MicroPort®
一个属于患者和医生的品牌
微创医疗

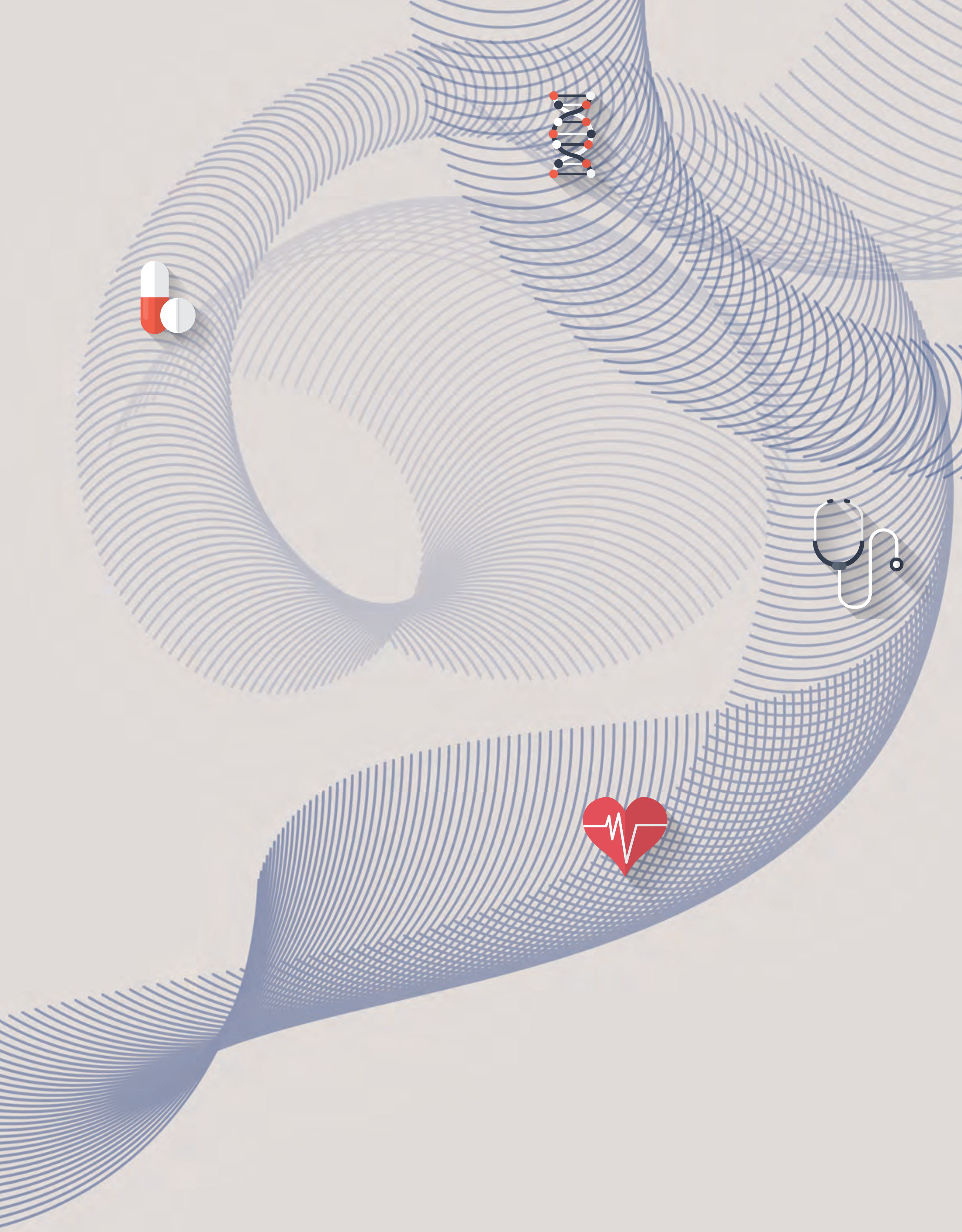
ANNUAL REPORT 2019

MicroPort Scientific Corporation
微創醫療科學有限公司

(Incorporated in the Cayman Islands with limited liability)

(Stock code: 00853)

CONTENTS



CORPORATE INFORMATION

DIRECTORS

Executive Director

Dr. Zhaohua Chang *(Chairman of the Board and Chief Executive Officer)*

Non-Executive Directors

Mr. Norihiro Ashida
Mr. Hiroshi Shirafuji
Mr. Hongliang Yu

Independent Non-Executive Directors

Mr. Jonathan H. Chou
Dr. Guoen Liu
Mr. Chunyang Shao

COMPANY SECRETARY

Ms. Yuen Wing Yan Winnie, *FCS (PE), FCIS*

AUTHORIZED REPRESENTATIVES

Dr. Zhaohua Chang
Ms. Yuen Wing Yan Winnie

AUDIT COMMITTEE

Mr. Jonathan H. Chou *(Chairman)*
Mr. Norihiro Ashida
Mr. Chunyang Shao

REMUNERATION COMMITTEE

Dr. Guoen Liu *(Chairman)*
Dr. Zhaohua Chang
Mr. Jonathan H. Chou

NOMINATION COMMITTEE

Mr. Chunyang Shao *(Chairman)*
Mr. Hongliang Yu
Dr. Guoen Liu

STRATEGIC COMMITTEE

Dr. Zhaohua Chang *(Chairman)*
Mr. Hiroshi Shirafuji
Mr. Jonathan H. Chou
Mr. Hongliang Yu

REGISTERED OFFICE

PO Box 309, Ugland House
Grand Cayman, KY1-1104
Cayman Islands

PRINCIPAL PLACE OF BUSINESS AND HEAD OFFICE IN THE PEOPLE'S REPUBLIC OF CHINA (THE "PRC")

1601 Zhangdong Road
Zhangjiang Hi-Tech Park
Shanghai 201203
The PRC

PLACE OF BUSINESS IN HONG KONG

Level 54
Hopewell Centre
183 Queen's Road East
Hong Kong

AUDITOR

KPMG
Public Interest Entity Auditor registered in accordance with the Financial Reporting Council Ordinance

LEGAL CONSULTANT

Sidley Austin

SHARE REGISTRAR IN HONG KONG

Computershare Hong Kong Investor Services Limited
Shops 1712-1716, 17th Floor, Hopewell Centre
183 Queen's Road East
Wanchai
Hong Kong

COMPANY WEBSITE

www.microport.com

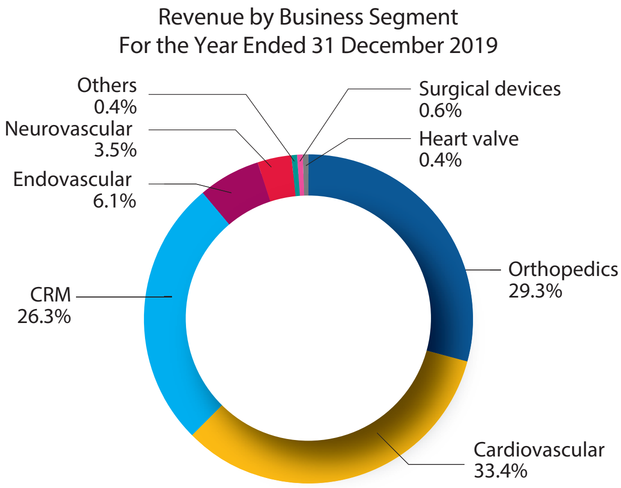
PRINCIPAL BANKERS

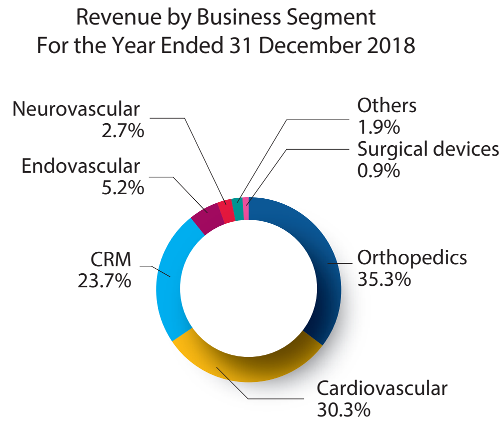
Bank of China (Hong Kong) Limited
China Construction Bank Corporation Shanghai Pudong Branch
Bank of China Limited Shanghai Zhangjiang Sub-Branch
China Minsheng Banking Corp., Ltd
Shanghai Pilot Free Trade Zone Branch
Bank of America
BNP Paribas

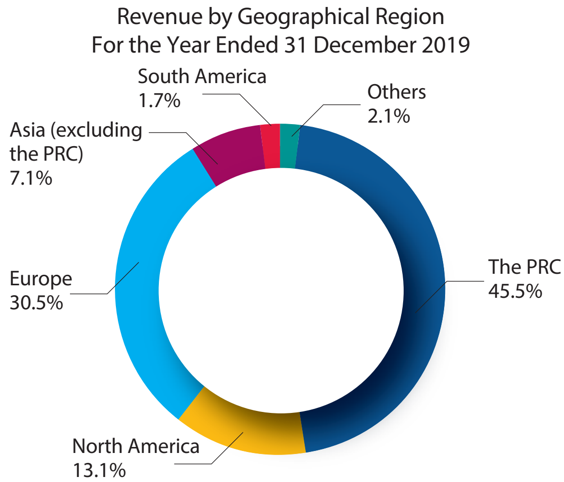
FINANCIAL HIGHLIGHTS

	Financial Year Ended		
	2019 US$'000	2018 US$'000	Change %
Revenue	**793,493**	669,490	18.5%
Gross profit	**564,425**	470,016	20.1%
Profit for the year	**29,009**	18,381	57.8%
Profit attributable to equity shareholders of the Company	**46,281**	23,913	93.5%
Earnings per share –			
Basic (in cents)	**2.92**	1.63	79.1%
Diluted (in cents)	**1.98**	1.28	54.7%

Revenue Analysis







FIVE YEARS' FINANCIAL SUMMARY

	2019 US$'000	2018 US$'000	2017 US$'000	2016 US$'000	2015 US$'000
Revenue	**793,493**	669,490	444,190	389,921	375,844
Net profit/(loss)	**29,009**	18,381	16,951	15,069	(11,379)
Assets					
Non-current assets	**856,997**	719,756	473,918	417,074	402,403
Current assets	**740,954**	554,691	429,705	357,476	331,240
Total assets	**1,597,951**	1,274,447	903,623	774,550	733,643
Liabilities					
Current liabilities	**431,801**	440,390	198,893	210,039	164,601
Non-current liabilities	**512,185**	305,111	265,278	218,032	251,214
Total liabilities	**943,986**	745,501	464,171	428,071	415,815
Total equity	**653,965**	528,946	439,452	346,479	317,828

COMPANY PROFILE

MicroPort Scientific Corporation (the "Company" or "MicroPort") and its subsidiaries (collectively the "Group") is a leading medical device group focusing on innovating, manufacturing and marketing high-end medical devices globally. With a diversified product portfolio now being used in over 10,000 hospitals in the world, the Group maintains world-wide operations in a broad range of business segments including cardiovascular, orthopedics, cardiac rhythm management ("CRM"), endovascular, neurovascular, heart valve, surgical robot and other business. Every six seconds, one of MicroPort's products is used worldwide to save life, improve life quality or help create life. The Group is dedicated to becoming a patient-oriented global enterprise that we continuously innovate and provide access to the best means of prolonging and reshaping lives.

The Group is human-oriented and is committed to improving people's lives through practical application of innovative science. We continually develop leading technologies and products for physicians and provide access to the best means of prolonging and reshaping lives to patients. We are a young group with an ambition to establish MicroPort as a globally recognised brand. Yet as the business grows, we strive to retain our unique entrepreneurial spirit and our commitment to improving the social well being, and continue to demonstrate entrepreneurial achievement and innovation spirit.

We have a large and growing intellectual property portfolio and a strong research and development ("R&D") team. We work in close cooperation with internationally recognized physicians and scientists worldwide, to develop a range of products that meet the highest quality and clinical standards. As we strive to provide state-of-the-art medical technologies and deliver new-generation medical devices and treatments for chronic ailments, our R&D team applies their expertise to ensure the sustained innovation of our latest products.

With a large global footprint of R&D and manufacturing facilities in Shanghai, Jiaxing, Suzhou, Dongguan in China, Memphis in the United States, Clamart in France, Saluggia in Italy and Dominican Republic, a strong focus on technological innovation with over 4,000 patents (including applications), and a global workforce of around 7,000 employees, MicroPort is committed to achieving its corporate vision.

Our products touch the lives of many people every day and we take this important responsibility very seriously. We are proud that MicroPort products will always achieve the highest standards of quality and ensure improved health for the patients. We know our products offer hope and relief to many people around the world, and every one of our employees takes personal responsibility to achieve our vision.

It is our commercial achievements that enable us to contribute back to the society, which makes our success deserved. Our commitment to social responsibility is an important aspect of our company culture and philosophy. MicroPort works diligently to build strong relationships with all our international partners and all our stakeholders, because we take our community as an essential part of our business, and we strive to pursue the essence to achieve the greatness.

OUR VISION

PEOPLE ORIENTED

Building a People-Centric Consortium of Companies Focused on Emerging Medical Technologies.

OUR MISSION

CONTINUOUS INNOVATION

Provide Access to the Best Means of Prolonging and Reshaping Lives.

CHAIRMAN'S STATEMENT

Dr. Zhaohua Chang
Chairman

Dear Shareholders,

MicroPort has held true to its "Eye for Greatness, Hands on Details" management credo and the doctor-enterprise-patient trinity as it continues to provide accessible best solutions for prolonging and reshaping lives. It has strived to build a people-centric consortium of companies focused on emerging medical technologies.

In 2019, an increasingly prominent global ageing trend drove greater public demand for medical devices, and the global medical device industry commensurately grew steadily while the domestic industry maintained its rapid growth. During the year, the Group actively expanded its global business, fully leveraged on the diverse synergies of various business segments, achieved solid progress in research and development, and made breakthroughs in domestic manufacturing, all of which helped to further expand the Group's business. For the year ended 31 December 2019, the Group recorded revenue of US$793.5 million, representing a year-on-year increase of 22.0% (excluding the impact of foreign exchange). Profit attributable to equity shareholders of the Company was US$46.3 million, representing a year-on-year increase of 93.5%. Such increase was principally attributable to significant revenue growth in its core business segments and investment gain on the partial disposal of equity interests in Shanghai MicroPort EP MedTech Co., Ltd. amounting to US$55.8 million (net of tax).

The Group's cardiovascular business has occupied the leading position in the PRC market since the products were launched. After over 20 years of development, the products have been introduced to nearly 30 countries and regions around the globe. The Group has gradually established a multi-layered product portfolio that includes four drug eluting stents ("DES") and four balloons, thus continuously bringing vitality to the segment. For the year ended 31 December 2019, revenue of cardiovascular business increased by 35.5% compared with the previous year (excluding the impact of foreign exchange). In the domestic market, the Group was actively engaged in market development, with coverage surpassing 2,000 hospitals for the first time. The Group also newly extended its coverage to 256 county hospitals to consolidate its leading position in the domestic market. In terms of products, the FireCondor™ Coronary Rapamycin Target Eluting Stent with improvements in its delivery system was approved and launched during the period, which brought new momentum for continued development. In overseas market, DES revenue achieved robust growth of 72.4% (excluding the impact of foreign exchange), with sales in 25 countries or regions and registration certificates first obtained in 13 countries or regions during the year and further expanded the Group's global presence. Particularly sales growth of Firehawk™ Coronary Rapamycin Target Eluting Stent ("Firehawk™") in Europe was boosted by its inclusion in the health insurance directories of France and Belgium by virtue of satisfactory results in a large-scale TARGET All Comers ("TARGET AC") clinical trial. To further penetrate the global mainstream market, the Group also submitted a registration application for the Firehawk™ stent to Pharmaceuticals and Medical Devices Agency of Japan. The Group's balloon product business also maintained robust growth, with its global sales revenue increasing by 54.5% over the previous year (excluding the impact of foreign exchange), achieving a growth rate of over 40% for the fourth consecutive year. Since its launch, the Firefighter™ PTCA balloon catheter's excellent performance was widely recognised by industry experts. To date, four balloon products have been registered and approved in a total of 21 countries or regions, of which 12 were added during the year.

The Group has integrated its orthopedics business resources to improve global product distribution, strengthen brand-building and the product concept, and accelerate domestic manufacturing. In 2019, revenue of the international (non-China) orthopedics business decreased, which was mainly attributable to a continued decline in global prices and the loss of a major US distributor in 2018. During the year, the Group explored customers in the United States, and its business gradually stabilised during the second half of the year. Business in Japan recorded slight growth during the year. The orthopedics business in China increased by 57.1% over the previous year (excluding the impact of foreign exchange), maintaining a strong growth trend. This was mainly attributable to the rapid growth of the Group's imported joint products, which was far higher than the market average. In 2019, two domestic products – Aspiration™ Total Knee Replacement System and Evolution™ Total Knee Replacement System – obtained registration certificates and the Group's product portfolio was further diversified to enhance comprehensive competitiveness, which also marked a new era of domestic production.

2019 was the first full financial year after the Group's acquisition of the CRM business. During the year, the Group actively adjusted its overseas marketing strategies. Domestic and overseas R&D teams cooperated to efficiently advance product development. The Group's CRM business recorded revenue of US$209.0 million during the year. For overseas markets, the Group's investment in research and development led to a number of projects progressing steadily. Since their launch just a year ago, the world's smallest 1.5T and 3T magnetic resonance compatible pacemakers OTO™, ENO™ and TEO™ have accounted for over 50% of the Group's sales revenue from pacemakers in Europe. In Japan, a strategic transition from the original distributor model to a direct sales model was largely completed, laying a foundation for long-term sustainable development in the market. In China, the Group followed a development path of combining "Made in China" and "Created in China". Recognition of the Rega™ brand domestic pacemaker was further enhanced, and implant cases greatly increased. Meanwhile, Beflex™ active pacing lead was being widely used in hospitals across the country and enriched the Group's existing product line.

The Group's endovascular and neurovascular devices businesses achieved significant growth of 44.5% and 55.6% (excluding the impact of foreign exchange) respectively during the year. Shares of Shanghai MicroPort Endovascular MedTech Co., Ltd. ("MP Endo") were quoted for listing on the Shanghai Stock Exchange, and it became one of the first batch of companies listed on the Sci-Tech Innovation Board. The added strengths in capital and technology will enhance the sustainability of MP Endo in the future. The heart valve business recorded sales revenue for the first year. Through targeted pricing and marketing strategies, VitaFlow™ Transcatheter Aortic Valve and Delivery System was widely promoted in core, medium and large hospitals since it was approved and launched during the year.

In 2019, MicroPort is well recognised by the society in terms of quality management, innovative capability and brand building. MicroPort won a series of quality honours, including the Asia Pacific Quality Organisation Innovation Award, the National Quality Benchmark, the Shanghai Quality Gold Award, and the Shanghai Quality Benchmark. Firehawk™ stent won the Outstanding Project Award of the 2019 PMI (China) Project Management Award. Last but not least, MicroPort was selected as one of the Asian Top 500 Brands, becoming the first Chinese medical device enterprise to be included in the list in its 14 years of history.

Effective R&D is key to the sustainable development of an innovative medical device company. For the past 20 years, with the goal of import substitution and building a Chinese brand, and through implementing higher standards and better practices, the Group has been committed to innovative R&D for global leading technologies, to creating a technological innovation system combining production, education and research, to providing quality products and services to the global market, and to provide momentum to the Group's sustainable development.

In 2019, 18 Class III medical devices of the Group received registration approval from National Medical Products Administration ("NMPA"), including FireCondor™ Rapamycin Target Eluting Coronary Stent System, Firefighter™ NC Balloon Catheter, Minos™ Abdominal Aortic Aneurysm and Delivery System, VitaFlow™ Transcatheter Aortic Value and Delivery System, Fastrack™ Microcatheter System and other key products. In the orthopedics business, two domestic products – Aspiration™ Total Knee Replacement System and Evolution™ Total Knee Replacement System – both obtained approval for launch. The domestic Goral™ Total Hip Replacement System was approved in February 2020, representing that the domestic joint product line is basically completed and fully commenced the era of domestic manufacturing. Besides, various products obtained registration approvals in overseas market, including Evolution™ NitrX™ Medial-Pivot Knee obtaining a registration certificate and approval for launch in the United States and Canada, and launch of the 1.5T and 3T magnetic resonance compatible pacemaker ENO™ series in Japan.

During the year, three of the Group's Class III medical devices entered the special approval procedure for innovative medical devices ("Green Path"); namely the BonaFire™ passive pacing lead, the DFVision™ 3D electronic laparoscope, and the Toumai™ Laparoscopic Surgical Robot. As of the end of 2019, 18 of the Group's products had entered the Green Path – the most of all among medical device manufacturers in China.

With respect to clinical developments, for the cardiovascular devices business, the Group released three-year follow-up results of FUTURE-I research on Firesorb™ Bioresorbable Rapamycin Target Eluting Coronary Scaffold System ("Firesorb™") for the treatment of coronary artery disease. These proved that the Firesorb™ stent based on PLLA with a thinner scaffolds strut is a viable, safe and effective solution for patients with single coronary artery lesions, as compared with first-generation biodegradable scaffolds. For Firehawk™ stent, the Company released two-year follow-up data from the TARGET AC trial, simultaneously published online by the Journal of the American College of Cardiology. The Group also released a two-year follow-up analysis of the TARGET AC trials on the low- and high-risk groups, which further proved how the Firehawk™ stent – with the lowest drug load in the world, with only one-third the drug load of similar products – can achieve identical efficacy and significantly increased safety. For the CRM business, the Group launched a clinical trial of the domestic MRI pacing system, and plans are in place for the launch of the first domestically-made MRI conditional pacemaker. The Group has made significant progress in the development of a Bluetooth-enabled pacemaker platform. Additionally, clinical studies to verify the safety and effectiveness of the NAVIGO™ quadrupole left ventricular pacing lead have been completed, and will help to further improve and upgrade the existing CRM product portfolio. For the heart valve business, the VitaFlow™ II Transcatheter Aortic Valve and Retrievable Delivery System has entered the Green Path and planned to submit registration application to NMPA. In the overseas market, the pre-marketing clinical trial in Europe made an orderly advance. For the surgical robot business, the first clinical operations using the DFVision™ 3D Electronic Laparoscope and Toumai™ Laparoscopic Surgical Robot were completed respectively during the year.

