'000) (千美元)	Level 2 第2級 (US\$'000) (千美元)	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	-	-	207,689	207,689
Financial assets at fair value through profit or loss	按公平值計入損益的金融資產	-	-	519,779	519,779
		-	-	727,468	727,468

31 December 2018

二零一八年十二月三十一日

		Fair value measurement categorised into 分類為以下層級之公平值計量			
		Level 1 第1級 (US\$'000) (千美元)	Level 2 第2級 (US\$'000) (千美元)	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	-	2,384	205,973	208,357
Financial assets at fair value through profit or loss	按公平值計入損益的金融資產	-	-	667,033	667,033
		-	2,384	873,006	875,390

During the year, there were no transfers of fair value measurements between Level 1 and Level 2 (2018: Nil). There was a transfer from Level 2 to Level 3 for an equity investment designated at fair value through other comprehensive income with a carrying amount of US\$2,384,000 as at 31 December 2019 (2018: Nil).

於年內，第1級與第2級公平值計量之間並無轉移（二零一八年：無）。於二零一九年十二月三十一日，賬面值為2,384,000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2級轉入第3級（二零一八年：無）。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

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 2019 and 2018. Below is a summary of the valuation techniques used and the key input 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二零一九年及二零一八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	Significant unobservable input	Range	Sensitivity of fair value to the input
		估值技術	重大不可觀察輸入數據	範圍	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	2019: 0.2x-5.5x 2018: 0.6x-3.7x	5% (2018: 5%) increase/decrease would result in increase/decrease in fair value by 5% (2018: 5%)
		估值倍數	同業平均市賬率	二零一九年： 0.2x-5.5x 二零一八年： 0.6x-3.7x	5% (二零一八年： 5%) 的增加/減少 將導致公平值 增加/減少5% (二零一八年：5%)
			Discount for illiquidity	2019: 20%-30% 2018: 20%-30%	5% (2018: 5%) increase/decrease would result in decrease/increase in fair value by 5% (2018: 5%)
			缺乏流通性的折讓價	二零一九年： 20%-30% 二零一八年： 20%-30%	5% (二零一八年： 5%) 的增加/減少 將導致公平值 減少/增加5% (二零一八年：5%)
Financial assets at fair value through profit or loss	按公平值計入損益的金融資產	Discounted cash flow method	Discount rate per annum	2019: 3.55%-3.80% 2018: 4.10%-4.30%	5% (2018: 5%) increase/decrease would result in decrease/increase in fair value by 0.01% (2018: 0.02%)
		貼現現金流量法	年貼現率	二零一九年： 3.55%-3.80% 二零一八年： 4.10%-4.30%	5% (二零一八年： 5%) 的增加/減少 將導致公平值 減少/增加0.01% (二零一八年： 0.02%)

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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入的股本投資 (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 2018	於二零一八年一月一日	215,487	-
Purchases	購買	-	1,959,653
Disposals	處置	-	(1,279,352)
Total gains recognized 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	-	15,612
Total gains recognized in other comprehensive income	於其他全面收益確認的收益總額	864	-
Exchange realignment	匯兌調整	(10,378)	(28,880)
At 31 December 2018 and 1 January 2019	於二零一八年十二月三十一日及二零一九年一月一日	205,973	667,033
Transfer from Level 2	自第2級轉出	2,384	-
Purchases	購買	-	2,532,504
Disposals	處置	-	(2,689,442)
Total gains recognized 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	-	23,989
Total gains recognized in other comprehensive income	於其他全面收益確認的收益總額	2,708	-
Exchange realignment	匯兌調整	(3,376)	(14,305)
As at 31 December 2019	於二零一九年十二月三十一日	207,689	519,779

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

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 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 summarised below.

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 41% (2018: 43%) of the Group's sales were denominated in currencies other than the functional currency of the subsidiary making the sale, whilst 71% (2018: 59%) of costs of sales were denominated in the subsidiary's functional currency.

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):

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外幣風險、信用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。

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41%（二零一八年：43%）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71%（二零一八年：59%）乃以子公司的功能貨幣計值。

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：

		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 2019	截至二零一九年十二月三十一日 止年度		
If US\$ weakens against RMB	倘美元兌人民幣貶值	5%	(10,844)
If US\$ strengthens against RMB	倘美元兌人民幣升值	(5%)	10,844
Year ended 31 December 2018	截至二零一八年十二月三十一日 止年度		
If US\$ weakens against RMB	倘美元兌人民幣貶值	5%	(26,809)
If US\$ strengthens against RMB	倘美元兌人民幣升值	(5%)	26,809



NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

38. Financial Risk Management Objectives and Policies (continued)

Credit risk

Credit risk is the risk that a counterparty will not 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 recognized 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.

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 2019 in addition to the fully impaired other receivables classified as Stage 3, as stated in note 22 to the financial statements.