MicroPort's strategy extends to multiple dimensions of exponential growth, and each segment is growing rapidly. The Group will not only provide single products, but also deliver integrated solutions by focusing on the clinical needs of doctors and the health of patients.

For the year ended 31 December 2019, our Directors, senior management officers and all staff members carried on their work in a pragmatic, diligent and committed fashion. On behalf of all members of the Company, I express my gratitude and appreciation to our shareholders, vendors, distributors, physicians and surgeons, as well as business communities and partners, for their dedicated and enduring support.

Dr. Zhaohua Chang
Chairman

30 March 2020

MANAGEMENT DISCUSSION AND ANALYSIS

BUSINESS OVERVIEW

OVERVIEW

In 2019, demand for medical device products and services remained strong with the increasingly obvious trend of an ageing population and the continuing improvements to overall income and living standards. The global medical device industry maintained steady growth as a whole. In the domestic market, the government further implemented healthcare system reform and introduced a number of major policies and measures for medical consumables, which included unification of classification and coding of high-value medical consumables for national medical insurance by establishing identification system rules for medical devices, further improvement of high-value medical consumables pricing system and enhancement of whole process supervision and management for high-value medical consumables by optimizing systems, polices and innovating methods. In addition, the National Healthcare Security Administration promoted diagnosis related groups (DRGs) pilot program. Initial design of such program was basically completed with the pilot cities identified. The National Health Commission also identified the pilot cities for integrated health care system which aimed to form synergy of medical insurance and medical reform. Under the guidance of the above reform plans, major provinces and cities have successively introduced centralized high-value medical consumables procurement policies, resulting in the downward prices in end markets. However, a series of innovative supporting measures will help reduce operating costs and in the long-run, industrial integration will be accelerated by establishing reasonable pricing mechanism to eliminate less competitive counterparties, which will provide greater market opportunities and a healthier development environment for industry leaders engaged in innovative and large-scale production and thus leading to high-quality development of the industry. In the international market, registration threshold in certain countries is increasing and the international trading environment is getting increasingly complicated. These challenges required globalized resources allocation and managerial experience of the Company to cope with the business environment and regulatory changes in the international market.

As of 31 December 2019, the Group has eight major business segments, being cardiovascular devices, orthopedics devices, CRM business, endovascular devices, neurovascular devices, heart valve business, surgical devices and surgical robot business, offering more than 300 varieties of medical devices.

In 2019, in terms of sales, the Group continued to intensively cultivate the domestic market, expand its market coverage while enriching overseas product portfolio to stably implement globalized strategies. In terms of research and development, a number of key products in each segment have been approved for launching which accelerated the progress of domestic manufacturing and thus creating new opportunities for growth. For the year ended 31 December 2019, the Group recorded revenue of US$793.5 million, representing an increase of 18.5% in US$ or 22.0% (excluding foreign exchange impact) as compared to previous year. Net profit amounted to US$29.0 million (profit attributable to equity shareholders of the Company: US$46.3 million).

For the year ended 31 December 2019, the Group derived 33.4% of its revenue from the cardiovascular devices, 29.3% from the orthopedics devices, 26.3% from the CRM business, 6.1% from the endovascular devices, 3.5% from the neurovascular devices, 0.6% from the surgical devices and 0.4% from the heart valve business. In 2019, the Group's various businesses – including cardiovascular, endovascular and neurovascular – continued to maintain leading market positions with substantial growth rate. The heart valve business recorded revenue for the first year after obtaining approval in July 2019.

Cardiovascular Devices Business

The Group's cardiovascular devices business offers products and services for the treatment of coronary artery-related diseases. The Group is committed to developing, manufacturing and commercialising market-leading coronary stents and the related delivery systems, along with balloon catheters and accessories.

With the increasingly obvious trend of an ageing population in the PRC, the overall cardiovascular diseases incidence increased continuously. With the significant leap in income level, the society's affordability to medical expenses strengthened as well. The quantity and quality of interventional therapy for coronary artery disease enhanced with stable development in recent years. In terms of product consumption, the PRC is now one of the countries with the most cases of PCI. In terms of the number of stents inserted, interventional therapy indications and devices use are deemed reasonable. In addition, along with the implementation of the national hierarchical diagnosis and treatment system, the capabilities of PCI gradually improved in hospitals at county level which are playing an increasingly important role in coronary heart disease treatment, which greatly increased patient accessibility.

The Group has cultivated its cardiovascular devices business for over two decades. With high-quality products, the Group has occupied the leading position in the PRC market since the products were launched and has reached nearly 30 countries and regions around the globe. Currently, four drug eluting stents ("DES") and four balloon products are in sale. New sustainable development drivers were brought with continuous addition of new products which gradually structured a multiple layered product mix. For the year ended 31 December 2019, the Group's cardiovascular devices business recorded revenue of US$264.6 million, representing a 35.5% increase (excluding the foreign exchange impact) as compared to the previous year. Domestically, revenue of the Group's DES increased by 32.8% (excluding the foreign exchange impact) as compared to the previous year, in which, revenue from the Firehawk™ Rapamycin Target Eluting Coronary Stent System ("Firehawk™") increased by 51.6% (excluding the foreign exchange impact) as compared to the previous year and revenue from the Firebird2™ Coronary Rapamycin-Eluting CoCr Coronary Stent ("Firebird2™") increased by 22.9% (excluding the foreign exchange impact) as compared to the previ ous year. In addition to the rapid growth of the domestic market and the market recognition of the world-class Firebird2™ stent and the cost-effective Firebird™ stent, the centralized bidding also promoted sales growth. The number of hospitals covered with DES exceeded 2,000 for the first time in 2019, among which, the hospitals covered by Firehawk™ increased by 41% as compared to the previous year and that by Firebird2™ increased by 18% as compared to the previous year. Furthermore, the Group has newly developed 256 county-level hospitals during the year. In terms of products, the FireCondor™ Rapamycin Target Eluting Coronary Stent System (renamed as FireCondor™ from Firehawk Nova™) with improved delivery system has been approved for launch and was applied for implantation in 2019, which will be the new growth momentum for such segment.

In 2019, the overseas result for DES was remarkable, with sales in 25 countries or regions, and registration certificates obtained in 13 countries or regions. For the year ended 31 December 2019, overseas DES revenue amounted to US$16.6 million, representing an increase of 72.4% (excluding the foreign exchange impact) as compared to the previous year and a record high. In which, overseas revenue of Firebird2™ increased by 186.9% (excluding the foreign exchange impact) as compared to the previous year while that of Firehawk™ increased by 54.6% (excluding the foreign exchange impact) as compared to the previous year. Firehawk™ was included in the national medical insurance of France and Belgium. European business was further expanded as Firehawk™ has been sold in various major European countries. Moreover, the Group has submitted registration application for Firehawk™ stent to Pharmaceuticals and Medical Devices Agency of Japan as an active move of expansion in global mainstream markets.

The balloon products business of the Group maintained high growth rate as its global revenue increased by 54.5% (excluding the foreign exchange impact) as compared to the previous year, which marked 2019 as the fourth consecutive year with a growth rate of over 40%. In the domestic market, three balloon products covered more than 600 hospitals, with a year-on-year revenue increase of 50.6% as compared to the previous year. The Firefighter™ PTCA Balloon Catheter was highly appraised by industry experts for its outstanding performance after its launch. Over 70 hospitals were newly developed during the year. Furthermore, the centralized bidding of Pioneer™ PTCA Balloon Catheter will promote clinical application in relevant regions. In overseas market, four balloon products have obtained registration approval in 21 countries and regions, with 12 new countries and regions added this year.

Orthopedics Devices Business

The orthopedics devices business offers an extensive product range that includes reconstructive joints, spine and trauma, and other professional implants and equipment. Additionally, the orthopedics Global Supply Center ("GSC") established in 2015 provides centralized purchasing and logistics distribution services of surgical instruments for joints, spine and trauma, in order to optimize the management of surgical instruments and consumables used in the implantation of our products.

In 2019, the Group improved its global portfolio of orthopedics implants and instruments by effective integration of global research and development teams and resources. Meanwhile, the Group strengthened its brand-building and marketing of product concept, and accelerated its domestic manufacturing processes to provide more product options for physicians and patients. For the year ended 31 December 2019, the Group's orthopedics devices business recorded revenue of US$232.4 million, representing a slight year-on-year decline of 0.2% (excluding the foreign exchange impact).

The international (non-China) orthopedics business recorded revenue of US$206.0 million for the year ended 31 December 2019, representing a 4.7% decrease (excluding the foreign exchange impact) as compared to the previous year. Such decrease was mainly due to the prolonged impact of the global downward prices and the loss of a major US distributor in 2018. Regionally, despite the fact that revenue from the US decreased by 7.1% as compared to the previous year, the business resumed to stability in the second half of the year as sales team initiated cooperation with new distributors and actively expanded customers. Compared to the significant drop of revenue in the first half of the year, the revenue in the second half of the year was basically flat year-on-year and recorded an increase of 5.4% compared to the first half of the year. Revenue from Japan achieved a slight increase in 2019. In 2019, the Group organised and participated in a range of well-known international academic events, improved physician training, and worked with industry experts and key opinion leaders to conduct multiple clinical trial projects which will further verify the effectiveness of SuperPATH™ surgery and medial-pivot knee technology under the concept of accelerated recovery. In 2019, the Group also obtained approval to launch a number of products in overseas regions. The new generation Evolution™ NitrX™ Medial-Pivot Knee applicable for patients with allergies to certain metallic ions was approved for launching in the US and Canada. The registration application of such product was submitted in Europe to imbue new momentum to the development of the segment.

For the year ended 31 December 2019, the PRC orthopedics business of the Group recorded a revenue of US$26.5 million, representing 57.1% growth (excluding the foreign exchange impact) as compared to the previous year. This was mainly due to the rapid sales growth in the imported joint business of 37.8%, which greatly exceeded the market average growth rate. With the superiority of the product concept, the PRC sales team implemented high-frequency marketing strategy as well as product training which aimed to expand brand influence. The imported joint products gained recognition from various hospitals with steady increase in hospital coverage rate and rapid growth of implant volume. Two domestic Aspiration™ Medial Stability Total Knee Replacement Systems and the SoSuperior™ Medial Stability Total Knee Replacement System successively obtained approvals for launch in 2019. Diversified product portfolio enhanced comprehensive competitiveness and become a new momentum for segment growth. In addition, the expansion of sales platforms, strengthening of clinical promotion, acceleration of hospital access, continuous upgrades of existing products and successive launches of new product led to continued rapid increase in revenue from the spine and trauma business, as well as an improved gross profit margin in 2019. The orthopedics instruments business effectively promoted the sales of domestic orthopedics implants by providing high quality and useful instruments. Instruments costs were greatly saved by accelerating the manufacturing localization of overseas orthopedics tools. The Global Supply Center (GSC) continued to operate steadily, supporting the development of an international orthopedics business through the global allocation of instruments and reduction of procurement costs.

Cardiac Rhythm Management Business

The CRM business principally develops, manufactures and markets products including defibrillators, cardiac resynchronisation therapy devices and pacemakers for the diagnosis, treatment and management of heart rhythm disorders and heart failure.

2019 is the first full financial year after the Group's acquisition of the CRM business. In 2019, the Group adjusted its overseas marketing strategies, improved the global market planning and cooperated with domestic and overseas R&D teams to advance product development. In the domestic market, Rega™, the Group's self-developed pacemaker, continued to drive robust business development. For the year ended 31 December 2019, the CRM business realized revenue of US$209.0 million.

In 2019, the international (non-China) CRM business adjusted its market strategy and continued to invest in R&D to optimize its product portfolio and achieve products upgrade. For the year ended 31 December 2019, revenue from the international (non-China) CRM business was US$201.1 million. In the Japan market, the Group has basically completed the strategic transformation from its original distributor model to a direct managed sales network. The 1.5T and 3T magnetic resonance compatible pacemaker ENO™ was launched in Japan and completed the first local implantation, and the Japan business steadily advanced. In the European market, the new generation of the world's smallest 1.5T and 3T magnetic resonance compatible pacemakers – OTO™, ENO™ and TEO™ – were widely used by hospitals due to its excellent quality and customer satisfaction further enhanced. Such products contributed more than half of the sales revenue of the pacemaker business in the European market for the first launch year. Through long-term cooperation with distributors, the Group expanded into some Asia-Pacific countries and African regions to further establish its global presence.

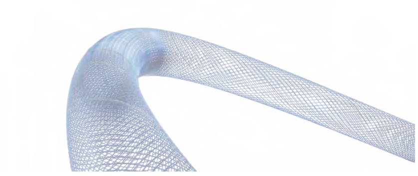
MicroPort Sorin CRM (Shanghai) Co., Ltd. ("MSC") manages the R&D, production and marketing of the Company's CRM business in China. Since its establishment, the business has operated within the guidelines of "Serving China", "Made in China" and "Created in China". For the year ended 31 December 2019, MSC realized revenue of US$8.0 million, and achieved fast growth driven by the higher-than-expected growth rate of domestic pacemakers. As the manufacturer of the first Chinese domestic market pacemaker of world-class quality, it further enhanced its brand recognition. The Group's growing cooperation with new hospitals has led to an increase in implantation volume and accelerated the manufacturing localization of pacemakers. The Beflex™ active pacing lead, which obtained launch approval in China in 2018, commenced clinical applications throughout the country. Its maneuverability, positioning and passability have reached or even surpassed those of similar products. The domestic launch accelerated the conversion of existing lead implants and helped to earn wide recognition from doctors. Last but not least, the Group's self-developed CompassAnalyzer™ Pacing System Analyzer (PSA) also began sales.

Endovascular Devices Business

The endovascular devices business provides a range of products and services for the interventional treatment of thoracic and abdominal aortic aneurysm, peripheral vascular disease, aortic dissection, and other endovascular related diseases.

For the year ended 31 December 2019, the endovascular devices business recorded revenue of US$48.5 million, representing a rapid 44.5% increase (excluding the impact of foreign exchange) which significantly exceeded the average market growth. This was mainly driven by the sales growth of all major products. In particular, the Castor™ Branched Aortic Stent-Graft System ("Castor™") – the world's first thoracic branch stent – has been applied by over 300 hospitals in China. The Minos™ Abdominal Aortic Aneurysm and Delivery System ("Minos™"), which was approved for launch in 2019, enriched the existing product portfolio and also brought new momentum to the growth of this segment. In the domestic market, the Group continued its sales strategy of "Development of the Second-, Third- and Fourth-Tier Hospitals with Intensive Effort", newly developed more than 60 hospitals and maintained its competitive market advantage. The Group has also gradually explored overseas markets. In 2019, the Minos™ obtained European Union CE certification and commenced its international business product line.

Neurovascular Devices Business



The neurovascular devices business segment specializes in products and services for the treatment of neurovascular diseases, including cerebral aneurysms, intracranial atherosclerotic diseases ("ICAD"), carotid artery diseases ("CAD"), and other neurovasculature-related diseases.

For the year ended 31 December 2019, neurovascular devices business maintained rapid growth and recorded revenue of US$27.6 million, representing an increase of 55.6% (excluding the foreign exchange impact) compared to the previous year. In particular, the APOLLO™ stent (has been launched for 15 years) recorded a year-on-year revenue increase of 31.7% (excluding the foreign exchange impact), mainly due to the expansion of surgical applications and increased hospital coverage. Since the launch of the Group's self-developed Tubridge™ vascular reconstruction device, clinical application has doubled as the Group actively promoted education and training by experts, promotion in the academic circle, and implemented tiered sales management in the market. The clinical effect of such product has been recognized by experts. Proportion of revenue contribution has been further increased. The Fastrack™ Microcatheter System approved for launch in 2019 has also brought new growth to this segment.

Heart Valve Business

The heart valve business focuses on the research and development, manufacturing and sales of complete solutions of medical devices for treating valvular heart diseases. The product in sales of this segment is the Group's self-developed VitaFlow™ Transcatheter Aortic Valve and Delivery System ("VitaFlow™ Valve System").

For the year ended 31 December 2019, the heart valve business recorded revenue of US$3.1 million. The VitaFlow™ Valve System was launched in 2019. The Group implemented targeted pricing and sales strategies focused on core hospitals and large and medium-sized hospitals, and carried out promotion in the academic circle and doctors training. As the first approved domestic transcatheter aortic valve product that adopts bovine pericardial leaflets, the VitaFlow™ Valve System is equipped with the Group's self-developed and approved Alwide™ balloon catheter and Alpass™ catheter Sheath, which provides doctors with a comprehensive treatment plan. The clinical data proved it has effectively improved the safety and effectiveness of surgery, thus gaining recognition from industry experts and doctors through application.

Surgical Robot Business

The surgical robot business is committed to cutting-edge research and technology integration in the fields of robot, intelligent control and information to provide innovative medical products.

In 2019, the Group's self-developed DFVision™ 3D Electronic Laparoscope began the special approval procedure for innovative medical devices ("Green Path") and completed the first domestic 3D electronic laparoscopic surgery, which marked the official start of domestic clinical trial. The Toumai™ Laparoscopic Surgical Robot ("Toumai™ Laparoscopic Robot") also entered the Green Path. In 2019, the first clinical study of radical prostatectomy with the aid of robot was completed, and it became the first domestic laparoscopic robot to complete a difficult urological surgery. The first-in-man ("FIM") clinical trial was officially launched. Presently, there are no domestic 3D laparoscope and domestic laparoscopic surgical robot products available on the market. After entering the Green Path, it will accelerate the domestic launch process and spur the development of internationally-advanced technologies and related domestic industries, thus benefiting more patients.

RESEARCH AND DEVELOPMENT ("R&D")

Effective R&D is a key driver of sustainable development for an innovative medical devices company. In this respect the Group's mission is to "Continuously innovate to provide access to the best means of prolonging and reshaping lives". With the goal of import substitution and building Chinese brands, the Group is committed to maintaining higher standards, introducing better practices, and innovative R&D leading to world-leading technologies. The aim is to create a technological innovation system combining production, education and research, and providing quality products and services to the global market, giving a strong drive to the sustainable development of the Group.

In 2019, a total of 18 Class III medical device products gained the National Medical Products Administration ("NMPA") approval and three entered the Green Path. Since the Green Path's establishment, 18 of the Group's products have been approved to enter the Green Path as of the end of 2019, ranking the Group first in the medical device industry for five consecutive years. The Group has several products that have obtained certification in the international market.

For the cardiovascular devices business, the FireCondor™ Rapamycin Target Eluting Coronary Stent System, the Firefighter™ NC Balloon Catheter and Waltz™ CoCr Coronary Stent System obtained registration certificates from NMPA. The guidewire and guiding catheter products also obtained approvals for launch, adding to the Group's PCI intervention consumables product line. In overseas markets, existing products in the segment have obtained 46 initial registration approvals in 17 countries or regions. Among them, the new generation Firehawk Liberty™ Coronary Rapamycin Target Eluting Coronary Stent System and the Firefighter™ NC PTCA Balloon Catheter obtained initial EU CE registration approval.

With respect to clinical progress, in March 2019, at the China Interventional Therapeutics (CIT) conference, the Group released the three-year follow-up results of the FUTURE-I research on Firesorb™ Bioresorbable Rapamycin Target Eluting Coronary Scaffold System ("Firesorb™") for the treatment of coronary artery disease. The results proved that the Firesorb™ stent based on PLLA with thinner Scaffolds strut is one of the viable, safe and effective solutions for the patients with single de novo coronary artery lesions, as compared with the first-generation biodegradable Scaffolds. For the FUTURE II pivotal study, over 50% of the subject have completed one-year angiography primary endpoint follow-up. The Group has also completed the preparation including IRB approval for starting subject enrollment for the prospective, multi-center and single-arm objective performance criteria (OPC) large scale study (FUTURE-III).

At the EuroPCR 2019 conference in May 2019, the Company initially released two-year follow-up data of the TARGET All-Comers ("TARGET AC") trial. The data was simultaneously published online by the *Journal of the American College of Cardiology*. Based on the trial's satisfactory results, the Firehawk™ stent was approved to be included in the French and Belgium medical insurance reimbursement list, which helps its further penetration into the European coronary stent market. At the American Conference on transcatheter cardiovascular therapy (TCT 2019), which was held in September 2019, the Group first released the follow-up data of two years' low-risk group and high-risk group of TARGET AC trial. The results showed that in both low-risk and high-risk groups, the two-year target lesion failure rate and the stent thrombosis rate of Firehawk™ stent were similar to the control group, which further demonstrated that Firehawk™ stent could achieve the same efficacy with the lowest drug load in the world with only one-third of drug load of similar products, and the safety increased significantly, showing the state-of-the-art technology.

In respect of the orthopedics devices business, the Aspiration™ Medial Stability Total Knee Replacement System and SoSuperior™ Medial Stability Total Knee Replacement System both obtained NMPA registration certificates in the domestic market in 2019. The made-in-China Goral™ Total Hip Replacement System obtained NMPA approval in February 2020, and was the Group's first domestically-made total hip replacement systems to obtain approval. Since then, the Group has basically completed the domesticaly-manufactured joint products portfolio and fully commenced the era of domestic manufacturing. In 2019, several other products also obtained NMPA registration certificates, including hip implant components of wedge-shape femoral stem and metal femoral head, the ARBORES™ Kyphoplastic Balloon Catheter, interlocking intramedullary nails and supporting tools, acetabular screws, and spinal posterior fixation system.

Overseas, the Evolution™ CS Stemmed Femur – a significant component of the Evolution™ Revision Knee System – and Evolution™ NitrX™ Medial-Pivot Knee obtained registration certificates and approval for launch in the USA and Canada. The Evolution™ Revision Knee System, femoral head line extension, and the Knee Tensioner Instrument System have also obtained approval in the US, while the Prime™ Acetabular system and Slo-Con™ Total Knee instruments have gained approval in Japan, and also the BIOLOX™ Delta™ Options system in Europe.

In respect of the CRM business, China's first full-body magnetic resonance imaging (MRI) conditional BonaFire™ passive pacing lead – independently developed by the Group – became the Group's 18th product to enter the Green Path. Meanwhile, the Group also launched a clinical study of the domestic MRI pacing system and expects to launch the first domestically-made MRI conditional pacemaker in the foreseeable future.

Overseas, the new-generation vein implantation 1.5T and 3T magnetic resonance conditional pacemakers – the ENO™ series – was officially launched in Japan. In Europe, the Group committed to the developing of new Bluetooth-enabled pacemaker platform and made significant progress. The pacemaker will be able to connect to a designated smartphone via Bluetooth and will send periodic reports and warning information to doctors for remote implant monitoring. Additionally, clinical studies to verify the safety and effectiveness of the NAVIGO™ quadrupole left ventricular pacing lead were completed, further improving and upgrading the CRM product portfolio.

In respect of the endovascular devices business, the Group's self-developed Minos™ Abdominal Aortic Aneurysm and Delivery System obtained an NMPA registration certificate and EU CE certification.

In respect of the neurovascular devices business, the Fastrack™ microcatheter system obtained an NMPA registration certificate. Fastrack™ was the Group's first independently-developed product to obtain registration certification in the neural pathway product segment. Prospective, multicentre, open, randomised controlled clinical trials of the coil occlusion system and detachment system were completed with satisfactory clinical results.

In respect of the heart valve business, the VitaFlow™ Valve System obtained an NMPA registration certificate, becoming the Group's sixth product to do so after entering the Green Path. This product will benefit patients with severe aortic stenosis in China. The VitaFlow™ II Transcatheter Aortic Valve and Retrievable Delivery System has entered the Green Path and planned to submit registration application to NMPA. The pre-marketing clinical research project trial in Europe commenced in an orderly manner as well.

In respect of the surgical robot business, the Group's self-developed DFVision™ 3D electronic laparoscope and Toumai™ Laparoscopic Robot both entered the Green Path. Toumai™ Laparoscopic Robot achieved independent innovations in the robot's basic components and technologies, including its 3D electronic laparoscopic system and control algorithm, streamlined bottlenecks in the production process, optimised the operating experience of doctors, reduced the cost of equipment maintenance and consumables, and demonstrated world-leading "Made in China by Intelligence".

Manufacturing

In 2019, the Group continued to focus on the refined management of the supply chain process, automation and digitization of the production process, instillation of the safety culture and the effective implementation of energy saving and emission reduction.

In 2019, in order to meet the significantly increased production volume demand and cost control targets, the Group arranged bottleneck production lines in advance, and through the implementation of many special improvement measures, the overall production capacity was significantly increased. At the same time, the Group continued to promote automated and intelligent production, having realized fully automated operation or production for various production processes and developed AI algorithms that automatically identify inferior product and defect, which helped significantly reduce the problem occurrence rate. The Group also utilized global resources to carry out global layout of production sites, and leveraged the advantages of industrial manufacturing in each country to ensure continuous supply of products.

Quality Assurance

Priority is given to "quality" in the values of the Group as the Group knows that the quality of each of its products has close bond with human life. The Group has an independent quality and business regulatory department and devotes significant resources to quality management of our products through monitoring every stage of our quality control process, including R&D, product design, procurement of raw materials, manufacturing, product release, product feedback and risk management, so as to assure that the product quality consistency meets the Group's quality management standards and policies. The quality and business regulatory department also conducts inspection on our products both during and after the manufacturing process, including raw material inspection, manufacturing process inspection and final products delivery inspection.

In 2019, the Group continued to strengthen its quality assurance capabilities, explored and improved the intelligence level of quality inspection, established evaluation capability platform, actively participated in the formulation of national standards, and facilitated the construction of the quality management system for various businesses. The excellent quality brand of the Group was fully recognized by the society. The Group was awarded a series of quality honours including the National Quality Benchmark, the Golden Quality Award of Shanghai Municipality and Quality Benchmark of Shanghai Municipality. Furthermore, the Group was awarded the APQO Innovation Class Award and is the first Chinese enterprise that receive such honour.

Competition

The environment in which we operate is continuously evolving. As a market leader among PRC companies manufacturing medical devices, the Group faces both domestic and international competition. In response, the Group pursues an independent course of innovation in order to strengthen its core competitiveness, and enable it to earn a leading market position by virtue of its high-quality products. The Group's products and brand are both widely recognised and highly regarded. Therefore, the Group is confident that it will maintain its current domestic market position and continue to expand its overseas market share.

Intellectual Property

Intellectual property is an important intangible asset of the Group and also an inherent driver to enhance our core competitiveness in the medical devices market. Thus, while being committed to technological innovation, we also regard intellectual property protection such as patent application and trademark registration as vital and conducive to the Group's healthy and sustainable long-term development. In 2019, the Group filed 592 patent applications and 368 trademark applications domestically and internationally. As of the end of 2019, the Group held a total of 4,116 patents (including applications) covering 28 countries and 2,085 trademarks (including applications) covering 66 countries.

MANAGEMENT DISCUSSION AND ANALYSIS

FINANCIAL REVIEW

OVERVIEW

Faced with technical changes in the global medical device industry, in particular the challenges in the rapidly growing medical device industry from a highly competitive global market, the Group has successfully achieved a revenue growth of 18.5% for the year ended 31 December 2019. The Group's cardiovascular devices, endovascular devices and neurovascular devices businesses have maintained the leading positions in China. The Group firmly continued to provide diversified products and pursue our globalization strategy with 54.5% of the revenue generated from the overseas markets. The Group aims to continuously bring our innovations, technologies and services to millions of global patients and become a patient-oriented global leading enterprise in minimally invasive treatment and other emerging medical markets.

The following discussion is based on, and should be read in conjunction with, the financial information and the notes included elsewhere in this report.

REVENUE

US$'000	Financial year ended		Percent change	
	2019	2018	in US$	excluding the foreign exchange impact
Cardiovascular devices business	**264,633**	202,817	30.5%	35.5%
Orthopedics devices business	**232,441**	236,279	(1.6%)	(0.2%)
CRM business *(*Note 1)*	**209,025**	158,376	32.0%	36.9%
Endovascular devices business	**48,527**	34,975	38.7%	44.5%
Neurovascular devices business	**27,631**	18,427	49.9%	55.6%
Surgical devices business	**4,695**	5,925	(20.8%)	(17.2%)
Heart valve business	**3,119**	–	n.a.	n.a.
Other business *(*Note 2)*	**3,422**	12,691	(73.0%)	(73.2%)
Total	**793,493**	669,490	18.5%	22.0%

**Note:*

1 The acquisition of the CRM business from LivaNova was completed on 30 April 2018. The financial results of the CRM business have been consolidated into the financial statement of the Group thereafter. As such, the revenue of this segment for the year ended 31 December 2018 includes the acquired business for the period from 30 April 2018 to 31 December 2018 and the original pacemaker business for the year ended 31 December 2018.

2. Other business segment did not meet the quantitative thresholds for determining reportable segments. During the year, revenue of other business is mainly attributable to electrophysiology devices business. Shanghai MicroPort EP MedTech Co., Ltd. ("MP EP") was restructured in 2019 whereby the Group ceased to hold the controlling interest of MP EP and therefore MP EP became an equity-accounted investee of the Group. As a result, the revenue of this segment disclosed herein for the year ended 31 December2019 was recorded from MP EP for the period from 1 January 2019 to the date of loss of control.

The Group's revenue for the year ended 31 December 2019 was US$793.5 million, representing a growth of 18.5% compared to US$669.5 million for the year ended 31 December 2018. The Group's reported revenue was impacted by translation from the non-US$ functional currencies of the Group's subsidiaries, to US$, the presentation currency of the Group due to the appreciation or depreciation of US$ against the functional currencies. Excluding the foreign exchange impact, the Group's revenue growth rate was 22.0%. Such increase was primarily driven by the strong sales performance of the major businesses and the acquired CRM business. The following discussion is based on the Group's major business segments.

– CARDIOVASCULAR DEVICES SEGMENT

The Group's cardiovascular devices segment achieved revenue of US$264.6 million for the year ended 31 December 2019, representing a growth of 35.5% (excluding the foreign exchange impact) or a growth of 30.5% in US$ compared to the year ended 31 December 2018. Such increase was mainly attributable to: (i) Firehawk™ penetrating into an increasing number of hospitals in China and more overseas countries, with its global revenue achieving a 52.0% growth (excluding the foreign exchange impact) over the previous year; and (ii) Firebird2™ sales recorded a rapid growth of 24.7% (excluding the foreign exchange impact) through advanced distribution channels and the centralized bidding.

– ORTHOPEDICS DEVICES SEGMENT

US$'000	**Financial year ended**		**Percent change**	
	2019	2018	in US$	excluding the foreign exchange impact
Orthopedics devices business	**232,441**	236,279	(1.6%)	(0.2%)
– U.S.	**92,641**	99,673	(7.1%)	(7.1%)
– Europe, Middle East and Africa	**55,672**	60,122	(7.4%)	(3.3%)
– Japan	**35,127**	34,494	1.8%	0.9%
– PRC	**26,462**	17,838	48.3%	57.1%
– Others	**22,539**	24,152	(6.7%)	(6.6%)

Orthopedic devices segment achieved revenue of US$232.4 million for the year ended 31 December 2019, representing a slight decrease of 0.2% (excluding the foreign exchange impact) or 1.6% in US$ compared to the year ended 31 December 2018. Such revenue decrease was mainly because: (i) revenue in the US decreased by 7.1%, which was mainly due to the loss of a major distributor in 2018; (ii) revenue in Japan increased by 0.9% excluding the foreign exchange impact or 1.8% in US$, which was attributable to positive momentum from the Japan market driven by a focus on sales execution and customer development; (iii) revenue in Europe, the Middle East and Africa market decreased by 3.3% excluding the foreign exchange impact or 7.4% in US$ mainly due to the impact of price erosion; (iv) revenue in the PRC market increased by 57.1% excluding the foreign exchange impact or 48.3% in US$, which was attributable to the greater market recogition from surgeons for the Medial-Pivot Knee and SuperPATH™, and market penetration to several white spaces, leading to a significant increase in sales volume; and (v) sales in other markets recorded a decrease of 6.6% excluding the foreign exchange impact or 6.7% in US$, mainly due to the decrease of sales in Australia.

CRM BUSINESS

US$'000	Financial year ended		Percent change	
	2019	2018	in US$	Excluding the foreign exchange impact
CRM Business	**209,025**	158,376	32.0%	36.9%
– US	**2,878**	2,036	41.4%	41.4%
– Europe, Middle East and Africa	**183,706**	129,446	41.9%	46.9%
– Japan	**2,707**	17,949	(84.9%)	(83.1%)
– PRC	**7,967**	5,683	40.2%	42.5%
– Others	**11,767**	3,263	260.6%	199.7%

CRM business was acquired by the Group from LivaNova, and the acquisition was completed on 30 April 2018. Following completion of such acquisition, the financial results of the CRM business has been consolidated into the financial statement of the Group. CRM business recorded revenue of US$209.0 million for the year ended 31 December 2019, representing an increase of 36.9% excluding the foreign exchange impact or 32.0% in US$ over the year ended 31 December 2018. Such increase was mainly attributable to the fact that the revenue recorded for this segment for the year ended 31 December 2018 only includes the revenue for the acquired business for the period from 30 April 2018 to 31 December 2018 and the revenue of the previous pacemaker business for the year ended 31 December 2018. Revenue in the Japan market decreased by 83.1% excluding the foreign exchange impact or 84.9% in US$, which was mainly due to the impact of the strategic transformation from its original distribution model to a direct sale model.

ENDOVASCULAR DEVICES SEGMENT

The Group's endovascular devices segment achieved revenue of US$48.5 million for the year ended 31 December 2019, representing a growth of 44.5% (excluding the foreign exchange impact) or a growth of 38.7% in US$ compared with the year ended 31 December 2018. Such increase was mainly attributable to: (i) positive market recognition and enhanced competitiveness of the Group's endovascular products in aortic aneurysm and endovascular treatment market attributable from the newly launched product Castor™, the world's first thoracic branch stent-graft system; (ii) the market share of Hercules™ products was further expanded with the support of high market recognition; and (iii) in response to government guideline, cultivating markets in second-and third-tier cities through effective promotion mechanisms.

NEUROVASCULAR DEVICES SEGMENT

The Group's neurovascular devices segment recorded revenue of US$27.6 million for the year ended 31 December 2019, representing a growth of 55.6% (excluding the foreign exchange impact) or a growth of 49.9% in US$ compared to the year ended 31 December 2018. Such increase was mainly attributable to: (i) positive market recognition for newly launched Tubridge™, the first flow diverting stent approved for product launch in China; (ii) the rapid growth of 31.7% excluding the foreign exchange impact in APOLLO™ driven by its greater market recognition; and (iii) rapid growth of an agent product, neurovascular guide wire ASAHI.

SURGICAL DEVICES SEGMENT

The Group's surgical devices segment recorded revenue of US$4.7 million for the year ended 31 December 2019, representing a decline of 17.2% (excluding the foreign exchange impact) or a decline of 20.8% in US$ as compared to the year ended 31 December 2018. Such decrease was mainly attributable to the temporary suspension of production of certain production lines. The cause of suspension of production was eliminated in May 2019 and the production of the segment of surgical management devices was resumed.

HEART VALVE BUSINESS SEGMENT

The Group's heart valve business segment recorded revenue of US$3.1 million for the year ended 31 December 2019. The VitaFlow™ Valve System was approved for launch in 2019 and quickly gained market share with positive market recognition.

OTHER BUSINESS SEGMENT

The Group's other business segment recorded revenue of US$3.4 million for the year ended 31 December 2019, representing a decrease of 73.2% excluding the foreign exchange impact or a decrease of 73.0% in US$ compared to the year ended 31 December 2018. The other business segment did not meet the quantitative thresholds for determining reportable segments. For the year ended 31 December 2019, revenue of the other business segment is mainly attributable to electrophysiology devices business. MP EP was restructured in 2019 whereby the Group ceased to control MP EP and therefore it became an equity-accounted investee of the Group. As a result, the revenue of this segment disclosed herein for the year ended 31 December 2019 only accrued revenue from MP EP for the period from 1 January 2019 to the date of loss of control.

COST OF SALES

For the year ended 31 December 2019, the cost of sales of the Group was US$229.1 million, representing an increase of 14.8% as compared to US$199.5 million for the year ended 31 December 2018. Such increase was mainly attributable to: (i) increased sales volume of the major segments; and (ii) the acquisition of the CRM business was completed in April 2018, and its cost of sales was fully included in the Group's consolidated financial statements for the year ended 31 December 2019, and there were four additional months of cost of sales included as compared to the year ended 31 December 2018.

GROSS PROFIT AND GROSS PROFIT MARGIN

As a result of the foregoing factors, the gross profit of the Group increased by 20.1% from US$470.0 million for the year ended 31 December 2018 to US$564.4 million for the year ended 31 December 2019. Gross profit margin is calculated as gross profit divided by revenue. The gross profit margin of the Group increased from 70.2% for the year ended 31 December 2018 to 71.1% for the year ended 31 December 2019, mainly due to the optimisation of the product sales mix.

OTHER NET INCOME

Other net income increased by 35.3% from US$13.8 million for the year ended 31 December 2018 to US$18.7 million for the year ended 31 December 2019. The increase was mainly attributable to the increase in government grant.

RESEARCH AND DEVELOPMENT COSTS

Research and development costs increased by 44.5% from US$104.8 million for the year ended 31 December 2018 to US$151.5 million for the year ended 31 December 2019. Such increase was mainly attributable to: (i) the acquisition of the CRM business. Its research and development costs were fully included in the Group's consolidated financial statements for the year ended 31 December 2019, and there were four additional months of research and development costs included as compared to the year ended 31 December 2018; and (ii) increased investments in the on-going R&D projects and the newly kicked off R&D projects.

DISTRIBUTION COSTS

Distribution costs increased by 26.4% from US$217.8 million for the year ended 31 December 2018 to US$275.3 million for the year ended 31 December 2019. Such increase was mainly attributable to: (i) the acquisition of the CRM business. Its distribution costs were fully included in the Group's consolidated financial statements for the year ended 31 December 2019, and there were four additional months of distribution costs included as compared to the year ended 31 December 2018; (ii) increase in staff cost; and (iii) increase in sales promotion.

ADMINISTRATIVE EXPENSES

Administrative expenses increased by 24.7% from US$95.7 million for the year ended 31 December 2018 to US$119.3 million for the year ended 31 December 2019. Such increase was mainly attributable to: (i) the acquisition of the CRM business. Its administrative expenses were fully included in the Group's consolidated financial statements for the year ended 31 December 2019, and there were four additional months of administrative expenses included as compared to the year ended 31 December 2018; and (ii) increase in staff cost.

OTHER OPERATING COSTS

The Group's operating costs decreased by 36.3% from US$13.4 million for the year ended 31 December 2018 to US$8.5 million for the year ended 31 December 2019. Such decrease was mainly attributable to: (i) decrease in professional fees relating to the acquisition of the CRM business for the year ended 31 December 2019; and (ii) decrease of impairment loss of intangible assets.

FINANCE COSTS

The Group's finance costs increased from US$21.0 million for the year ended 31 December 2018 to US$22.7 million for the year ended 31 December 2019. The increase was mainly attributable to the increase in interest-bearing bank borrowings and the impact of adoption of HKFRS 16, Lease from 1 January 2019.

GAIN ON DISPOSAL OF SUBSIDIARIES

In February 2019, MP EP together with its original shareholders entered into a capital increase and share transfer agreement and a shareholder agreement with Jiaxing Huajie, pursuant to which, Jiaxing Huajie agreed to (i) subscribe for 16,477,942 newly issued shares of MP EP at a cash consideration of RMB200.0 million; and (ii) acquire 18,362,194 shares of MP EP from the Group at a cash consideration of RMB222.9 million. The transaction was accounted for as a disposal of MP EP with a gain of US$63.1 million recognised in profit or loss for the year ended 31 December 2019.

INCOME TAX

The Group's income tax increased from US$14.5 million for the year ended 31 December 2018 to US$34.2 million for the year ended 31 December 2019. Such increase was mainly attributable to: (i) the increase in profit before tax of the PRC subsidiaries; (ii) estimated tax expenses in relation to the disposal of partial equity interests in MP EP; and (iii) tax expenses on the reorganisation of shareholding in the heart valve business.

CAPITAL MANAGEMENT

The primary goal of the Group's capital management is to maintain the Group's stability and growth, safeguard its normal operations and maximize shareholders' value. The Group reviews and manages its capital structure on a regular basis, and makes timely adjustments to it in light of changes in economic conditions. To maintain or realign our capital structure, the Group may raise capital by way of bank loans or issuance of equity or convertible bonds.

LIQUIDITY AND FINANCIAL RESOURCES

As at 31 December 2019, the Group had cash and cash equivalents of US$280.1 million, as compared to US$130.1 million as at 31 December 2018. Such increase was mainly attributable to the separate listing of MP Endo on the science and technology innovation board and the Series C financing of MP CardioFlow Cayman, both of which are subsidiaries of the Company. The Board's approach to manage liquidity of the Group is to ensure sufficient liquidity at any time to meet its matured liabilities to avoid any unacceptable losses or damage to the Group's reputation.

BORROWING AND GEARING RATIO

Total borrowings of the Group, including interest-bearing borrowings and convertible bonds, as at 31 December 2019 were US$403.3 million, representing an increase of US$74.2 million as compared to US$329.1 million as at 31 December 2018. Such increase was driven by the working capital invested in the CRM business. As at 31 December 2019, the gearing ratio (calculated as total bank borrowings and convertible bonds divided by total equity) of the Group decreased to 61.7%, while that as at 31 December 2018 was 62.2%.

NET CURRENT ASSETS

The Group's net current assets as at 31 December 2019 were US$309.2 million, as compared to US$114.3 million as at 31 December 2018. Such increase was mainly attributable to the separate listing of MP Endo on the science and technology innovation board of the Shanghai Stock Exchange and the Series C financing of MP CardioFlow Cayman, both of which are subsidiaries of the Company.

FOREIGN EXCHANGE EXPOSURE

The Group is exposed to currency risk primarily from sales, purchases, borrowing and lending which give rises to receivables and payables that are denominated in a foreign currency (mainly RMB, Euro and JPY). For the year ended 31 December 2019, the Group recorded a net exchange gain of US$0.2 million, as compared to a net foreign exchange gain of US$9.6 million for the year ended 31 December 2018. The Group did not have any significant hedging arrangements to manage foreign exchange risk but has been actively monitoring and overseeing its foreign exchange risk.

CAPITAL EXPENDITURE

In addition, during the year ended 31 December 2019, the Group's total capital expenditure amounted to approximately US$115.1 million, which was used in (i) construction of building; (ii) acquiring equipment and machinery and (iii) expenditures for R&D projects in development stage.

CHARGE ON ASSETS

As at 31 December 2019, the Group had pledged certain bank deposits and mortgaged its manufactory buildings and land use rights held for own use for the purpose of securing bank loans with a carrying value of US$43.8 million.