38. 財務風險管理目標及政策 (續)

信用風險

信用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）的信用風險。

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用風險。本集團並無其他存在重大信用風險的金融資產。

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，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）就二零一九年十二月三十一日的預期信貸虧損分類為第一階段。

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

38. Financial Risk Management Objectives and Policies (continued)

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.

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:

	On demand	Less than 3 months	3 to 12 months	1 to 5 years	Over 5 years	Total	
31 December 2019 二零一九年十二月三十一日	按要求 (US\$'000) (千美元)	少於三個月 (US\$'000) (千美元)	十二個月 (US\$'000) (千美元)	一至五年 (US\$'000) (千美元)	五年以上 (US\$'000) (千美元)	總計 (US\$'000) (千美元)	
Interest-bearing bank borrowings	計息銀行借款	–	–	4,597	17,872	4,339	26,808
Lease liabilities	租賃負債	–	2,263	629	6,447	15,153	24,492
Trade payables	貿易應付款項	13,106	73,013	–	–	–	86,119
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	123,198	104,299	–	–	–	227,497
Amounts due to related parties	應付關聯方款項	10,655	–	–	–	–	10,655
		146,959	179,575	5,226	24,319	19,492	375,571

	On demand	Less than 3 months	3 to 12 months	1 to 5 years	Over 5 years	Total	
31 December 2018 二零一八年十二月三十一日	按要求 (US\$'000) (千美元)	少於三個月 (US\$'000) (千美元)	十二個月 (US\$'000) (千美元)	一至五年 (US\$'000) (千美元)	五年以上 (US\$'000) (千美元)	總計 (US\$'000) (千美元)	
Interest-bearing bank borrowings	計息銀行借款	–	–	4,725	18,376	8,873	31,974
Trade payables	貿易應付款項	15,053	64,417	–	–	–	79,470
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	102,269	–	–	–	–	102,269
Amounts due to related parties	應付關聯方款項	5,838	–	–	–	–	5,838
		123,160	64,417	4,725	18,376	8,873	219,551

38. 財務風險管理目標及政策 (續)

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。

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：

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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。各報告期末的資產負債比率如下：

		31 December 2019 二零一九年 十二月三十一日 (US\$'000) (千美元)	31 December 2018 二零一八年 十二月三十一日 (US\$'000) (千美元)
Trade payables	貿易應付款項	86,119	79,470
Other payables and accruals (note 25)	其他應付款項及暫估費用 (附註25)	270,365	138,109
Interest-bearing bank borrowings	計息銀行借款	25,802	30,598
Lease liabilities	租賃負債	18,616	-
Amounts due to related parties	應付關聯方款項	10,655	5,838
Less: Cash and cash equivalents	減：現金及現金等價物	(476,286)	(777,000)
Net debt	淨負債	(64,729)	(522,985)
Total equity	權益總額	3,082,592	2,704,332
Capital and net debt	資本及淨負債	3,017,863	2,181,347
Gearing ratio	資產負債比率	(2.14%)	(23.98%)

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

39. Notes to the Consolidated Statement of Cash Flows

(a) Major non-cash transactions

During the year, the Group had non-cash additions to right-of-use assets and lease liabilities of US\$1,233,000 and US\$1,233,000, respectively, in respect of lease arrangements for offices and dormitory properties (2018: Nil).

(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)	Interest payable included in other payables 計入其他應付款項的應付利息 (US\$'000) (千美元)	Dividend payable included in other payable 計入其他應付款項的應付股息 (US\$'000) (千美元)	Lease liabilities 租賃負債 (US\$'000) (千美元)
As at 1 January 2018	於二零一八年一月一日	92,890	66	13	-
Changes from financing cash flows	融資現金流量變動	(60,613)	(2,259)	(41,066)	-
Interest expense	利息開支	-	2,203	-	-
Final 2017 dividend payable	應付二零一七年末期股息	-	-	41,095	-
Foreign exchange movement	外匯變動	(1,679)	-	(20)	-
As at 31 December 2018 and 1 January 2019 as previously reported	於二零一八年十二月三十一日及二零一九年一月一日				
Impact of adopting HKFRS 16 (note 2.2)	(如先前呈列) 採用香港財務報告準則第16號的影響 (附註2.2)	30,598	10	22	-
As 1 January 2019 as restated	於二零一九年一月一日 (重列)	30,598	10	22	17,882
Changes from financing cash flows	融資現金流量變動	(4,332)	(360)	(50,963)	(975)
Interest expense	利息開支	-	358	-	884
Final 2018 dividend declared	最終宣派二零一八年股息	-	-	50,772	-
New Leases	新租賃	-	-	-	1,233
Foreign exchange movement	外匯變動	(464)	1	196	(408)
As at 31 December 2019	於二零一九年十二月三十一日	25,802	9	27	18,616