As at 31 December 2019, a bank loan amounting to US$83.8 million in connection with the acquisition of the CRM Business was secured by the equity interests of the Company's four subsidiaries, namely Shanghai MicroPort Medical (Group) Co., Ltd. ("MP Shanghai"), MicroPort International Corp. Limited, MicroPort International Corp. and MicroPort Cardiac Rhythm B.V. and guaranteed by MP Shanghai.

FUTURE INVESTMENT PLANS AND EXPECTED FUNDING

Looking forward, the Group will continue to expand its markets at home and abroad so as to tap into its internal potential, thereby maximizing shareholders' interest and creating higher value. The Group will continue to grow the business both in scale and strength through self-development, mergers and acquisitions, and other means. The Group's future business plan will be supported by a combination of financing channels to finance capital expenditures, including but not limited to internal funds and bank loans. Currently, the bank credit lines available to the Group are adequate.

PROSPECT

The continuing improvement in income and living standards and the year-by-year increase in proportion of the global ageing population are driving steady growth in global demand for medical devices. In the PRC, with the continued economic development, increased government expenditure in social medical insurance, policy benefits from medical system reform and a gradual improvement in public health awareness, the medical devices market experienced rapid growth, providing opportunities for an equally rapid development of the Group's business. Such rapid development has also attracted more multinational corporations to the market, resulting in fierce competition. The Group will further implement proactive strategies which include but are not limited to the followings, to compete in the market:

1. Strengthening our leading position in the domestic medical devices market. The Group will fully leverage on its brand recognition and sales distribution network to further expand its market shares, and strengthen and maintain its leading position in the PRC medical devices market.

2. Integration of the MicroPort brand with global operations. The Group will pursue a global brand and operational strategy based on localisation, implement an operational model of "global strategy, localised execution, diversified planning and unified positioning". The Group will effectively integrate global resources with the market to complete its global planning and introduce products to more countries and regions and benefit patients around the world.

3. Developing and improving existing products, achieving product diversification by innovation. The Group will further develop and improve the performance and manufacturing technology of existing products, foster research and development toward products of next generation. The Group will further progress on the clinical trials and obtaining approvals for new products to diversify the Group's product mix and provide a comprehensive portfolio of medical devices to patients and physicians.

4. Reforming management system. The Group will carry out management system reforms with the aims of integrating resources, streamlining processes and optimising management structures, and eventually enhancing the Group's competitiveness and risk resistance.

The outbreak of the COVID-19 since the beginning of 2020 is a challenging situation faced by the society on a global basis. The Group has been assessing the overall impact of the situation on the operation of the Group and endeavoured all efforts to manage the impact. The Group will continuously monitor the changing situations and make timely responses and adjustments as they arise.

BOARD OF DIRECTORS AND SENIOR MANAGEMENT

DIRECTORS

EXECUTIVE DIRECTOR

Dr. Zhaohua Chang (常兆華博士), is the Chairman, Executive Director and Chief Executive Officer of the Company. He has over 29 years' experience in the medical device industry, and currently also serve as a professor at School of Medical Instrument, University of Shanghai for Science and Technology. Before establishing Shanghai MicroPort Medical (Group) Co., Ltd. (上海微創醫療器械(集團)有限公司) ("MP Shanghai") in 1998, from 1996 to 1997, Dr. Chang served as Vice President of Research and Development at Endocare Inc., a NASDAQ listed medical device company based in California, U.S.. From 1990 to 1995, he served as Senior Engineer, Chief Scientist, Director of Research and Development and Vice President of Engineering at Cryomedical Sciences Inc., a medical device company in Maryland U.S.. Dr. Chang received his bachelor's degree in refrigeration engineering in 1983 and master's degree in cryogenic engineering in 1985, both from University of Shanghai for Science and Technology. In 1992, he received his doctoral degree in Biological Science from State University of New York (Binghamton). Dr. Chang has published extensively in biomedical fields and holds dozens of patents in the United States and in China.

NON-EXECUTIVE DIRECTORS

Mr. Norihiro Ashida (蘆田典裕), born in 1954, is a Non-executive Director of the Company. Mr. Ashida has served as a Director since 1 November 2006. Mr. Ashida is currently holding directorship in certain subsidiaries of the Group. Mr. Ashida is also an Advisor of Otsuka Medical Devices Co., Ltd. ("OMD") and a Director of KISCO. OMD and KISCO are subsidiaries of Otsuka Holdings Co., Ltd ("Otsuka Holdings"). Mr. Ashida had served as a Director of OMD from February 2011 to March 2019. Mr. Ashida was an Executive Operating Officer of Otsuka Holdings and the Director of its business development and planning department until 2015. Before joining Otsuka Pharmaceutical Co., Ltd. ("Otsuka Pharmaceutical") in April 2003, he was a general manager of Mizuho Corporate Bank Ltd. from 2002 to 2003. From 1999 to 2002, Mr. Ashida was a general manager of the Industrial Bank of Japan ("IBJ"), where he headed the credit department for western Japan. From 1995 to 1999, Mr. Ashida served as Vice President responsible for business development at 3iBJ Ltd., a venture capital firm formed by 3i Group plc and IBJ. From 1989 to 1995, Mr. Ashida was a Senior Vice President of IBJ (Canada). He joined IBJ in 1977 in its Tokyo branch. Mr. Ashida received his bachelor's degree in economics from the University of Tokyo in 1977.

Mr. Hiroshi Shirafuji (白藤泰司), born in 1944, is a non-executive Director of the Company. Mr. Shirafuji has served as a Director since 1 November 2006 and is also a director of certain subsidiaries of the Group. Mr. Shirafuji is the President of OMD. Prior to joining OMD in February 2011, he was an executive director responsible for pharmaceuticals marketing at Otsuka Pharmaceutical from 1997 to 1998. Mr. Shirafuji joined Otsuka Pharmaceutical in 1967. Mr. Shirafuji received his bachelor's degree in economics from Doshisha University in Kyoto in 1967. Mr. Shirafuji was also appointed as President, CEO and representative director of OMD in February 2011.

Mr. Hongliang Yu (余洪亮), born in 1974, was appointed as our Non-executive Director on 21 June 2018. Mr. Yu is currently the general manager of Zhangjiang Science & Technology Venture Capital Co., Ltd. Mr. Yu joined Shanghai Zhangjiang (Group) Co., Ltd. in November 2000, and successively served as the vice manager and executive vice manager of investment management department of Shanghai Zhangjiang (Group) Co., Ltd., vice general manager of Shanghai Zhangjiang Biotech & Pharmaceutical Base Development Co., Ltd., vice general manager of Shanghai Zhangjiang Science & Technology Venture Capital Co., Ltd. and general manager of Shanghai Putong District Small-Credit Co., Ltd. Mr. Yu graduated from East China University of Metallurgy majoring in Ferrous Metallurgy with a bachelor degree in July 1996, and graduated from University of Shanghai for Science and Technology majoring in management engineering with a master degree in April 2001. Mr. Yu holds the professional title of economist and qualification of certified public accountant.

INDEPENDENT NON-EXECUTIVE DIRECTORS

Mr. Jonathan H. Chou (周嘉鴻先生), born in 1964, was appointed as our independent non-executive Director ("INED") on 3 September 2010. Mr. Chou has more than 25 years of professional experience from various senior finance leadership positions with Fortune 500 companies as well as Asia headquartered U.S. listed companies. These companies include Honeywell International and Tyco Fire & Security (ADT) where he held the position of Asia Pacific Chief Financial Officer. More recently, Mr. Chou held the position of Chief Financial Officer of Kulicke & Soffa Industries, Inc. (NASDAQ: KLIC) ("K&S"), a USD$2 Billion market capitalization company from 2010 to 2018. K&S is a leading provider of semiconductor packaging and electronic assembly solutions supporting the global automotive, consumer, communications, computing and industrial segments. Mr. Chou holds an MBA from Duke University, Fuqua School of Business, North Carolina and a B.A. from the University at Buffalo, New York.

Dr. Guoen Liu (劉國恩博士), born in 1957, was appointed as our Independent Non-executive Director on 3 September 2010. Dr. Liu is a noted scholar in the fields of health and development economics, health reform and pharmaceutical economics. Dr. Liu currently serves as a BOYA professor of economics of Peking University, vice dean of Economics Management Department of Peking University, MOH Yangtze River Scholar professor of economics at the Peking University National School of Development, and director of the China Center for Health and Economic Research of Peking University. From 2000 to 2006, Dr. Liu was tenured associate professor of University of North Carolina at Chapel Hill. From 1994 to 2000, Dr. Liu was assistant professor of University of Southern California. Dr. Liu also serves as editor or a member of the editorial board in various periodic in the field of pharmaceutical economics. Dr. Liu received his bachelor's degree in mathematics from Southwestern University for Nationalities in 1981, his master's degree in statistics from Southwestern University of Finance and Economics in 1985, his Ph.D. in economics from the City University of New York in 1991, and post-doctoral training in health economics from Harvard University in 1994.

Mr. Chunyang Shao (邵春陽), born in 1964, was appointed as our INED on 23 September 2016. Mr. Shao is currently a partner of JunHe LLP and a member of the All China Lawyers Association and Shanghai Bar Association. Mr. Shao specializes in practice such as corporate, foreign investment, real estate, mergers and acquisitions, securities, infrastructure and project finance. From July 1988 to October 1993, Mr. Shao worked in Anhui Foreign Economy Law Office. From November 1995 to March 2002, Mr. Shao worked in the London, Hong Kong and China offices of major international law firms, including in Simmons & Simmons as PRC legal counsel and Sidley Austin as a senior PRC legal consultant. Mr. Shao joined JunHe LLP in April 2002. Mr. Shao is currently the independent director of Changjiang & Jinggong Steel Building (Group) Co., Ltd. (長江精工鋼結構(集團)股份有限公司), a company listed on Shanghai Stock Exchange (stock code: 600496). Mr. Shao received his bachelor degree in law from East China University of Political Science and Law in 1987, and was admitted to practice PRC law in 1988. From 1993 to 1994, Mr. Shao worked as visiting lawyer in Sino-Britain Young Lawyers' Exchange Program in the UK. In 2002, he received his master degree in law from East China University of Political Science and Law.

BOARD OF DIRECTORS AND SENIOR MANAGEMENT

SENIOR MANAGEMENT

The Company currently consists of three geographically distinctive operational units which are Greater China Executive Committee ("CEC"), InterContinental Orthopedics Committee ("IOC") and InterContinental CRM Committee ("ICC"). The above committees are under management of Dr. Zhaohua Chang (常兆華), Executive Director, the Founder, Chairman and CEO of the Company and MP Shanghai. Please refer to the section headed "Directors-Executive Director" above for the details of his biography.

GREATER CHINA EXECUTIVE COMMITTEE

Mr. Bo Peng (彭博), is the Chief Marketing Officer of Shanghai MicroPort Medical (Group) Co., Ltd. and the Chairperson of CEC. Prior to current position, Mr. Peng served as Senior Vice President of Domestic Sales and Marketing of the Company. Mr. Peng has over 21 years of experience in marketing and sales. Prior to joining the Company in 2001, Mr. Peng served as the Director, Vice President and Sales General Manager of Xianxing Electronics Group. Mr. Peng received his bachelor's degree in Computer Science from Changchun University of Science and Technology in 1990 and his master's degree in Business Administration from Shanghai University of Finance & Economics in 2003.

Mr. Hongbin Sun (孫洪斌), is the Chief Financial Officer of the Company, the Co-Chairperson of CEC, member of IOC and ICC. Mr. Sun has over 22 years of finance experience. Mr. Sun was the Director and General Manager of Otsuka China from 2006 to 2010. From 2004 to 2006, he served as a Financial Director of Otsuka China. From 1998 to 2003, Mr. Sun was an Assistant Manager of the Shanghai office of KPMG. Mr. Sun is a member of the Chinese Institute of Certified Public Accountants and is also a Chartered Financial Analyst. Mr. Sun received his bachelor's degree in Economics from Shanghai Jiao Tong University in 1998.

Dr. Qiyi Luo (羅七一), is the Chief Technology Officer ("CTO") of the Company and a member of CEC, IOC and ICC. Dr. Luo has over 28 years of experience in the medical device industry. Prior to joining the Company in 2003, he worked as Principal Research and Development Engineer and Senior Manufacturing/Development Engineer at Medtronic AVE in the United States and Canada from 1995 to 2002. From 1991 to 1995, he worked as Supervisor and Engineer of the angioplasty research and development team at Vas-Cath Inc., a subsidiary of C.R. Bard, Inc., in Canada. Dr. Luo, jointly with others, owns 375 patent in China, the United States, Japan and the European Union. Dr. Luo received his bachelor's degree in Applied Science from Yunnan University of Technology in 1983, his master's degree in Applied Science from Queen's University in Canada in 1990 and doctor's degree in Biomedical Engineering from University of Shanghai for Science and Technology in 2014.

Mr. Yimin Xu (徐益民), is Executive Vice President of Regulatory Affairs & Property Management of Shanghai MicroPort Medical (Group) Co., Ltd. and a member of CEC. Prior to current position, Mr. Xu has served as Vice President of Quality and Regulatory of the Company. He has over 20 years of experience in medical device industry. Prior to joining us in 2000, Mr. Xu served as project manager in Shanghai Zhangjiang Hi-Tech Development Co., Ltd. and Shanghai Zhangjiang Hi-Tech Innovation Centre, from 1995 to 2000. Mr. Xu also served as quality engineer in Nanjing No.2 Air Compressor Factory from 1988 to 1992. Mr. Xu received his master's degree in Mechanical and Electronic Engineering from Shanghai Jiao Tong University in 1995.

Dr. Chengyun Yue (樂承筠), is the First Vice President of Business Development and Project Management of MP Shanghai and a member of CEC. Prior to current position, Dr. Yue has served as Vice President of Planning and Project Management, Senior Director of Project Management Office, and Director of R&D Support of the Company. Before joining the Company, Dr. Yue worked in a Biotech company in Southern California for 7 years for developing islets transplantation product. Dr. Yue received both her bachelor's and master's degree from Nanjing University, Ph.D. in Material Science from University of Alabama, and conducted her postdoctoral research in Biomedical Engineering at the California Institute of Technology.

Mr. Yiyun Que (闕亦雲), is the First Vice President of Coronary Manufacturing and Engineering of MP Shanghai and a member of CEC. Prior to current position, Mr. Que served as Vice President of Manufacturing and Engineering of the company and has over 13 years' experience in medical device industry. Prior to joining the Company in 2006, Mr. Que served as an engineering manager in Shanghai Lenovo Electronic Co., Ltd. Mr. Que received his bachelor's degree in Industrial Engineering from Sichuan University in 2001 and his master's degree in Biomedical Engineering from University of Shanghai for Science and Technology in 2015.

INTERCONTINENTAL ORTHOPEDICS COMMITTEE

Mr. Jonathan Chen, is the Chief International Business Officer ("CIBO") of the Company, Chairperson of ICC, Co-Chairperson of IOC. Prior to current positions, he has served as the Executive Vice President of International Operations and Investor Relations of the Company. Mr. Chen's primary responsibilities include expanding the Company's International business in markets of the U.S, Europe, Asia Pacific and South America. Mr. Chen has over 22 years of experience in the medical device industry. Prior to joining the Company, Mr. Chen worked for Angiotech Pharmaceuticals, Inc. for 6 years, where he was Senior Vice President of Business Development. He led the management team to build near $300 million medical products business through various acquisitions and licensing transactions. Prior to joining Angiotech, Mr. Chen was a life sciences investment banker for Credit Suisse and Alex. Brown & Sons. He helped his clients raise in excess of $2 billion in equity and debt capital and advised on over $3 billion in Mergers & Acquisitions transactions. Mr. Chen holds a Bachelor of Arts degree in Economics and a Bachelor of Sciences degree with honors in Biological Sciences from Stanford University.

Mr. Hongbin Sun (孫洪斌), CFO of the Company, Co-Chairperson of CEC, member of IOC and member of ICC. Please refer to the above for the details of his biography.

Dr. Qiyi Luo (羅七一), CTO of the Company, and member of CEC, IOC and ICC. Please refer to the above for the details of his biography.

Mr. Todd Smith, is the Vice President of Finance of MicroPort Orthopedics Inc. and a member of IOC. Following the Company's asset purchase of Wright Medical Technology's OrthoRecon Business in January 2014, he serves as Vice President of Finance of MicroPort Orthopedics Inc. Prior to his current position, Mr. Smith had been Wright's Senior Director of Strategic and Financial Planning from 2011 to 2014; from 2001 to 2010, he served as Wright's Director and Senior Director of International Finance. Prior to joining Wright, Mr. Smith was the Vice President and Finance Controller of Vision America, Inc. and was an audit staff in the Memphis office of KPMG. He holds a Bachelor of Arts degree at Rhodes College and is a member of the American Institute of Certified Public Accountants (AICPA).

Mr. Robin Weng (翁資欣), is the China Orthopedic president of the Company and a member of IOC. Mr. Weng has almost 30 years of marketing, sales development and operation management experiences in the orthopedics (including joints, spine and trauma) industry. He has served several management roles in multi-national orthopedics and medical devices companies, where he was responsible for business development within mainland China, regions of Hong Kong, Macau and Taiwan and oversea markets and achieved significant results. He has considerable experience in corporate operation, management and development. Before joining the China Orthopedic business of the Company, Mr. Weng was responsible for Trauma and Joint Recon business and served as General Manager of Joint Business at Smith & Nephew (China) over 14 years. Mr. Weng graduated from Chung Yuan Christian University, majoring in Medical Engineering.

INTERCONTINENTAL CRM Committee

Mr. Jonathan Chen, CIBO of the Company, Co-Chairman of IOC and Chairperson of ICC. Please refer to the above for the details of his biography.

Mr. Benoît Clinchamps, is President of MicroPort CRM and Co-Chairperson of ICC. Following the Company's asset purchase of LivaNova PLC's CRM Business in May 2018, he serves as Managing President of MicroPort CRM. Mr. Benoit Clinchamps has 21 years of experience in the medical device industry and 9 years of experience in the aerospace industry. Previously, Mr. Clinchamps served as Vice-President & General Manager of CRM business, Vice-President for Product Development & Regulatory Affairs, Vice President for Quality Assurance & Regulatory Affairs, Vice Director of Plant Manager and Quality Assurance & Regulatory Affairs in LivaNova group. Prior to joining LivaNova group, Mr. Clinchamps spent 6 years at GE Healthcare and was the Director of Operations and Manufacturing in Europe where he won the 6 Sigma Champion. Before entering the healthcare and medical product industry, Mr. Clinchamps served as Project Managers in several international projects in the aerospace industry. Mr. Clinchamps holds an Engineering Degree from ICAM Lille France (Institut Catholique des Arts et Métiers). He furthermore completed a Management Course in Aerospace in ENSAE Toulouse France (Ecole Nationale Supérieure de l Aéronautique et de l Espace) and in TUM Germany (Technische Universitat München). He is a certified 6 Sigma Black Belt and also took an Executive Course at INSEAD Fontainebleau France.

Mr. Hongbin Sun (孫洪斌), CFO of the Company, Co-Chairman of CEC, member of IOC and member of ICC. Please refer to the above for the details of his biography.

Dr. Qiyi Luo (羅七一), CTO of the Company, and member of CEC, IOC and ICC. Please refer to the above for the details of his biography.

Dr. Philippe Wanstok, is Senior Vice President of Global Sales of MircroPort CRM and a member of ICC. Following the Company's asset purchase of LivaNova PLC's CRM Business in May 2018, he serves as Senior Vice President of Global Sales of MircroPort CRM since August 2018. He has over 26 years of experience in medical device industry. Most recently, he was acting as Chief Commercial Officer for CVRx. Before that, he served as the International General Manager of Cardiac Rhythm Disease Management – Commercial Operations at Medtronic, leading an international team of near 3,000 colleagues generating more than $2.4 billion of revenues in active markets of implantable devices. Dr. Wanstok participated in the establishment and development of cardiac rhythm business of Medtronic. He also worked at Guidant, where he served in a variety of management roles during which he established successful country and regional operation personnel, sales organization and distribution channels in France and Spain. After Guidant's merger with Boston Scientific, Dr. Wanstok served as Vice President of International Marketing for Boston Scientific, where he established and launched global marketing strategies. Dr. Wanstok holds a master's degree in Economics from the University of Paris-Assas and a Ph.D in Finance and International Marketing from the University of Pantheon-Sorbonne.

Mr. Paul Vodden, is Vice President of Finance of MicroPort CRM and a member of ICC. Following the Company's asset purchase of LivaNova PLC's CRM Business in May 2018, he serves as Vice President of Finance of MicroPort CRM. Mr. Vodden served as Vice Finance President in Sorin group from 2011 to 2018 where he was responsible for its CRM business and business in Europe and Japan markets. From 2003 to 2011, he took several finance management roles of Europe business in Boston Scientific. Before then, he worked in Hewlett Packard until 2003, in its branches and subsidiaries in UK and then in France, with several roles including Finance Director of commercial desktop business. Mr. Vodden has worked in PricewaterhouseCoopers in the UK, where he qualified as a Chartered Accountant with ICAEW. Mr. Vodden graduated in Business Economics and Accounting from the University of Southampton, and is a member of the ICAEW.

The Board (the "Board") of directors (the "Directors") of MicroPort Scientific Corporation (the "Company" and together with its subsidiaries, the "Group") presents this report to the shareholders of the Company (the "Shareholders") together with the audited consolidated financial statements of the Group for the year ended 31 December 2019.

PRINCIPAL ACTIVITIES

The principal activity of the Company is investment holding and the activities of its subsidiaries are set out in note 13 to the consolidated financial statements. There's no significant changes in the nature of Group's activities during the year.

FINANCIAL STATEMENTS

The financial performance of the Group for the financial year ended 31 December 2019 and the state of the Group's affairs as at that date are set out in the consolidated financial statements on pages 104 to 220 of this annual report.

BUSINESS REVIEW

OVERVIEW

In 2019, an increasingly prominent global ageing trend drove greater public demand for medical devices, and the global medical device industry commensurately grew steadily while the domestic industry maintained its rapid growth. For the year ended 31 December 2019, the Company recorded a revenue of US$793.5 million, with an increase of 18.5% from 2018. Meanwhile, the Company achieved a net profit of US$29.0 million (profit attributable to equity shareholders: US$46.3 million). We continued to diversify our product portfolio and executed our globalization strategy. We continuously innovate and subsequently commercialize the best and yet affordable therapeutic solutions to save and reshape lives.

A review of the business of the Group during the year ended 31 December 2019, which includes an analysis of the Group's performance using financial key performance indicators are set out in the section headed "Management Discussion and Analysis" on page 10 to 27 of this report. The financial risk management objectives and policies of the Group are set out in note 30 to the consolidated financial statements. An analysis of the Group's performance indicators are set out in the section headed "Financial Highlights" on page 4 of this report. The compliance with relevant laws and regulations which have significant impact on the Group is set out in this Directors' report. The reviews form part of this statement.

ENVIRONMENTAL POLICIES AND PERFORMANCE

Realizing the responsibility of protecting the environment, the Company is committed to achieve its success in business without the expense of environment, and is dedicated to maintain an environmentally friendly and sustainable operation.

The Company integrates environmental considerations into its operational strategy, ensuring that required resources are allocated to support effective implementation of the environmental management system. The functional departments of the Company regularly review the relevant laws and regulations, making sure the environmental management systems are up-to-date and in compliance with the latest standards and requirements.

A comprehensive review on the Company's environmental policies and performance during the year 2019 is provided in the "Environment, Social and Governance Report" from page 66 to page 96 of this annual report.

COMPLIANCE WITH LAWS AND REGULATIONS

The Company recognizes the importance of compliance with legal and regulatory requirements, as well as the risk of non-compliance. The Company has allocated system and staff resources to ensure ongoing compliance with applicable laws, rules and regulations including but not limited to, those laws, rules and regulations promulgated by the NMPA, the government of the Hong Kong Special Administrative Region, Food and Drug Administration, the US Commerce Department, the US Department of Justice, and such entities global counterparts in countries where MicroPort conducts business. We maintain cordial working relationships with regulators through effective communications. Throughout the year ended 31 December 2019, we have strived to conduct business in accordance with all applicable laws, rules and regulations in all material respects and there is no investigation, disciplinary proceeding or inquiry by, or order, decree, decision or judgment of any authority outstanding, or, to the best of the Company's knowledge, threatened or expected to be issued against any member of the Company or its respective assets or any person for whose acts or defaults it may be vicariously liable, and which is of a material nature.

PRINCIPAL RISKS AND UNCERTAINTIES

FINANCIAL RISKS

The Group's principal business activities are exposed to a variety of financial risks including but not limited to credit risk, interest rate risk, liquidity risk, currency risk. Details of the aforesaid key risks and risk mitigation measures are elaborated in note 30 "Financial Risk Management and Fair Values" to the financial statements of this annual report.

MARKET RISKS

The Group is also exposed to market risks brought by the government. The execution of bidding policy and other national policies and legislations may bring stress for the retails prices of our products. Ongoing decreases in the retails prices of our products or limitations on the profit margins we earn could materially and adversely affect our business, financial condition and results of operation. In addition, as our sales depend to a large extent on the level of insurance reimbursement patients receive for treatments using our products, and China has a complex medical insurance system that is currently undergoing reform, the governmental insurance coverage or reimbursement level in China for treatments using new medical devices such as vascular devices is subject to significant uncertainty and varies from region to region, therefore, the Group is exposed to the uncertainty of market share reduction due to the reasons above.

LEGAL RISKS

From time to time, the Company is subject to various pending or potential legal actions and proceedings, including those that arise in the ordinary course of our business, some of which involve claims for damages that are substantial in amount. These actions and proceedings may relate to, among other things, product liability, intellectual property, distributor, commercial, and other matters. These actions and proceedings could also result in losses, including damages, fines, or penalties, any of which could be substantial, as well as criminal charges. Although such matters are inherently unpredictable, and negative outcomes or verdicts can occur, we believe that we have significant defenses in all of them, and do not believe any of them will have a material adverse effect on our financial position. However, we could incur judgments, pay settlements, or revise our expectations regarding the outcome of any matter. Such developments, if any, could have a material adverse effect on our results of operations in the period in which applicable amounts are accrued, or on our cash flows in the period in which amounts are paid.

RELATIONSHIPS WITH KEY STAKEHOLDERS

The Group's success also depends on the support from key stakeholders which comprise employees, customers, and shareholders.

EMPLOYEES

The Company builds its success on employees' dedication and commitment. MicroPort is committed to providing as much opportunities as possible for employees' skills enhancement and career development. The Company aims at cultivating talents in a long run, encouraging employees to realise their full potential and to keep pace with growth of the Company. During the year, MicroPort has redesigned the Faculty Structure of the Innovation Institute to deliver tailor-made training for promoting professionalism among its employees at different levels.

Details of employees of the Company during the year are set out in the "Environmental, Social and Governance Report" from page 66 to page 96 of this annual report.

CUSTOMERS

The Group's principal customers are distributors, hospitals, physicians and surgeons, and patients throughout the world. We have been devoted to providing excellent customer service with the purpose of maintaining long term cooperation, enhancing product quality, increasing sales volume and improving profitability.

We have established relationships with many key opinion leaders in medical community, including physicians, researchers and hospital administrators. Through regular visits with specialists, attendance of conferences, holding physician education programs and other activities, our brand recognition are enhanced greatly.

Our Customer Service Center also collects complains from world-wide customers through our online complain system, so as to help rational settlement of medical disputes.

SHAREHOLDERS

The Company considers that effective communication with shareholders is essential for enhancing investor relations ("IR") and investor understanding of the Company's business performance and strategies. Apart from transparent and timely disclosure of corporate information in accordance with the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (The "Listing Rules"), the Company has kept effective communication with shareholders through the Company's website, Wechat platform, shareholder's hotline, and IR mailbox. Senior managements are also glad to receive shareholders' on-site visit and have one-on-one meetings with them to share the information which they are concerned and enable them to make rational investment decisions.

FUTURE BUSINESS DEVELOPMENTS

In 2020, facing the increasingly fierce competition and price pressure of global medical devices industry, we will continuously perform proactive strategies to maintain sustained development and enhance competitiveness through integrating resources, optimizing management structure, deepening globalization, intensifying innovation, expanding market, and building total solution capability, establishing intelligent information technology systems, and so on.

MAJOR CUSTOMERS AND SUPPLIERS

For the financial year ended 31 December 2019, purchases from the Group's largest supplier and the five largest suppliers in aggregate accounted for 7% and 18% respectively of the Group's cost of sales for the year. Sales to the Group's largest customer and the five largest customers in aggregate accounted for 10% and 23% respectively of the Group's total revenue for the year.

None of the Directors or any of their associates or any shareholders of the Company (which, to the best knowledge of the Directors, own more than 5% of the Company's issued share capital) had any material beneficial interest in the Group's five largest customers and suppliers.

REPORT OF THE DIRECTORS

SHARE CAPITAL

Details of movements in the share capital of the Company during the reporting period are set out in note 28 to the consolidated financial statements.

DISTRIBUTABILITY OF RESERVES

At 31 December 2019, the aggregate amount of reserves available for distribution to equity shareholders of the Company, was US$295,719,000 (2018: US$582,233,000).

GROUP FINANCIAL SUMMARY

A summary of the Group's results and assets and liabilities for the past five financial years is set out in the section Five Year's Financial Summary of this annual report.

DIRECTORS

Directors during the year ended 31 December 2019 and up to the date of this report were:

EXECUTIVE DIRECTOR

Dr. Zhaohua Chang *(Chairman)*

NON-EXECUTIVE DIRECTORS

Mr. Norihiro Ashida
Mr. Hiroshi Shirafuji
Mr. Hongliang Yu

INDEPENDENT NON-EXECUTIVE DIRECTORS

Mr. Jonathan H. Chou
Dr. Guoen Liu
Mr. Chunyang Shao

In accordance with the Company's Articles of Association, Mr. Norihiro Ashida, Mr. Hiroshi Shirafuji, Mr. Jonathan H. Chou and Dr. Guoen Liu shall retire from office as Directors at the forthcoming annual general meeting. Except for Mr. Hiroshi Shirafuji, who does not offer himself for re-election, all of the above retiring Directors, being eligible, offer themselves for re-election.

BOARD OF DIRECTORS AND SENIOR MANAGEMENT

Biographical details of the Directors and senior management of the Group are set out on pages 28 to 32 of this annual report.

DIRECTORS' SERVICE CONTRACT

None of the Directors, including those to be re-elected at the forthcoming annual general meeting, has a service contract which is not determinable by the Company within one year without the payment of compensation (other than statutory compensation).

COMPETING BUSINESS INTERESTS OF DIRECTORS

During the year ended 31 December 2019 and up to the date of this report, none of the Directors were interested in any business apart from the Company's business, which competed or was likely to compete, either directly or indirectly, with the businesses of the Company and its subsidiaries pursuant to Rule 8.10 of the Listing Rules.

EMOLUMENT POLICY

The remuneration committee is responsible for reviewing the Group's emolument policy and structure for all remuneration of the Directors and senior management of the Group, having regard to the Group's operating results, individual performance and comparable market practices.

The Company has adopted a share option scheme as an incentive for Directors and eligible employees. Details of the scheme are set out in the section headed "Share Option Scheme" below.

REMUNERATION OF DIRECTORS AND FIVE INDIVIDUALS WITH HIGHEST EMOLUMENTS

Details of the emoluments of the Directors and the five individuals with highest emoluments are set out in notes 7 and 8 to the consolidated financial statements.

PENSION SCHEME

According to relevant laws and regulations, as well as local routines, the Group's subsidiaries worldwide participate in retirement savings plans. Under these plans, the Group is required to pay the defined contribution to the plans by certain rules and up to certain maximums. The only obligation of the Group with respect to the retirement savings plans is to make required contributions under the plans. Contributions made under the retirement savings plans are charged in the statement of profit or loss as incurred.

The Company may not utilize any forfeited contributions in order to make fewer contributions than the current amounts.

INTERESTS AND SHORT POSITIONS OF THE DIRECTORS AND CHIEF EXECUTIVE IN SHARES, UNDERLYING SHARES AND DEBENTURES OF THE COMPANY AND ITS ASSOCIATED CORPORATIONS

As at 31 December 2019, interests and short positions in the shares of the Company (the "Shares"), underlying Shares and debentures of the Company or any of its associated corporations (within the meaning of Part XV of the Securities and Futures Ordinance ("SFO")) held by the Directors and chief executive of the Company which have been notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests and short positions which were taken or deemed to have under such provisions of the SFO) or have been entered in the register maintained by the Company pursuant to section 352 of the SFO, or otherwise have been notified to the Company and the Stock Exchange pursuant to the Model Code for Securities Transactions by Directors of Listed Companies (the "Model Code") as set out in Appendix 10 to the Listing Rules were as follows:

Name of Director/ Chief Executive	no. of Shares	Note	Capacity	nature of Interest	Approximate percentage of interest in the Company
Zhaohua Chang	58, 698,111	1	Beneficial owner	Long position	3.62%
Jonathan H. Chou	1,000,000	2	Beneficial owner	Long position	0.06%

Note:

(1) Zhaohua Chang is interested in the underlying Shares of the Company by virtue of the options granted to him under the share option scheme of the Company. For further details, please refer to the below section headed "Share Option Schemes".

(2) Jonathan H. Chou is interested in the underlying Shares of the Company by virtue of the options granted to him under the share option scheme of the Company. For further details, please refer to the below section headed "Share Option Schemes".

Save as disclosed above, as at 31 December 2019, none of the Directors or chief executive of the Company had any interests or short positions in the Shares, underlying Shares and debentures of the Company or any of its associated corporations (within the meaning of Part XV of the SFO) which would be required to be notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO, or which would be required, pursuant to Section 352 of the SFO, to be entered in the register referred to therein, or otherwise notified to the Company and the Stock Exchange pursuant to the Model Code.

INTERESTS AND SHORT POSITIONS OF SUBSTANTIAL SHAREHOLDERS IN SHARES AND UNDERLYING SHARES OF THE COMPANY

As at 31 December 2019, so far as is known to the Directors, the following persons (not being a Director or chief executive of the Company) had interests or short positions in the Shares or underlying Shares which would need to be disclosed to the Company under the provisions of Divisions 2 and 3 of Part XV of the SFO and recorded in the register required to be kept by the Company pursuant to section 336 of the SFO:

INTERESTS AND SHORT POSITION IN THE SHARES

Name of Substantial Shareholder	No. of Shares	Notes	Capacity	Nature of interest	Percentage of total number of Shares in issue (%)
Otsuka Holdings Co., Ltd.	382,994,120	1	Interest of controlled corporation	Long position	23.60
Otsuka Medical Devices Co., Ltd.	382,994,120	1	Beneficial owner	Long position	23.60
Maxwell Maxcare Science Foundation Limited	234,384,296	2	Interest of controlled corporation	Long position	14.44
We'Tron Capital Ltd.	234,384,296	2	Beneficial owner	Long position	14.44
Shanghai We'Tron Capital Corp.	234,384,296	2	Interest of controlled corporation	Long position	14.44
Shanghai Zhangjiang (Group) Co., Ltd.	221,748,050	3	Interest of controlled corporation	Long position	13.66
Shanghai Zhangjiang Science and Technology Investment Co.	221,748,050	3	Interest of controlled corporation	Long position	13.66
Shanghai Zhangjiang Haocheng Venture Capital Co., Ltd.	221,748,050	3	Interest of controlled corporation	Long position	13.66
Shanghai Zhangjiang Hi-Tech Park Development Co., Ltd.	221,748,050	3	Interest of controlled corporation	Long position	13.66
Shanghai Zhangjiang Science and Technology Investment (Hong Kong) Company Limited	221,748,050	3	Interest of controlled corporation	Long position	13.66
Shanghai ZJ Hi-Tech Investment Corporation	221,748,050	3	Interest of controlled corporation/ Beneficial Owner	Long position	13.66
Shanghai ZJ Holdings Limited	221,748,050	3	Interest of controlled corporation	Long position	13.66
Shanghai Zhangjiang Health Solution Holdings Limited	214,705,470	3	Beneficial Owner	Long position	13.23
CAP IV, L.L.C.	108,238,011	4	Interest of controlled corporation	Long position	6.67
	37,056,193	4	Interest of controlled corporation	Short position	2.28
CAP IV General Partner, L.P.	108,238,011	4	Interest of controlled corporation	Long position	6.67
	37,056,193	4	Interest of controlled corporation	Short position	2.28
Carlyle Asia Partners IV, L.P.	108,238,011	4	Interest of controlled corporation	Long position	6.67
	37,056,193	4	Interest of controlled corporation	Short position	2.28
CAP IV Coinvestment, L.P.	108,238,011	4	Interest of controlled corporation	Long position	6.67
	37,056,193	4	Interest of controlled corporation	Short position	2.28
Erudite Holdings Limited	108,238,011	4	Interest of controlled corporation	Long position	6.67
	37,056,193	4	Interest of controlled corporation	Short position	2.28
Grand Eternity Limited	95,949,033	5	Interest of controlled corporation	Long position	6.02
East Image Limited	95,949,033	5	Interest of controlled corporation	Long position	6.02
East Mega Limited	95,949,033	5	Interest of controlled corporation	Long position	6.02
Helix Capital Partners	95,949,033	5	Interest of controlled corporation	Long position	6.02
Starwick Investments Limited	95,949,033	5	Beneficial Owner	Long position	6.02

Notes:

(1) Otsuka Holdings Co. Ltd. holds the entire issued share capital of Otsuka Medical Devices Co., Ltd. and therefore, is deemed to be interested in the same number of Shares held by Otsuka Medical Devices Co., Ltd..

(2) Maxwell Maxcare Science Foundation Limited holds 100% interest of Shanghai We'Tron Capital Corp. which in turn is interested in 94.19% of We'Tron Capital Limited. Therefore, Maxwell Maxcare Science Foundation Limited, Shanghai We'Tron Capital Corp. and We'Tron Capital Limited are interested in the same 234,384,296 Shares held by We'Tron Capital Limited.

(3) Shanghai Zhangjiang (Group) Co., Ltd. is wholly-owned by the State-owned Assets Supervision and Administration Commission of the Shanghai Pudong New Area People's Government. Shanghai Zhangjiang (Group) Co., Ltd. holds 100% interest in Shanghai Zhangjiang Science and Technology Investment Co., which in turn holds 100% interest in Shanghai Zhangjiang Science and Technology Investment (Hong Kong) Company Limited, which in turn holds 50% interest in Shanghai ZJ Hi-Tech Investment Corporation. Shanghai Zhangjiang (Group) Co., Ltd. also holds 50.75% interest in Shanghai Zhangjiang Hi-Tech Park Development Co. Ltd., which in turn holds 100% interest in Shanghai Zhangjiang Haocheng Venture Capital Co., Ltd., which in turn holds 100% interest in Shanghai ZJ Holdings Limited, which in turn holds 50% in Shanghai ZJ Hi-Tech Investment Corporation. Shanghai ZJ Hi-Tech Investment Corporation holds 100% interest in Shanghai Zhangjiang Health Solution Holdings Limited. The interest in 221,748,050 Shares relates to the same block of Shares in long position held by the following companies:

Name of Controlled Corporation	No. of Shares	Approximate percentage of total number of Shares in issue (%)
Shanghai Zhangjiang Health Solution Holdings Limited	214,705,470	13.23
Shanghai ZJ Hi-Tech Investment Corporation	7,042,580	0.43
Total	221,748,050	13.66

(4) Erudite Holdings Limited holds the entire issued share capital of Erudite Parent Limited and Erudite Investment Limited respectively. Erudite Parent Limited and Erudite Investment Limited hold 71,181,818 Shares and 37,056,193 Shares, both in long position respectively. In addition, Erudite Investment Limited holds 37,056,193 Shares in short position. Therefore, CAP IV L.L.C., CAP IV General Partner, L.P., Carlyle Asia Partners IV, L.P., CAP IV Coinvestment, L.P. and Erudite Holdings Limited are deemed to be interested in the same 108,238,011 Shares in long position and 37,056,193 Shares in short position.

(5) Grand Eternity Limited holds 20.5% Interests of East Image Limited. East Image Limited is managed by Grand Eternity Limited, East Mega Limited and Helix Capital Partners. East Image Limited holds 92.96% interests of Starwick Investments Limited. Starwick Investments Limited holds 95,949,033 Shares in long position. Therefore, Grand Eternity Limited, East Image Limited, Helix Capital Partners and East Image Limited are interested in the same 95,949,033 Shares held by Starwick Investments Limited.

Save as disclosed above, as at 31 December 2019, the Directors of the Company were not aware of any persons (who were not Directors or chief executive of the Company) who had an interest or short position in the Shares or underlying Shares which would need to be disclosed under Divisions 2 and 3 of Part XV of the SFO, or which would be required, pursuant to Section 336 of the SFO, to be entered in the register referred to therein.

MANAGEMENT CONTRACT

During the year ended 31 December 2019, no contract concerning the management and administration of all or any substantial part of the business of the Company was entered into or existed.

DIRECTORS' INTERESTS IN TRANSACTIONS, ARRANGEMENTS AND CONTRACTS OF SIGNIFICANCE

No transactions, arrangements or contracts of significance in relation to the Group's business to which the Company or any its subsidiaries was a party and in which a director of the Company or his/her connected entity had a material interest, whether directly or indirectly, subsisted at the end of the financial year 2019 or at any time during the year ended 31 December 2019.

Save as disclosed in note 32 to the consolidated financial statements, no contract of significance was entered into between any member of the Group and a controlling shareholder of the Company or any of its subsidiaries corporations or contract of significance for the provision of services to any member of the Group by a controlling shareholder or any of its subsidiaries subsisted as at the end of the financial year 2019 or during the year ended 31 December 2019.

PERMITTED INDEMNITY PROVISION

The Company's Articles of Association provides that every Director, Auditor or other senior management of the Company shall be entitled to be indemnified out of the assets of the Company against all losses or liabilities incurred or sustained by him as a Director, Auditor or other senior management of the Company in defending any proceedings, whether civil or criminal, in which judgment is given in his favour, or in which he is acquitted. Subject to the Companies Law of the Cayman Islands, if any Director or other person shall become personally liable for the payment of any sum primarily due from the Company, the Board may execute or cause to be executed any mortgage, charge, or security over or affecting the whole or any part of the assets of the Company by way of indemnity to secure the Director or person so becoming liable as aforesaid from any loss in respect of such liability.

The Company has maintained directors' liability insurance after Listing which provides appropriate cover for the Directors of the Company.

ARRANGEMENTS TO ENABLE DIRECTORS TO ACQUIRE SHARES AND DEBENTURES

Apart from the details as disclosed under the heading "Interests and short positions of the Directors and Chief Executive in Shares, underlying Shares and debentures of the Company and its associated corporations" above, at no time during the year were rights to acquire benefits by means of the acquisition of Shares in or debentures of the Company granted to any Director or their respective spouse or children under 18 years of age, or were any such rights exercised by them; nor was the Company, its holding company, or any of its subsidiaries or fellow subsidiaries a party to any arrangement to enable the Directors, or their respective spouse or children under 18 years of age, to acquire such rights in any other body corporate.