(c) Total cash outflow for leases

The total cash outflow for leases included in the statement of cash flows is as follows:

		2019 二零一九年 (US\$'000) (千美元)
Within operating activities	經營活動內	1,625
Within financing activities	融資活動內	975
		2,600

39. 綜合現金流量表附註

(a) 主要非現金交易

於年內，本集團就與辦公室及宿舍物業有關的租賃安排確認使用權資產及租賃負債的非現金添置1,233,000美元及1,233,000美元 (二零一八年：無)。

(b) 融資活動所產生的負債變動如下：

(c) 租賃現金流出總額

計入現金流量表的租賃現金流出總額如下：

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

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:

		2019 二零一九年	2018 二零一八年
Percentage of interest held by non-controlling interests	非控股權益持有權益比率	49%	43.5%
Hua Hong Wuxi	華虹無錫		

Pursuant to the Investment Agreement, capital injection to Hua Hong Wuxi has been scheduled into four instalments. As at 31 December 2019, all the four instalments have been fully paid and the proportion of the injected capital attributable to the non-controlling shareholders was 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 and remains constant regardless of the instalment of capital injection.

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非全資子公司之詳情如下：

		2019 二零一九年	2018 二零一八年
Percentage of interest held by non-controlling interests	非控股權益持有權益比率	49%	43.5%
Hua Hong Wuxi	華虹無錫		

根據投資協議，向華虹無錫注資以四次分期進行。於二零一九年十二月三十一日，四期注資均已繳足且非控股股東應佔注資比例為49%。

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，且無論注資是否分期，投票權的比例均保持不變。

		2019 二零一九年 (US\$'000) (千美元)	2018 二零一八年 (US\$'000) (千美元)
(Loss)/profit for the year allocated to non-controlling interests:	分配至非控股權益之年內(虧損)/溢利：		
Hua Hong Wuxi	華虹無錫	(7,252)	2,450
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	837,351	549,076

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

40. Partly-Owned Subsidiary With Material Non-Controlling Interests (continued)

The following tables illustrate the summarised financial information of the above subsidiary. The amounts disclosed are before any inter-company eliminations:

40. 有重大非控股權益之非全資子公司 (續)

下表概述子公司的財務資料，所披露之金額為任何公司間抵銷前之金額：

		Hua Hong Wuxi 華虹無錫 2019 二零一九年 (US\$'000) (千美元)	Hua Hong Wuxi 華虹無錫 2018 二零一八年 (US\$'000) (千美元)
Revenue	銷售收入	7,414	–
Other income	其他收入	45,443	16,328
Total expenses	開支總額	(68,311)	(13,315)
(Loss)/profit and total comprehensive (loss)/income for the year	年內(虧損)/溢利及全面(虧損)/收益總額	(15,454)	3,013
Current assets	流動資產	953,970	1,163,234
Non-current assets	非流動資產	1,028,097	146,210
Current liabilities	流動負債	(273,049)	(47,210)
Non-current liabilities	非流動負債	(138)	–
Net cash flows used in operating activities	經營活動所用現金流量淨額	(36,447)	(2,935)
Net cash flows used in investing activities	投資活動所用現金流量淨額	(702,045)	(795,227)
Net cash flows from financing activities	融資活動所得現金流量淨額	500,000	1,300,000
Effect of foreign exchange rate changes, net	外匯匯率變動影響，淨額	(10,784)	(12,115)
Net (decrease)/increase in cash and cash equivalents	現金及現金等價物(減少)/增加淨額	(249,276)	489,723

41. Event After the Reporting Period

There is no material subsequent event undertaken by the Group after 31 December 2019.

41. 報告期後事項

本集團於二零一九年十二月三十一日後概無發生任何重大期後事項。

NOTES TO FINANCIAL STATEMENTS

財務報表附註

31 December 2019
二零一九年十二月三十一日

42. Statement of Financial Position of the Company

Information about the statement of financial position of the Company at the end of the reporting period is as follows:

42. 本公司的財務狀況表

有關本公司報告期末的財務狀況表資料載列如下：

		31 December 2019 二零一九年 十二月三十一日 (US\$'000) (千美元)	31 December 2018 二零一八年 十二月三十一日 (US\$'000) (千美元)
NON-CURRENT ASSETS	非流動資產		
Investments in subsidiaries	投資於子公司	1,967,608	1,959,862
Total non-current assets	非流動資產總額	1,967,608	1,959,862
CURRENT ASSETS	流動資產		
Trade and notes receivables	貿易應收款項及應收票據	5,684	6,666
Prepayments, other receivables and other assets	預付款項、其他應收款項及其他資產	1,850	107
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	22
Cash and cash equivalents	現金及現金等價物	13,020	19,792
Total current assets	流動資產總額	21,579	27,585
CURRENT LIABILITIES	流動負債		
Other payables and accruals	其他應付款項及暫估費用	264	1,250
Due to subsidiaries	應付子公司款項	94,693	95,010
Total current liabilities	流動負債總額	94,957	96,260
NET CURRENT LIABILITIES	流動負債淨額	(73,378)	(68,675)
TOTAL ASSETS LESS CURRENT LIABILITIES	資產總值減流動負債	1,894,230	1,891,187
Net assets	淨資產	1,894,230	1,891,187
EQUITY	權益		
Share capital	股本	1,966,095	1,960,159
Reserves (note)	儲備(附註)	(71,865)	(68,972)
Total equity	權益總額	1,894,230	1,891,187