CONNECTED TRANSACTIONS

(I) EXCLUSIVE DISTRIBUTION AGREEMENTS

On 23 January, 2017, the Company and Otsuka Holdings Co., Ltd. ("Otsuka Holdings") entered into a Distribution Framework Agreement ("Distribution Framework Agreement"), details of which were disclosed in the announcement of the Company dated 23 January 2017. According to the Distribution Framework Agreement, the Company appointed Otsuka Holdings' associates as exclusive distributors for the medical devices of the Company's subsidiaries in certain countries or region where the respective business of Otsuka Holdings and its associates covers. The Distribution Framework Agreement has a term commencing from 23 January 2017 and ending on 31 December 2019 (both days inclusive).

The transactions under the Distribution Framework Agreement were conducted via specific distribution agreements between respective members of the Group and Otsuka Holdings' associates, and were made at prices no less favourable than those of similar transactions with independent third parties in accordance with the pricing terms therein.

As Otsuka Holdings is the substantial shareholder of the Company as at the date of this report, it is the connected person of the Company as defined under the Listing Rules. Accordingly, the transactions conducted under the Distribution Framework Agreement constituted continuing connected transactions under Chapter 14A of the Listing Rules. The annual caps for the transactions under the Distribution Framework Agreement in 2017, 2018 and 2019 were US$10 million, US$11 million and US$12 million, respectively. During the year 2019, the actual transaction amount under the Distribution Framework Agreement was US$6.7 million.

(II) SERVICE FRAMEWORK AGREEMENT

On 23 January 2017, the Company and Maxwell Maxcare Science Foundation Limited ("Maxwell") entered into the Service Framework Agreement, pursuant to which Maxwell and/or its associates will provide respective members of the Group with various services, including, among others, properties rental and management, and publicity planning services. The Service Framework Agreement has a term commencing from 23 January 2017 and ending on 31 December 2019 (both days inclusive).

The transactions under the Service Framework Agreement were conducted via specific agreements between specific members of the Group and Maxwell, and were made at prices no less favorable than such prices offered by any comparable independent third party to the Group or by Maxwell and/or its associates to any comparable independent third party.

As Maxwell is the substantial shareholder of the Company as at the date of this report, it is the connected person of the Company as defined under the Listing Rules. Accordingly, the transactions conducted under the Service Framework Agreement constituted continuing connected transactions under Chapter 14A of the Listing Rules. The annual caps for the transactions under the Service Framework Agreement in 2017, 2018 and 2019 were US$2 million, US$3 million and US$4 million, respectively. During the year 2019, the actual transaction amount under the Service Framework Agreement was nil.

In the opinion of the Independent Non-executive Directors, the above transactions pursuant to the Distribution Framework Agreement and Service Framework Agreement were carried out in the ordinary and usual course of business of the Group, on normal commercial terms and were in accordance with the relevant Agreements governing them and the pricing policies of the Company, and on terms that were fair and reasonable and in the interests of the Group and the shareholders of the Company as a whole.

The Company's auditor was engaged to report on the Group's continuing connected transactions in accordance with Hong Kong Standard on Assurance Engagements 3000 "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" and with reference to Practice Note 740 "Auditor's Letter on Continuing Connected Transactions under the Hong Kong Listing Rules" issued by the Hong Kong Institute of Certified Public Accountants.

The auditor has issued unqualified letter containing their findings and conclusions in respect of the continuing connected transactions of the Group in accordance with Rule 14A.56 of the Listing Rules.

The Company's auditor has confirmed that regarding the continuing connected transactions of the Group, nothing has come to their attention that causes them to believe that:

- the disclosed continuing connected transactions have not been approved by the Board;
- for transactions involving the provision of goods or services by the Group, such transactions were not, in all material respects, in accordance with the pricing policies of the Group;
- the transactions were not entered into, in all material respects, in accordance with the relevant agreements governing such transactions; and
- the transaction amounts of the disclosed continuing connected transactions as mentioned above have exceeded the annual cap set by the Company.

Save as the aforsaid, there were no discloseable non-exempted connected transaction or non-exempted continuing connected transaction under the Listing Rules during the year ended 31 December 2019.

Save as aforesaid, none of the "Material Related Party Transactions" as disclosed in Note 32 to the consolidated financial statements for the year ended 31 December 2019 constituted discloseable non-exempted connected transaction or non-exempted continuing connected transaction under the Listing Rules.

To the extent of the above "Material Related Party Transactions" constituted connected transactions or continuing connected transactions as defined in the Listing Rules, the company had complied with the relevant requirements under Chapter 14A of the Listing Rules during the year ended 31 December 2019.

PURCHASE, SALE OR REDEMPTION OF THE COMPANY'S LISTED SECURITIES

Save for the 19,426,000 Shares of the Company purchased by the trustee of the share award scheme at cash consideration of US$17,632,000 on the Stock Exchange, neither the Company nor any of its subsidiaries has purchased, sold or redeemed any of the Company's listed securities during the year ended 31 December 2019.

MATERIAL ACQUISITIONS AND DISPOSAL OF SUBSIDIARIES AND ASSOCIATED COMPANIES

In February 2019, MicroPort EP MedTech Co., Ltd. ("MP EP") entered into a capital increase and share transfer agreement with its original shareholders and Jiaxing Huajie I Equity Investment Limited Partners (Limited Partnership) ("Jiaxing Huajie"), an independent third party, pursuant to which, Jiaxing Huajie agreed to (i) subscribe for 16,477,942 newly issued shares of MP EP at a cash consideration of RMB200,000,000; and (ii) acquire 18,362,194 shares of MP EP from the Group at a cash consideration of RMB222,870,000. Upon completion of the disposal, the Group's equity interest in MP EP decreased from 81.93% to 45.10%. The transaction did not constitute a notifiable transaction under Chapter 14 of the Listing Rules.

In July 2019, the shares of Shanghai MicroPort Endovascular MedTech Co., Ltd. ("MP Endo") were separately listed on the science and technology innovation board of the Shanghai Stock Exchange (the "Separate Listing"). Pursuant to the Separate Listing, MP Endo issued a total of 18,000,000 A shares at an offer price of RMB46.23 per share to investors. Upon completion of the Separate Listing and the new issue, the Group's interest in MP Endo was reduced from 61.79% to 46.34%.

Reference is made to the announcements of the Company dated 22 March 2019, 27 March 2019 and 29 October 2019. In 2019, Microport CardioFlow Medtech Corporation ("MP CardioFlow Cayman") issued 11,250,000 Series C Preferred Shares to Qianyi Investment I L.P., an independent third party, for a cash consideration of US$45,000,000. Upon completion of the issue, the Group's voting right in MP CardioFlow Cayman was reduced from 64.7151% to 57.3425%.

Saving as disclosed above, during the reporting period, there was no material acquisition and disposal of subsidiaries and associated companies by the Company.

CODE OF CONDUCT REGARDING SECURITIES TRANSACTIONS BY DIRECTORS

The Company has adopted the Model Code as set out in Appendix 10 of the Listing Rules as the code of conduct regarding securities transactions by Directors. Having made specific enquiry by the Company, all Directors confirmed that they have complied with the required standard set out in the Model Code throughout the year ended 31 December 2019.

SHARE AWARD SCHEME

The Board approved and adopted a share award scheme on 26 August 2011 ("Share Award Scheme") as a means of recognising the contributions of selected employees of the Group.

SHARE OPTION SCHEMES

PRE-IPO SHARE OPTION SCHEME

In order to attract and retain eligible persons, and to provide an additional incentive for them to promote the success of the Group, the Company had adopted a share option scheme in 2004 (the "2004 Option Plan") and 2006 (the "2006 Incentive Plan") (collectively the "Pre-IPO Share Option Scheme"). The 2004 Option Plan, authorised to grant up to 10,261,030 share options, was modified when the Company agreed to assume the obligation of all outstanding and unvested share options of MicroPort Medical (Cayman) Corporation, while the 2006 Incentive Plan was modified prior to IPO by increasing the maximum aggregate number of shares which may be issued to 6,509,157.

As part of the restructuring of the Company due to the IPO, the Company approved a 10-for-1 share split, which as a result adjusted all share options issued prior to the share split by a 10-for-1 ratio accordingly. As such, total number of securities available for issue under the Pre-IPO Share Option Scheme are 102,610,300 and 65,091,570 for the 2004 Option Plan and the 2006 Incentive Plan, respectively. As at 31 December 2019, the total aggregate share options that may be granted under the Pre-IPO Share Option Scheme is 167,701,870, which represented 10.33% of the issued share capital of the Company. However, no additional options have been issued under the Pre-IPO Share Option Scheme since the listing of the Company on the Stock Exchange, and the total outstanding options that has been issued under the Pre-IPO Share Option Scheme is 3,142,000.

The administrator of the Pre-IPO Share Option Scheme may at its discretion select the employees, Directors and consultants to whom options may be granted from time to time. The exercise period for the options granted under the Pre-IPO Share Option Scheme shall be no more than ten (10) years from the date of grant, and five (5) years if the grantee who owns Shares representing more than ten percent (10%) of the voting power of all classes of Shares in the Company. The exercise price under the Pre-IPO Share Option Scheme shall be based on one hundred percent (100%) of the fair market value per Share on the date of grant, and one hundred and ten percent (110%) if the grantee owns Shares representing more than ten percent (10%) of the voting power of all classes of Shares in the Company. The administrator shall determine the provisions, terms and conditions of each grant including, but not limited to, the vesting schedule, repurchase provisions, rights of first refusal, forfeiture provisions, form of payment (cash, shares, or other consideration) upon settlement of the options, payment contingencies, and satisfaction of any performance criteria.

SHARE OPTION SCHEME

A share option scheme (the "Share Option Scheme") was approved and adopted pursuant to a written resolution of all the shareholders on 3 September 2010 (the "Adoption Date"), which will stay effective for ten years ending at 3 September 2020.

The purpose of the Share Option Scheme is to provide the Company with a means of incentivizing Directors, employees of business associates and retaining employees, and to encourage employees to work towards enhancing the value of our Company and promote the long-term growth of the Company. The Share Option Scheme will link the value of the Company with the interests of participants, enabling participants and the Company to develop together and promoting the Company's corporate culture.

The Directors of the Company may, at their discretion, invite any Directors (including Executive Directors, Non-executive Directors and Independent Non-executive Directors), employees and officers of any members of the Group and any advisors, consultants, distributors, contractors, contract manufacturers, agents, customers, business partners, joint venture business partners and service providers of any members of our Group who the Board considers, in its sole discretion, have contributed or will contribute to the Group to participate in the Share Option Scheme.

The Company shall be entitled to issue options, provided that the total number of Shares which may be allotted and issued upon exercise of all outstanding options to be granted under the Share Option Scheme of the Company shall not exceed 10% of the aggregate Shares in issue as at the date when the Shares were first listed on the Stock Exchange, which is 140,411,234 Shares. As at 31 December 2019, 134,106,811 Shares were available for issue under the Share Option Scheme, which represented 8.26% of the issued share capital. The Company may at any time refresh this 10% limit, subject to compliance with the Listing Rules, provided that the total number of Shares which may be issued upon exercise of all outstanding options granted and yet to be exercised under the Share Option Scheme and any other share option scheme of the Company does not exceed 30% of the Shares in issue from time to time.

Unless approved by shareholders of the Company, the total number of Shares issued and to be issued upon exercise of the options granted under the Share Option Scheme and any other share option scheme of the Group (including both exercised or outstanding options) to each participant in any 12-months period shall not exceed 1% of the then issued share capital of the Company.

An option may be accepted by a participant within 28 days from the date of the offer of grant of the option. The amount payable by each grantee of option to the Company on acceptance of the offer for the grant of option is US$1.00.

At the time of the grant of the options, the Company will specify the minimum period for which an option must be held before it can be exercised. The Share Option Scheme does not contain any such minimum period. The period within which the option must be exercised will be specified by the Company at the time of grant. Such period must expire no later than 10 years from the relevant date of grant (being the date on which the Board resolves to make an offer of options to the relevant grantee).

The Board will determine the price per Share upon the exercise of an option according to the terms of the Share Option Scheme, provided that it shall be no lower than the highest of: (i) the closing price of the Shares as stated in the daily quotation sheet issued by the Stock Exchange on the date of the offer of a grant; (ii) the average closing price of the Shares as stated in the daily quotation sheets issued by the Stock Exchange for the 5 business days immediately preceding the date of the offer of a grant; and (iii) the nominal value of a Share on the date of grant.

The Share Option Scheme will remain in force for a period of 10 years after the Adoption Date.

During the year, 24,132,598 share options were granted and the status of the share options granted up to 31 December 2019 is as follows:

Category of participants	As at 30 Jun 2019	Granted during the Period	Exercised during the Period	Expired during the Period	Cancelled during the Period	As at 31 Dec 2019	Date of Grant of Share Options	Vesting Period	Exercise Period	Exercise Price	Share Price of the Company as at the date of grant of share options	Share Price of the Company Immediately before the exercise date of share options (Note)
Directors												N/A
Zhaohua Chang	1,250,000	–	–	–	–	1,250,000	9 July 2010	9 July 2010 – 9 July 2014	9 July 2011 – 8 July 2020	USD0.3062	N/A	
	13,500,000	–	–	–	–	13,500,000	20 Jan 2015	20 Jan 2015 – 20 Jan 2021	20 Jan 2016 – 19 Jan 2025	HKD3.210	HKD3.170	
	14,100,000	–	–	–	–	14,100,000	30 Mar 2016	30 Mar 2016 – 30 Mar 2021	30 Mar 2017 – 29 Mar 2026	HKD3.482	HKD3.360	
	13,500,000	–	–	–	–	13,500,000	23 Jan 2017	23 Jan 2017 – 23 Jan 2022	23 Jan 2022 – 22 Jan 2027	HKD5.628	HKD5.450	
	313,636	–	–	–	–	313,636	30 Mar 2017	30 Mar 2017 – 30 Mar 2022	30 Mar 2022 – 29 Mar 2027	HKD5.798	HKD5.700	
	214,535	–	–	–	–	214,535	29 Mar 2018	29 Mar 2023	29 Mar 2023 – 28 Mar 2028	HKD8.510	HKD8.510	
	15,594,188	–	–	–	–	15,594,188	24 Dec 2018	24 Dec 2018 – 30 Dec 2022	24 Dec 2020 – 23 Dec 2028	HKD7.692	HKD7.150	
	225,752	–	–	–	–	225,752	1 Apr 2019	1 Apr 2024	1 Apr 2024 – 31 Mar 2029	HKD7.448	HKD7.270	
Jonathan H. Chou	1,000,000	–	–	–	–	1,000,000	23 Jan 2019	23 Jan 2019 – 23 Jan 2023	23 Feb 2019 – 22 Jan 2029	HKD7.730	HKD7.730	
In Aggregate	59,698,111	–	–	–	–	59,698,111						
Business associates												8.48
	500,000	–	–	–	–	500,000	14 Jun 2007	24 Sep 2010 – 24 Sep 2014	24 Sep 2011 – 23 Sep 2020	USD0.3062	N/A	
	450,000	–	150,000	–	–	300,000	1 Sep 2016	1 Sep 2016 – 1 Sep 2021	1 Sep 2017 – 31 Aug 2026	HKD4.950	HKD4.950	
	500,000	–	–	–	–	500,000	8 Oct 2018	8 Oct 2018 – 8 Oct 2023	8 Oct 2019 – 7 Oct 2028	HKD9.992	HKD9.540	
	15,000,000	–	–	–	15,000,000	–	23 Jan 2019	23 Jan 2019 – 23 Jan 2020	23 Feb 2019 – 22 Jan 2029	HKD7.730	HKD7.730	
In Aggregate	16,450,000	–	150,000	–	15,000,000	1,300,000						

Notes: 1. The share price of the Company disclosed is the weighted average closing price of the shares immediately before the exercise dates of share options during the period.

2. On 23 January 2019, 15,000,000 share options were granted under the Company's share option scheme to Real & Realistic Foundation Limited ("Real & Realistic"). Such options were subsequently cancelled in August 2019. Please refer to note 27(a) to the consolidated financial statements.

Real & Realistic is a company limited by guarantee with no share capital incorporated in Hong Kong. Real & Realistic through its subsidiaries has invested directly in certain subsidiaries and equity-accounted investees of the Company. Its subsidiaries are also the general partner of certain limited partnerships that have invested in certain subsidiaries and equity-accounted investees of the Company. Certain employees of the Group are limited partners in these limited partnerships. Certain subsidiaries of Real & Realistic are also the landlords to the Company with respect to a production facility and offices of certain subsidiaries of the Company. To the best knowledge of the Directors, Real & Realistic also holds less than 5% of the issued share capital of the Company.

Save for the relationships disclosed above, Real & Realistic is independent of the Company and its connected persons and is not related to the employees of the Group.

Category of participants	As at 30 Jun 2019	Granted during the Period	Exercised during the Period	Expired during the Period	Cancelled during the Period	As at 31 Dec 2019	Date of Grant of Share Options	Vesting Period	Exercise Period	Exercise Price	Share Price of the Company as at the date of grant of share options	Share Price of the Company Immediately before the exercise date of share options (Note)
Employees												HKD8.00
	370,000	–	–	–	–	370,000	8 Jul 2010	1 Aug 2010 – 1 Aug 2014	1 Aug 2011 – 7 Jul 2020	USD0.3062	N/A	
	22,000	–	–	–	–	22,000	8 Jul 2010	8 Jul 2010 – 8 Jul 2014	8 Jul 2011 – 7 Jul 2020	USD0.3062	N/A	
	1,150,000	–	150,000	–	–	1,000,000	9 Jul 2010	9 Jul 2010 – 9 Jul 2014	9 Jul 2011 – 8 Jul 2020	USD0.3062	N/A	
	150,000	–	150,000	–	–	–	17 Oct 2011	17 Oct 2011 – 17 Dec 2018	17 Oct 2012 – 16 Oct 2021	HKD4.790	HKD4.790	
	6,800,000	–	1,180,100	–	–	5,619,900	28 Aug 2012	28 Aug 2018 – 28 Aug 2019	28 Aug 2019 – 27 Aug 2022	HKD3.350	HKD3.350	
	500,000	–	–	–	–	500,000	7 Sep 2012	7 Sep 2012 – 7 Sep 2017	7 Sep 2013 – 6 Sep 2022	HKD3.330	HKD3.330	
	7,800,000	–	724,000	–	–	7,076,000	10 Dec 2012	10 Dec 2012 – 10 Dec 2019	10 Dec 2019 – 9 Dec 2022	HKD4.600	HKD4.600	
	250,000	–	–	–	–	250,000	28 Aug 2013	28 Aug 2013 – 28 Aug 2018	28 Aug 2014 – 27 Aug 2023	HKD4.970	HKD4.970	
	830,000	–	200,000	–	–	630,000	20 Jan 2015	20 Jan 2015 – 20 Jan 2019	20 Jan 2016 – 19 Jan 2025	HKD3.210	HKD3.170	
	2,420,000	–	120,000	–	–	2,300,000	20 Jan 2015	20 Jan 2015 – 20 Jan 2020	20 Jan 2016 – 19 Jan 2025	HKD3.210	HKD3.170	
	3,120,000	–	–	–	–	3,120,000	20 Jan 2015	20 Jan 2015 – 20 Jan 2021	20 Jan 2016 – 19 Jan 2025	HKD3.210	HKD3.170	
	100,000	–	–	–	–	100,000	30 Jun 2015	30 Jun 2015 – 30 Jun 2018	30 Jun 2016 – 29 Jun 2025	HKD3.900	HKD3.820	
	17,709,000	–	979,000	–	240,000	16,490,000	30 Mar 2016	30 Mar 2016 – 30 Mar 2021	30 Mar 2017 – 29 Mar 2026	HKD3.482	HKD3.360	
	500,000	–	200,000	–	–	300,000	23 Jan 2017	23 Jan 2017 – 23 Jan 2022	23 Jan 2018 – 22 Jan 2027	HKD5.628	HKD5.450	
	9,040,000	–	–	–	–	9,040,000	23 Jan 2017	23 Jan 2022	23 Jan 2022 – 22 Jan 2027	HKD5.628	HKD5.450	
	2,486,413	–	–	–	–	2,486,413	30 Mar 2017	30 Mar 2022	30 Mar 2022 – 29 Mar 2027	HKD5.798	HKD5.700	
	2,000,000	–	–	–	–	2,000,000	25 Aug 2017	25 Aug 2017 – 25 Aug 2022	25 Aug 2018 – 24 Aug 2027	HKD7.418	HKD7.020	
	2,236,939	–	–	–	–	2,236,939	29 Mar 2018	29 Mar 2023	29 Mar 2023 – 28 Mar 2028	HKD8.510	HKD8.510	
	15,065,782	–	–	–	125,680	14,940,102	24 Dec 2018	24 Dec 2018 – 30 Dec 2022	24 Dec 2020 – 23 Dec 2028	HKD7.692	HKD7.150	
	1,820,994	–	–	–	–	1,820,994	23 Jan 2019	23 Jan 2019 – 31 Jan 2023	23 Jan 2021 – 22 Jan 2029	HKD7.730	HKD7.730	
	250,000	–	–	–	–	250,000	23 Jan 2019	23 Jan 2019 – 23 Jan 2024	23 Jan 2020 – 22 Jan 2029	HKD7.730	HKD7.730	
	1,500,000	–	137,500	–	–	1,362,500	23 Jan 2019	23 Jan 2019 – 23 Jan 2020	23 Feb 2019 – 22 Jan 2029	HKD7.730	HKD7.730	
	3,835,852	–	–	–	–	3,835,852	1 Apr 2019	1 Apr 2024	1 Apr 2024 – 31 Mar 2029	HKD7.448	HKD7.270	
	–	500,000	–	–	–	500,000	30 Aug 2019	30 Aug 2019 – 30 Aug 2024	30 Aug 2020 – 29 Aug 2029	HKD6.95	HKD6.95	
In Aggregate	79,956,980	500,000	3,840,600	–	365,680	76,250,700						
Total	156,105,091	500,000	3,990,600	–	15,365,680	137,248,811						

EQUITY-LINKED AGREEMENTS

Other than the Share Option Scheme of the Company as disclosed above, no equity-linked agreements that will or may result in the Company issuing shares or that require the Company to enter into any agreements that will or may result in the Company issuing shares were entered into by the Company during the year ended 31 December 2019.

PUBLIC FLOAT

From information publicly available to the Company and within the knowledge of the Directors, at least 25% of the Company's total issued share capital was held by the public at all times during the financial year ended 31 December 2019 as required under the Listing Rules.

PRE-EMPTIVE RIGHTS

There are no provisions for pre-emptive rights under the Company's Articles of Association and the laws of the Cayman Islands, which would oblige the Company to offer new Shares on a pro-rata basis to existing shareholders.

DONATION

During the year ended 31 December 2019, the Company made donations of approximately US$780,000.

ANNUAL GENERAL MEETING

The Annual General Meeting ("AGM") of the Company will be held on 18 June 2020. The notice of AGM will be sent to shareholders at least 20 clear business days before the AGM.

FINAL DIVIDEND

The Directors have resolved to recommend the payment of a final dividend of HK5.3 cents (tax inclusive) per Share for the year ended 31 December 2019 to the shareholders whose names appear on the register of members of the Company on Monday, 29 June 2020 and also to recommend the offer to the shareholders the right to select as an alternative, to receive such a final dividend wholly by allotment of new Shares credited as fully paid in lieu of cash (the "Scrip Dividend Scheme"), subject to the approval of the shareholders on the payment of a final dividend at the AGM and the granting by the Stock Exchange of the listing of, and permission to deal in, the Shares to be issued pursuant thereto.

Once the relevant resolution is passed at the AGM, the proposed final dividend is expected to be paid on or about Monday, 17 August 2020. Dividend warrants and share certificates for new shares to be issued under the Scrip Dividend Scheme will be dispatched by ordinary mail on or about Monday, 17 August 2020. The Shares to be issued pursuant to the Scrip Dividend Scheme will rank pari passu in all respects with the Shares in issue on the date of allotment and issue of such Shares save that they will not be entitled to the final dividend for the year ended 31 December 2019.

On condition that the payment of the above final dividend is approved by the shareholders at the AGM, a circular containing details of the Scrip Dividend Scheme will be dispatched to the shareholders on or about Monday, 13 July 2020.

TAX ALLOWANCES

The Company is not aware of any particular tax allowances granted to the Company's shareholders due to their interests in its securities.

CLOSURE OF THE REGISTER OF MEMBERS

For determining the entitlement to attend and vote at the AGM, the register of members of the Company will be closed from Monday, 15 June 2020 to Thursday, 18 June 2020, both days inclusive, during which period no transfer of shares will be registered. In order to be eligible to attend and vote at the AGM, all transfers of shares, accompanied by the relevant share certificates, must be lodged with the Company's share registrar in Hong Kong, Computershare Hong Kong Investor Services Limited, at Shops 1712-1716, 17th Floor, Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong, for registration not later than 4:30 p.m. on Friday, 12 June 2020 (Hong Kong Time), being the last registration date.

The proposed final dividend for the year ended 31 December 2019 is subject to approval by the shareholders at the AGM. For determining the entitlement to the proposed final dividend, the register of members of the Company will be closed from Wednesday, 24 June 2020 to Monday, 29 June 2020, both days inclusive, during which period no transfer of shares will be registered. In order to qualify for the proposed final dividend, all transfers of shares, accompanied by the relevant share certificates, must be lodged with the Company's share registrar in Hong Kong, Computershare Hong Kong Investor Services Limited, at Shops 1712-1716, 17th Floor, Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong, for registration not later than Tuesday, 23 June 2020 (Hong Kong Time), being the last registration date.

CORPORATE GOVERNANCE

The Company's principal corporate governance practices are set out in the Corporate Governance Report of this annual report.

AUDITOR

KPMG has acted as auditor of the Company for the financial year ended 31 December 2019. KPMG has been the auditor of the Company for the past ten years.

KPMG shall retire at the forthcoming AGM and, being eligible, will offer themselves for re-appointment. A resolution may be proposed at the forthcoming annual general meeting to re-appoint KPMG as auditor of the Company.

MISCELLANEOUS

The Company was not aware of any shareholders who had waived or agreed to waive any dividend arrangement for the year ended 31 December 2019.

By Order of the Board
Microport Scientific Corporation
Dr. Zhaohua Chang
Chairman

Shanghai, the PRC
30 March 2020

CORPORATE GOVERNANCE REPORT

The Board is pleased to present this Corporate Governance Report in the Group's annual report for the financial year ended 31 December 2019.

The Company is committed to maintaining high standards of corporate governance and practices to protect the interests of the shareholders of the Company. The Board believes that good corporate governance is essential to the success of the Company and the enhancement of shareholders' value. The Company adopts the principles set out in the Corporate Governance Code and embedding best governance practices throughout the organization.

CORPORATE GOVERNANCE PRACTICES

The Company strives to maintain high standards of corporate governance to safeguard the interests of its shareholders and to enhance corporate value and accountability.

Throughout the year ended 31 December 2019, the Company has complied with all applicable Code Provisions as set out in the Corporate Governance Code ("CG Code") as set out in Appendix 14 of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (the "Listing Rules") with the exceptions as addressed below:

Pursuant to the Code Provision A.2.1, the roles of chairman and chief executive officer should be separate and should not be performed by the same individual. The division of responsibilities between the chairman and chief executive officer should be clearly established and set out in writing. On 21 September 2012, Dr. Zhaohua Chang ("Dr. Chang") has re-assumed the responsibility of the executive Director and was appointed the chairman of the Board. As the Board considers that Dr. Chang has in-depth knowledge of the Group's business and can make appropriate decisions promptly and efficiently, he also re-assumed the position of the chief executive officer of the Company. Nevertheless, the Board will continue to review the efficacy of the Group's corporate governance structure to assess whether the separation of the positions of chairman and chief executive officer of the Company is necessary.

Pursuant to the Code Provision A.4.1, all the non-executive directors should be appointed for a specific term, subject to re-election. Currently, all Non-executive Directors (including Independent Non-executive Directors) of the Company are not appointed for a specific term, except Mr. Chunyang Shao (as Independent Non-executive Directors) who has been appointed for a term of three years. All directors are subject to retirement by rotation at least once every three years and re-election at the annual general meeting of the Company in accordance with the provisions of the Articles of Association of the Company. Since their appointments will be reviewed when they are due for re-election, the Board considers that sufficient measures have been introduced for compliance with the CG Code. The Nomination Committee will continue to review and consider the necessity to engage the Non-executive Directors for a fixed term and make a recommendation to the Board for approval accordingly.

The Company will continue to review and enhance its corporate governance practices to ensure compliance with the CG Code.

THE BOARD/BOARD OF DIRECTORS

ROLES AND RESPONSIBILITIES

The Board reserves for its decision all major matters relating to policy matters, strategies and budgets, internal control and risk management, material transactions (in particular those that may involve conflict of interests), financial information, appointment of directors and other significant operational matters of the Company.

The day-to-day management, administration and operation of the Company are delegated to the Chief Executive Officer and the senior management. The delegated functions and work tasks are periodically reviewed. Approval has to be obtained from the Board prior to entering into any significant transactions by the abovementioned officers.

All Directors shall ensure that they carry out duties in good faith, in compliance with applicable laws and regulations, and in the interests of the Company and its shareholders at all time.

The Company has arranged for appropriate insurance cover for Directors' and senior management's liabilities in respect of legal actions against its Directors and senior management arising out of corporate activities.

BOARD COMPOSITION

The Board structure is governed by the Company's Articles of Association. The composition of the Board is well balanced with each Director having sound industry knowledge, extensive corporate and strategic planning experience and/or expertise relevant to the business of the Group.

As at 31 December 2019, the Board comprises seven members, consisting of one Executive Director, three Non-executive Directors and three Independent Non-executive Directors.

The list of all Directors, which also specifies the posts, e.g. Chairman, and chairman and member of committees, held by each Director is set out under "Corporate Information" on page 3. The Independent Non-executive Directors are expressly identified in all corporate communications pursuant to the Listing Rules. The list of Directors (by category) is also disclosed in all corporate communications issued by the Company pursuant to the Listing Rules from time to time.

The Board of the Company comprises the following Directors as of 31 December 2019:

EXECUTIVE DIRECTOR:

Dr. Zhaohua Chang *(Chairman and Chief Executive Officer)*

NON-EXECUTIVE DIRECTORS:

Mr. Norihiro Ashida
Mr. Hiroshi Shirafuji
Mr. Hongliang Yu

INDEPENDENT NON-EXECUTIVE DIRECTORS:

Mr. Jonathan H. Chou
Dr. Guoen Liu
Mr. Chunyang Shao

Save as disclosed in this annual report, there is no other relationship (including, financial, business, family or other material/relevant relationships) between the board members.

Throughout the financial year ended 31 December 2019, the Board at all time met the requirements of the Listing Rules relating to the appointment of at least three independent non-executive directors with at least one independent non-executive director possessing appropriate professional qualifications or accounting or related financial management expertise, and the Board at all times met the requirement of the Listing Rules in regard of independent non-executive directors to constitute one-third of an issuer's board.

INDEPENDENCE OF NON-EXECUTIVE DIRECTORS

The Company has received written annual confirmation from each Independent Non-executive Director of his independence pursuant to the requirements of the Listing Rules. The Company considers all Independent Non-executive Directors to be independent in accordance with the independence guidelines as set out in Rule 3.13 of the Listing Rules.

All Directors, including Non-executive Directors and Independent Non-executive Directors, have brought a wide spectrum of valuable business experience, knowledge and professionalism to the Board for its efficient and effective functioning.

APPOINTMENT AND RE-ELECTION OF DIRECTORS

Code Provision A.4.1 of the CG Code stipulates that Non-executive Directors shall be appointed for a specific term, subject to re-election, whereas Code Provision A.4.2 states that all Directors appointed to fill a casual vacancy shall be subject to election by shareholders at the first general meeting after appointment and that every Director, including those appointed for a specific term, shall be subject to retirement by rotation at least once every three years.

In accordance with the Company's Articles of Association, all Directors are subject to retirement by rotation at least once every three years.

Mr. Norihiro Ashida, Mr. Hiroshi Shirafuji ("Mr. Shirafuji), Mr. Jonathan H. Chou and Dr. Guoen Liu shall retire from offices as Directors at the forthcoming annual general meeting. Except for Mr. Shirafuji, who does not offer himself for re-election, all of the above retiring Directors, being eligible, offer themselves for re-election.

Mr. Shirafuji shall retire as a Director at the conclusion of the forthcoming annual general Meeting. Mr. Shirafuji confirmed that he has no disagreement with the Board and there is no matter which needs to be brought to the attention of shareholders of the Company in respect of his retirement.

The procedures and process of appointment, re-election and removal of directors are laid down in the Company's Articles of Association. The Nomination Committee is responsible for reviewing the Board composition, monitoring the appointment/re-election and succession planning of Directors.

INDUCTION AND CONTINUING DEVELOPMENT OF DIRECTORS

Each newly appointed Director receives formal, comprehensive and tailored induction on the first occasion of his appointment to ensure appropriate understanding of the business and operations of the Company and full awareness of directors' responsibilities and obligations under the Listing Rules and relevant statutory requirements.

Development and financing of Directors is an ongoing process, so that they can perform their duties appropriately. Directors are continually updated on the statutory and regulatory regime and the business environment to facilitate the discharge of their responsibilities. Continuing briefing and professional development for Directors will be arranged where necessary.

During the year 2019, a seminar was conducted covering the updates of new amendments of the Listing Rules, the rights and obligations of Directors, inside information, connected transactions, dealing of securities of the Company, and compliance of the Model Code for Securities Transactions by Directors of Listed Issuers (the "Model Code") set out in Appendix 10 to the Listing Rules. All Directors attended the seminar.

BOARD MEETINGS

FUNCTIONS

The Board requires Directors to devote sufficient time and attention to their duties and responsibilities. The Board normally has scheduled meetings at quarterly interval each year and meets as and when required to discuss the overall business, development strategy, operations and financial reporting of the Company.

BOARD PRACTICES AND CONDUCT OF MEETINGS

Annual meeting schedules and draft agenda of each meeting are normally made available to Directors in advance.

Notice of regular Board meetings is served to all Directors at least 14 days before the meeting. For other Board and committee meetings, reasonable notice is generally given.

Board papers together with all appropriate, complete and reliable information are sent to all Directors at least 3 days before each Board meeting or committee meeting to keep Directors apprised of the latest developments and financial position of the Company and to enable them to make informed decisions. The Board and each Director also have separate and independent access to the senior management where necessary.

The senior management attend all regular Board meetings and where necessary, other Board and committee meetings, to advise on business developments, financial and accounting matters, statutory and regulatory compliance, corporate governance and other major aspects of the Company.

The Board secretary and the company secretary are responsible for taking and keeping minutes of all Board meetings and committee meetings. Draft minutes are normally circulated to Directors for comments within a reasonable time after each meeting and final versions are open for Directors' inspection.

The Company's Articles of Association contain provisions requiring Directors to abstain from voting and not to be counted in the quorum at meetings for approving transactions in which such Directors or any of their associates have a material interest.

DIRECTORS' ATTENDANCE RECORDS

During the financial year ended 31 December 2019, four Board Meetings were held for, among other things, reviewing and approving the financial and operating performance, considering and approving the overall strategies and policies of the Company; an annual general meeting was held on 13 June 2019 for reviewing financial statements, approving re-election of directors, re-appointment of auditor, etc. In addition, an extraordinary general meeting was held on 31 July 2019 for reviewing and approving the resolution relating to the amendments to the Articles of Association of the Company.

The attendance records of each Director at the Board meetings, the annual general meeting and the extraordinary general meeting during the term of office as a Director during the year ended 31 December 2019 are set out below:

Name of Director	Attendance/Number of Board meetings held during the term of office of the Director Concerned	Attendance/Number of annual general meeting held during the term of office of the Director Concerned	Attendance/Number of extraordinary general meeting held during the term of office of the Director Concerned
Executive Director			
Dr. Zhaohua Chang	4/4	1/1	1/1
Non-executive Directors			
Mr. Norihiro Ashida	4/4	1/1	1/1
Mr. Hiroshi Shirafuji	4/4	1/1	1/1
Mr. Hongliang Yu	4/4	1/1	1/1
Independent Non-executive Directors			
Mr. Jonathan H. Chou	4/4	1/1	1/1
Dr. Guoen Liu	4/4	1/1	0/1
Mr. Chunyang Shao	4/4	1/1	1/1

Directors reviewed the documents of Board Meetings provided by the Company in advance.

MODEL CODE FOR SECURITIES TRANSACTIONS

The Company has adopted the Model Code set out in Appendix 10 to the Listing Rules as its code of conduct regarding Directors' securities transactions.

Specific enquiry has been made of all the Directors and the Directors have confirmed that they have complied with the Model Code for transactions in the Company's securities throughout the financial year ended 31 December 2019.

The Company has also established written guidelines on no less exacting terms than the Model Code (the "Employees Written Guidelines") for securities transactions by employees who are likely to be in possession of unpublished inside information of the Company.

No incident of non-compliance of the Employees Written Guidelines by the employees was noted by the Company.

DELEGATION BY THE BOARD

BOARD COMMITTEES

The Board reserves for its decision all major matters of the Company, in terms of approval and monitoring of all policy matters, overall strategies and budgets, internal control and risk management systems, material transactions (in particular those that may involve conflict of interests), financial information, appointment of directors and other significant financial and operational matters.

All Directors have full and timely access to all relevant information and the advices/services of the company secretary, with a view to ensure that Board procedures and all applicable laws and regulations are properly followed. Each Director can seek independent professional advice in appropriate circumstances at the Company's expense, upon making request to the Board.

The Board has delegated a schedule of responsibilities to the chief executive officer and senior management of the Company. These responsibilities include implementing decisions of the Board, directing and coordinating day-to-day operation and management of the Company in accordance with the management strategies and plans approved by the Board, formulating and monitoring the operating and production plans and budgets, and supervising and monitoring the control systems.

The Board has established four committees, namely, the Audit Committee, the Remuneration Committee, the Nomination Committee, the Strategic Committee, for overseeing particular aspects of the Company's affairs. All Board committees of the Company are established with defined written terms of reference which are available to shareholders upon request. Aside from the aforesaid four Board committees, the Company has also established three Executive Committees to oversee the day-to-day operations of the Group. The Independent Non-executive Directors are invited to serve on these four Board committees.

CORPORATE GOVERNANCE FUNCTIONS

The Board is responsible for performing the functions set out in Code Provision D.3.1 of the CG Code. During the year ended 31 December 2019, the Board has considered the corporate governance policies and practice and its relevant disclosures; the compliance of the Model Code and the Employees Written Guidelines; and policies and practices on compliance with legal and regulatory requirements as required under the applicable requirements of the Listing Rules.

AUDIT COMMITTEE

The Company established an audit committee in March 2010 with written terms of reference in compliance with the CG Code. The Audit Committee comprises three members:

Mr. Jonathan H. Chou *(Chairman)*
Mr. Norihiro Ashida
Mr. Chunyang Shao

Two of the members are Independent Non-executive Directors (including one Independent Non-executive Director who possesses the appropriate professional qualifications or accounting or related financial management expertise). None of the members of the Audit Committee is a former partner of the Company's existing external auditor.

The main duties of the Audit Committee include the following:

- Review of the financial information of the Group;
- Review of the relationship with and the terms of appointment of the external auditor;
- Review of the Company's financial reporting system, internal control system and risk management system.

The Audit Committee oversees the internal control system and risk management system of the Group, reports to the Board on any material issues, and makes recommendations to the Board.

During the year under review, the Audit Committee reviewed the Group's interim and annual results, interim and annual reports for the year ended 31 December 2019, the financial reporting and compliance procedures, the Company's internal control and risk management systems and processes, and the re-appointment of the external auditor.

The Audit Committee held 3 meetings during the year ended 31 December 2019. The attendance records of each member at the Audit Committee meetings during the year ended 31 December 2019 are set out below:

Name of Members concerned	**Attendance/Number of meetings held during the term of office of the Audit Committee member**
Mr. Jonathan H. Chou *(Chairman)*	3/3
Mr. Norihiro Ashida	3/3
Mr. Chunyang Shao	3/3

REMUNERATION COMMITTEE

The Company established a remuneration committee in March 2010 with written terms of reference in compliance with the CG Code.

The Remuneration Committee comprises three members:

Dr. Guoen Liu *(Chairman)*
Mr. Jonathan H. Chou
Dr. Zhaohua Chang

Majority of the members are Independent Non-executive Directors.

The Company has adopted a Share Option Scheme as incentive to Directors and eligible employees. Details of the scheme are set out in the section headed "Share Option Scheme" in the Report of the Directors.

The primary objectives of the Remuneration Committee include making recommendations to the Board on the remuneration policy and structure of the Directors and the senior management and determining the remuneration packages of all executive Directors and senior management. The Remuneration Committee is also responsible for establishing transparent procedures for developing such remuneration policy and structure to ensure that no Director or any of his associates will participate in deciding his/her own remuneration, which will be determined by reference to the performance of the individual and the Company as well as market practice and conditions.

During the year under review, the Remuneration Committee reviewed and made recommendations to the Board on the year end bonus of senior management and the related remuneration policy.

The Remuneration Committee held 5 meetings during the year ended 31 December 2019. The attendance records of each member at the Remuneration Committee meetings during the year ended 31 December 2019 are set out below:

Name of Members concerned	Attendance/Number of meetings held during the term of office of the Remuneration Committee member
Dr. Guoen Liu *(Chairman)*	5/5
Mr. Jonathan H. Chou	5/5
Dr. Zhaohua Chang	4/5

NOMINATION COMMITTEE

The Company established a nomination committee in March 2010 with written terms of reference in compliance with the CG Code.

The Nomination Committee comprises three members:

Mr. Chunyang Shao *(Chairman)*
Dr. Guoen Liu
Mr. Hongliang Yu

Majority of the members are Independent Non-executive Directors.

The principal duties of the Nomination Committee include reviewing the Board composition, making recommendations to the Board on the appointment and succession planning of Directors, and assessing the independence of the Independent Non-executive Directors.

The Company has adopted a director nomination policy. The director nomination policy contains the criteria for nomination and appointment of directors, as well as nomination process. In evaluating and selecting any candidate for directorship, the following criteria should be considered: character and integrity; qualifications including professional qualifications, skills, knowledge and experience and diversity aspects under the board diversity policy of the Company that are relevant to the Company's business and corporate strategy; any measurable objectives adopted for achieving diversity on the Board; requirement for the Board to have independent directors in accordance with the Listing Rules and whether the candidate would be considered independent with reference to the independence guidelines set out in the Listing Rules; any potential contributions the candidate can bring to the Board in terms of qualifications, skills, experience, independence and diversity; willingness and ability to devote adequate time to discharge duties as a member of the Board and/or Board committee(s) of the Company's such other perspectives that are appropriate to the Company's business and succession plan and where applicable, may be adopted and/or amended by the Board and/or the Nomination Committee from time to time for nomination of directors and succession planning.

For the appointment of new Director, the Nomination Committee and/or the Board should, upon receipt of the proposal on appointment of new director and the biographical information (or relevant details) of the candidate, evaluate such candidate based on the criteria as set out above to determine whether such candidate is qualified for directorship. If the process yields one or more desirable candidates, the Nomination Committee and/or the Board shall rank them by order of preference based on the needs of the Company and reference check of each candidate (where applicable). The Nomination Committee shall then recommend to the Board to appoint the appropriate candidate for directorship, as applicable. For any person that is nominated by a shareholder for election as a director at the general meeting of the Company, the Nomination Committee and/or the Board should evaluate such candidate based on the criteria as set out above to determine whether such candidate is qualified for directorship. Where appropriate, the Nomination Committee and/or the Board shall make recommendation to shareholders in respect of the proposed election of director at the general meeting.