Suxin Zhang
張素心
Director
董事

Jun Ye
葉峻
Director
董事

NOTES TO FINANCIAL STATEMENTS

31 December 2019
二零一九年十二月三十一日

財務報表附註

42. Statement of Financial Position of the Company (continued)

Note:

A summary of the Company's reserves is as follows:

42. 本公司的財務狀況表 (續)

附註：

本公司的儲備概述如下：

		Other reserve 其他儲備 (US\$'000) (千美元)	Share option reserve 購股權儲備 (US\$'000) (千美元)	Accumulated losses 累計虧損 (US\$'000) (千美元)	Total 總計 (US\$'000) (千美元)
As at 1 January 2018	於二零一八年一月一日	(68,260)	7,083	(3,427)	(64,604)
Profit for the year	年內溢利	-	-	37,203	37,203
Final 2017 dividend declared	最終宣派二零一七年股息	-	-	(41,095)	(41,095)
Equity-settled share option arrangements	以權益結算的購股權安排	-	1,298	-	1,298
Issue of shares	發行股份	-	(1,774)	-	(1,774)
At 31 December 2018 and 1 January 2019	於二零一八年十二月三十一日及二零一九年一月一日	(68,260)	6,607	(7,319)	(68,972)
Profit for the year	年內溢利	-	-	41,767	41,767
Final 2018 dividend declared	最終宣派二零一八年股息	-	-	(50,772)	(50,772)
Equity-settled share option arrangements	以權益結算的購股權安排	-	7,746	-	7,746
Issue of shares	發行股份	-	(1,634)	-	(1,634)
As at 31 December 2019	於二零一九年十二月三十一日	(68,260)	12,719	(16,324)	(71,865)

43. Approval of the Financial Statements

The financial statements were approved and authorised for issue by the board of directors on 26 March 2020.

43. 財務報表的批准

財務報表已於二零二零年三月二十六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				
		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)	2016 二零一六年 (US\$'000) (千美元)	2015 二零一五年 (US\$'000) (千美元)
RESULTS	業績					
REVENUE	銷售收入	932,567	930,268	808,148	721,428	650,131
Cost of sales	銷售成本	(650,107)	(619,114)	(540,971)	(501,080)	(448,705)
Gross profit	毛利	282,460	311,154	267,177	220,348	201,426
Other income and gains	其他收入及收益	69,091	43,613	24,394	34,761	42,717
Fair value gain on an investment property	投資物業的公平值收益	163	247	89	72	58
Selling and distribution expenses	銷售及分銷費用	(8,828)	(7,771)	(7,232)	(6,814)	(7,292)
Administrative expenses	管理費用	(169,796)	(122,323)	(108,673)	(97,404)	(104,855)
Other expenses	其他費用	(406)	(11,106)	(10,712)	(666)	(9)
Finance costs	財務費用	(1,242)	(2,203)	(2,178)	(3,873)	(7,754)
Share of profit of an associate	分佔一家聯營公司溢利	10,131	9,444	9,622	7,056	961
PROFIT BEFORE TAX	稅前溢利	181,573	221,055	172,487	153,480	125,252
Income tax expense	所得稅開支	(26,588)	(35,447)	(27,225)	(24,648)	(12,703)
PROFIT FOR THE YEAR	年內溢利	154,985	185,608	145,262	128,832	112,549
Attributable to:	以下各項應佔：					
Owners of the parent	母公司擁有人	162,237	183,158	145,262	128,832	112,549
Non-controlling interests	非控股權益	(7,252)	2,450	-	-	-
		154,985	185,608	145,262	128,832	112,549
		Year ended 31 December 截至十二月三十一日止年度				
		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)	2016 二零一六年 (US\$'000) (千美元)	2015 二零一五年 (US\$'000) (千美元)
Total assets	資產總值	3,613,303	3,078,274	2,078,306	1,826,664	1,911,733
Total liabilities	負債總額	(530,711)	(373,942)	(383,101)	(337,978)	(421,043)
Non-controlling interests	非控股權益	(837,351)	(549,076)	-	-	-
		2,245,241	2,155,256	1,695,205	1,488,686	1,490,690



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