For re-election of Director at a general meeting of the Company, the Nomination Committee and/or the Board shall review the overall contribution and service to the Company of the retiring director and the level of participation and performance on the Board. The Nomination Committee and/or the Board shall review and determine whether the retiring director continues to meet the criteria as set out above.

The Company has adopted a Board Diversity Policy which aims to set out the approach to achieve diversity of the Company's Board of Directors. The Company recognizes and embraces the benefits of having a diverse Board and increasing diversity at the Board level as an essential element in maintaining the Company's competitive advantage. Certain measurable objectives (including gender-related objectives) have been set in the policy. These perspectives include but not be limited to gender, age, cultural and educational background, professional experience, skills, knowledge and regional experience. The ultimate decision will be based on merit and contribution that the selected candidates will bring to the Board.

During the financial year ended 31 December 2019, a meeting of Nomination Committee was held.

Name of Members concerned	Attendance/Number of meetings held during the term of office of the Nomination Committee member
Mr. Chunyang Shao *(Chairman)*	1/1
Dr. Guoen Liu	1/1
Mr. Hongliang Yu	1/1

The members reviewed the current composition of the Board and discussed the Board restructuring to ensure that it has a balance of expertise, skills and experience appropriate for the requirements of the business of the Company.

The Nomination Committee recommended the re-appointment of the Directors standing for re-election at the AGM of the Company.

STRATEGIC COMMITTEE

The Company established a strategic committee in March 2019 with written terms of reference.

The Strategic Committee comprises four members:

Dr . Zhaohua Chang *(Chairman)*
Mr. Hiroshi Shirafuji
Mr. Jonathan H. Chou
Mr. Hongliang Yu

The primary objectives of the Strategic Committee include researching and making recommendations to the Board on long-term development strategies and rolling strategies, business, operational and financial/capital plans; reviewing and evaluating financial, marketing, operational and business performance of the Company; researching and discussing on trends in markets where the Group operates as well as reviewing and discussing on the implementation of the Group's strategies.

The Strategic Committee did not hold any meetings during the year ended 31 December 2019.

EXECUTIVE COMMITTEES

The Company consists of three distinctive operational business units: Greater China and Inter-Continental respectively managed by Greater China Executive Committee ("CEC"), Inter-Continental Orthopedics Committee ("IOC") and Inter-Continental CRM Committee ("ICC").

As of 31 December 2019, the CEC comprises six members: Mr. Bo Peng (Chairperson of CEC), Mr. Hongbin Sun (Co-chairperson of CEC), Dr. Qiyi Luo, and Mr. Yimin Xu , Dr. Chengyun Yue and Mr. Yiyun Que. The majority are heads or Vice Presidents of operational departments.

As of 31 December 2019, the IOC comprises five members: Mr. Jonathan Chen (Co-chairperson of IOC), Mr. Hongbin Sun, Dr. Qiyi Luo, Mr. Todd Smith and Mr. Robin Weng. The IOC reports to Ms. Glendy Wang, the COO of the Company.

As of 31 December 2019, the ICC comprises six members: Mr. Jonathan Chen (Chairperson of ICC), Mr. Benoit Clinchamps (Co-chairperson of ICC), Mr. Hongbin Sun, Dr. Qiyi Luo, Dr. Philippe Wanstock and Mr. Paul Vodden.

The CEC, IOC, ICC shall oversee the management of the Company relating to routine, administrative, operational and managerial matters that occur between regularly scheduled meetings of the Board and shall provide support to and be responsible to the Board. Subject to the provisions set out in the charters of CEC, IOC, ICC, the three committees basically will have and may exercise all the powers and authority granted by the Board in the management of business and affairs of MiroPort Shanghai, MicroPort Orthopedics and MicroPort CRM respectively.

During the reporting period, CEC, IOC and ICC held meetings periodically and frequently to carry out their duties.

ACCOUNTABILITY AND AUDIT

DIRECTORS' RESPONSIBILITIES FOR FINANCIAL REPORTING IN RESPECT OF FINANCIAL STATEMENTS

The Directors acknowledge their responsibilities for preparing the financial statements of the Company for the financial year ended 31 December 2019.

The Directors are responsible for overseeing the preparation of financial statements of the Company with a view to ensuring that such financial statements give a true and fair view of the state of affairs of the Group and relevant statutory and regulatory requirements and applicable accounting standards are complied with.

The Board has received from the senior management the management accounts and such accompanying explanation and information as are necessary to enable the Board to make an informed assessment for approving the financial statements.

AUDIT COMMITTEE

In addition to the duties and responsibilities set out under its terms of reference, the Audit Committee assists the Board by providing an objective non-executive review of the effectiveness and efficiency of the internal control, risk management and governance processes of the Group on an annual basis.

The senior manager of the Company's Internal Audit Department attended Audit Committee meetings at the invitation of the committee.

Minutes of each Audit Committee meeting were circulated to all members of Audit Committee for their perusal prior to confirmation of the minutes at the subsequent Audit Committee meeting. Members might request for clarifications or raise comments before the minutes were confirmed. Upon receipt of confirmation from the members at the Audit Committee meetings, the minutes were signed by the Chairman of the meeting as a correct record of the proceedings of the meeting. The minutes of the Audit Committee meetings were also submitted to the Board and for further action of the Board where appropriate.

The activities carried out by the Audit Committee during the year are set out in this Corporate Governance Report on page 56 of this annual report.

RISK MANAGEMENT AND INTERNAL CONTROLS

The Board acknowledges its responsibility for the risk management and internal control systems, reviewing their effectiveness at least once a year through Audit Committee. Such systems are designed to manage rather than eliminate the risk of failure to achieve business objectives, and can only provide reasonable and not absolute assurance against material misstatement or loss. During the year of 2019, the Audit Committee has reviewed the Group's internal control and risk management systems and processes which covered the whole financial year.

The Board has the overall responsibility for evaluating and determining the nature and extent of the risks it is willing to take in achieving the Company's strategic objectives, establishing and maintaining appropriate effective risk management and internal control systems.

The Audit Committee assists the Board in leading the management and overseeing the design, implementation, monitoring the risk management and internal control systems.

The Company has developed and adopted various risk management procedures and guidelines with defined authority for implementation by key business processes and office functions, including sales, purchasing, financial reporting, expense, fixed assets, contract management, human resources, information technology and so on.

Through interviews and questionnaires, the internal Audit Department conducted independent risk assessment regularly to identify risks that potentially impact the business of the Group and various aspects including strategic risks, financial risks, market risks, operation risks, legal risks and so on.

The management, in coordination with division/department heads, assessed the likelihood of risk occurrence, the impact, the vulnerability and the velocity. Also they provided treatment plans, and monitored the risk management progress.

The Internal Audit Department is responsible for performing independent review of the adequacy and effectiveness of the risk management and internal control systems. The Internal Audit Department examined key issues in relation to the accounting practices and all material controls, provided its findings and recommendations for improvement to auditees and reported the remediation periodically to the Audit Committee.

The Board, as supported by the Audit Committee, reviewed the risk management and internal control systems, including the financial, operational and compliance controls periodically and considered such systems are effective and adequate.

The Company has developed its disclosure policy which provides a general guide to the Company's Directors, officers, senior management and relevant employees in handling confidential information, monitoring information disclosure and responding to enquiries. Monitoring procedures have been implemented to ensure that unauthorized access and use of inside information are strictly prohibited.

The Company would appoint independent consultancy firm to conduct a thorough review of risk management and internal control systems of the Company and its subsidiaries on regular intervals basis when necessary.

EXTERNAL AUDITOR AND AUDITOR'S REMUNERATION

The statement of the external auditors of the Company about their reporting responsibilities for the financial statements is set out in the "Independent Auditor's Report" on pages 97 to 103 in this annual report.

For the financial year ended 31 December 2019, the fees for audit services and non-audit services rendered by external auditor, KPMG were as follows:

Audit Services

Auditors	Fees (US$'000)
KPMG	2,178

The audit service performed by KPMG related to the statutory audit of the Group's consolidated financial statements for the financial year ended 31 December 2019.

Non-audit Services

Auditors	Fees (US$'000)
KPMG	1,120

During the year ended 31 December 2019, non-audit services performed by KPMG are primarily in relation to tax and certain acquisitions related services.

COMPANY SECRETARY

Ms. Chang Hang Yee Florence ("Ms. Chang") was the Company Secretary of the Company during the period from 1 January, 2019 and she resigned on 27 March, 2019. Ms. Chan Wing Sze (Ms. Chan") had been appointed as the company secretary of the Company in place of Ms. Chang since 27 March, 2019 up to 15 January, 2020.

Each of Ms. Chang and Ms. Chan were nominees of the external professional service providers appointed to act as the Company Secretary of the Company in compliance with the Listing Rules.

The appointment of each of Ms. Chang and Ms. Chan as a Company Secretary of the Company during the relevant period has been nominated by Tricor Services Limited under an engagement letter made between the Company and Tricor Services Limited.

Each of Ms. Chang and Ms. Chan had attended over 15 hours' relevant seminars during the year ended 31 December 2019 pursuant to Rule 3.29 of the Listing Rules.

During the year ended 31 December 2019, the primary person at the Company with whom each of Ms. Chang and Ms. Chan had been contacting in respect of company secretarial matters was Ms. He Li, the Board Secretary of the Company, who responsible for Board procedures and communications among Directors with shareholders and management.

COMMUNICATION WITH SHAREHOLDERS AND INVESTORS/INVESTOR RELATIONS

The Company considers that effective communication with shareholders is essential for enhancing investor relations and investor understanding of the Group's business performance and strategies. The Company also recognizes the importance of transparency and timely disclosure of corporate information, which will enable shareholders and investors to make the best investment decisions.

To promote effective communication, the Company maintains a website at www.microport.com, where up-to-date information and updates on the Company's business operations and developments, financial information, corporate governance practices and other information are available for public access. Investors may write to the Company at its principal place of business in Hong Kong or China or via the Company's website for any enquiries. During the periods of interim results and annual results release, dual-languages conference calls, non-deal roadshows are held for ensuring effective and timely communication to shareholders and investors. Normally, the Company also accommodated shareholders' and investors' site visits by arranging meetings with senior managements.

The general meetings of the Company provide a forum and an important channel for communication between the Board and the shareholders. The Chairman of the Board as well as chairmen of the Nomination Committee, Remuneration Committee and Audit Committee or, in their absence, other members of the respective committees and, where applicable, the chairman of the independent Board committee, are available normally at the annual general meeting and other relevant shareholder meetings to answer questions.

SHAREHOLDER RIGHTS

To safeguard shareholder interests and rights, a separate resolution is proposed for each substantially separate issue at general meetings, including the election of individual Directors.

All resolutions put forward at general meetings will be voted on by poll pursuant to the Listing Rules and poll results will be posted on the websites of the Company and of the Stock Exchange after each general meeting pursuant to the Listing Rules.

For putting forward any enquiries to the Board of the Company, shareholders may send written enquiries to the Company. The Company will not normally deal with verbal or anonymous enquiries.

Pursuant to Article 12.3 of the Articles of Association of the Company, an extraordinary general meeting shall be convened on the written requisition of (1) any two or more members of the Company; or (2) a recognized clearing house (or its nominees(s)) deposited at the principal place of business of the Company in Hong Kong (Level 54, Hopewell Centre, 183 Queen's Road East, Hong Kong) for the attention of the Board or, in the event the Company ceases to have such a principal place of business in Hong Kong, the registered office of the Company (PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands) for the attention of the Board.

The written requisition shall specify the objects of the extraordinary general meeting and signed by the requisitionist(s), provided that such requisitionist(s) held as at the date of deposit of the written requisition not less than one-tenth of the paid up capital of the Company which carries the voting right at general meetings of the Company.

If the Board does not, within 21 days from the date of deposit of the written requisition, proceed duly to convene the extraordinary general meeting to be held within a further 21 days, the requisitionist(s) or any of them representing more than one-half of the total voting rights of all of them, may convene the extraordinary general meeting in the same manner, as nearly as possible, as that in which extraordinary general meeting may be convened by the Board, provided that any extraordinary general meeting so convened shall not be held after the expiration of 3 months from the date of deposit of the written requisition, and all reasonable expenses incurred by the requisitionist(s) as a result of the failure of the Board shall be reimbursed to them by the Company.

DIVIDEND POLICY

The Company has adopted a Dividend Policy on payment of dividends. When proposing the payment of dividend, various elements would be taken into consideration including but not limited to the Company's strategic development objectives, operation plan, profitability, cash flow and financing. The policy sets out the factors in consideration, procedures, methods and intervals of the payment of dividends with an objective to provide the shareholders with continuing, stable and reasonable returns on investment while maintaining the Company's business operation and achieving its long-term development goal.

CONTACT DETAILS

Shareholders may send their enquiries or requests as mentioned above to the following:

Address:	1601 Zhangdong Road, Zhangjiang Hi-Tech Park, Shanghai 201203, The People's Republic of China (For the attention of the Board Secretary)
Fax:	(86) (21) 50801305
Email:	ir@microport.com

For the avoidance of doubt, shareholder(s) must deposit and send the original duly signed written requisition, notice or statement, or enquiry (as the case may be) to the above address and provide their full name, contact details and identification in order to give effect thereto. Shareholders' information may be disclosed as required by law.

CONSTITUTIONAL DOCUMENTS

During the year ended 31 December 2019, the Company has convened an extraordinary general meeting on 31 July 2019 (the "EGM") to consider and approve the proposed amendments to the Company's Articles of Association, pursuant to the amendments to the provisions of applicable laws and regulations in relation to the companies incorporated in the Cayman Islands and the companies whose shares are listed on the Stock Exchange. The aforesaid amendment had been duly approved by the shareholders of the Company at the EGM. For details, please refer to the Company's circular dated 10 July 2019 for information. An up to date version of the Company's Articles of Association is also available on the websites of the Hong Kong Stock Exchange and the Company's Website.

CHANGES AFTER CLOSURE OF FINANCIAL YEAR

This report takes into account the significant changes that have occurred since the end of 2019 to the date of approval of this report.

By Order of the Board
Microport Scientific corporation
Dr. Zhaohua Chang
Chairman

Shanghai, The PRC
30 March 2020

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

ABOUT THIS REPORT

MicroPort Scientific Corporation's Environmental, Social and Governance ("ESG") Report 2019 is prepared in compliance with the ESG Reporting Guide set out in Appendix 27 to the Rules Governing the Listing of Securities (the "Listing Rules") on the Hong Kong Stock Exchange. The Board of Directors (the "Board") acknowledges its responsibility for ensuring the integrity of the ESG report and confirms that it has reviewed and approved the report.

MicroPort considers sustainability as a key requirement for its long-term development. The purpose of the report is not only to communicate our management approaches and performances to our stakeholders, but also present our ongoing sustainable development initiatives that are directed towards the society and environment in which we operate.

The reporting principles of Materiality, Quantitative, Balance, and Consistency underpin the content of this ESG report. Data in this report are analysed to account for year-on-year changes and presented in a way that allows for consistent comparison.

REPORTING PERIOD AND SCOPE

This report presents information relevant to ESG performance and related activities of MicroPort Scientific Corporation, and its subsidiaries in the PRC, the US and Europe, for the fiscal year, from 1 January 2019 to 31 December 2019.

CEO MESSAGE

Dear stakeholders,

On behalf of the Board, I am pleased to present the 2019 ESG report of MicroPort. To fulfill our mission of providing the accessible best solutions that prolong and reshape lives, we make ceaseless efforts to address sustainability issues that are material to our operations. As the leading enterprise in the innovative high-end medical devices, we aspire to lead the industry towards a sustainable future through technological and quality advancement, which are the two-wheel driving force of our business.

Quality remains at the core of the way we conduct our business. Moving towards smart manufacturing, we have strengthened our quality control through expanding the use of smart devices and informationalised systems throughout the production process. An increase in quality inspection efficiency has boosted product performance, as evident from the high approval of customers in the recent customer satisfaction survey.

Our excellence in quality management and innovation have received commendations from national authorities and international organisations also. The Shanghai operations were awarded the national quality benchmark from the municipal government and Innovation Class Award from the Asia Pacific Quality Organisation. Relying on our innovative management model and strong R&D capacity, we strive to provide high-quality products to meet customer needs and to promote technological advancement in the medical devices industry. To protect the rights of the Company as well as our stakeholders, we also strengthened the risk control on data security and anti-corruption.

We recognise our duty as a corporate citizen to preserve the environment and resources. The Company complies with all relevant environmental laws and standards and has been striving to go beyond minimum compliance where possible. Through the three-pronged approach of conducting external audits, life cycle analysis and value quantification, we continuously seek to optimise use of resources. To mitigate environmental impact, we have undertaken initiatives including recovering water from manufacturing processes and upgrading facilities to raise energy efficiency.

As an enterprise driven by innovation, a forward-looking talent management approach is essential for the Company's future. We actively support employees' career development with our talent cultivation system, providing various opportunities to enhance their professional skills and innovation potential. It is our aim to build a strong and motivated team that brings new impetus to the Company's growth.

As we develop our business and enhance our ESG reporting, we continue to gauge and respond to stakeholders' expectations. Their involvement in our sustainability journey is vital for realising our vision. I would like to express my sincere thanks to all employees, customers, business partners, shareholders, government and the wider community for their contribution and support. We look forward to closer engagements in building a brighter future for the next generation.

By Order of the Board
Dr. Zhaohua Chang
Chairman

Shanghai, 30 March, 2020

OPERATIONAL EXCELLENCE

MicroPort views product quality as the core focus in its operations. Driven by innovation and guided by customers' needs, we make ceaseless efforts on research and development and quality advancement. We aspire to lead the industry forward with our innovative quality management model.

Quality Assurance

MicroPort maintains the highest level of product quality and safety standards under a rigorous Quality Management System (QMS), ensuring its products meet customer needs, and are safe for human health. Our laboratory in Shanghai and orthopedic laboratory in Tennessee are accredited with ISO 9001[1] and ISO 13485[2] and our Shanghai laboratory is also certified by CNAS[3], in accordance with ISO/ IEC 17025[4]. In 2019, our facilities and products manufactured in China passed all 8 external audits conducted by national authorities and independent third parties, including Shanghai Municipal Food and Drug Administration and EU notified bodies. Our sites in the US and overseas also received and passed 8 external audits by third parties during the year.

Product design	Procurement	Production	Product launch
Product risk assessment • Assess health and safety risks of the entire product life-cycle, from design, production, storage and transportation	**Ensure traceability of materials** • Clear labeling and stringent sample testing	**Digital product release** • Fix all non-conformity before product release • Digitalization of inspection procedures and records	**After-launch risk control** • Regular risk control through monitoring of production data, clinical data and customer complaints

Quality Management System

Led by our quality and regulatory affairs department, the quality assurance and control processes include product risk assessment for the entire product life-cycle, from design, production, storage and transportation, in order to identify and minimise any health and safety hazards from any of these processes. To ensure traceability of materials procured and prevent contamination, Incoming Quality Control (IQC) has been strengthened through implementing a clear labelling system and stringent sample testing system. Suppliers are requested to make corrections if there are any non-conformities found.

1 ISO 9001 sets out the framework for a quality management system.

2 Requirements issued by the International Organization for Standardization for a comprehensive quality management system for the design and manufacture of medical devices.

3 China National Accreditation Service for Conformity Assessment.

4 General requirements for the competence of testing and calibration laboratories – A standard issued by International Organization for Standardization for testing and calibration of laboratories.

Our product inspection process has been digitalised so as to maintain accuracy and efficiency. Products can only be released after meeting all requirements, including passing inspections and signed off by inspectors, resolving all non-conformity issues, as well as meeting the requirements on product labelling and manual. Continuous risk control is carried out after product launch to monitor product performance. Through collecting and monitoring production data, clinical data, regulatory changes and customer complaints, we take every opportunity to upgrade our products to raise user satisfaction.

Smart upgrade on quality management

The Company continuously keeps refining its quality control procedures through a series of innovative initiatives. We use smart technologies and informationalised systems to strengthen the linkages between procurement, production and inspection, raising efficiency of quality control procedures and boosting the performance of the products.

Full implementation of SPC data analysis

The Statistical Process Control (SPC) system for coronary products has been extended to the entire product inspection process, covering inspections of incoming materials, during production and before product delivery. The system allows automatic data collection, analysis and alarm notifications, ensuring timeliness in quality control. Non-conformity is effectively prevented rather than being addressed after occurrence.

Increased efficiency on Incoming Quality Control (IQC)

To improve the quality of incoming materials, we conduct pre-procurement analysis of production capability and stability of our suppliers. This allows early detection of any non-conformity and closer engagement with suppliers for stabilizing material supplies.

Improving equipment and craftsmanship

During the year, we carried out overall investigation of production abnormalities and made improvements in equipment and craftsmanship. We take targeted approach to resolving product defects through adding more inspection points and alarm systems on specific procedures, which helps further optimize the performance of products including Firehawk™ and Firebird 2™ Coronary Stents.

Intelligentization of inspection

We continued our transformation towards smart inspection. The number of smart equipment has increased by 67% compared to that of 2018. At the same time, we upgraded the digital software control system to align with relevant regulations.

Recognition on quality management and innovation

MicroPort is recognized for its excellence and innovative ways of quality management. Shanghai MicroPort Medical (Group) Co., Ltd., our subsidiary, was awarded the Innovation Class Award by the APQO and commendations from the national authorities for adopting best practices on quality advancement and becoming the benchmark in the industry. Our enterprise brand building and management of high-end medical devices received the first prize from the Shanghai Enterprise Management Modernization Innovation Results Review Committee, acknowledging our core values of putting quality and continuous R&D at the heart of our business.

Name of Award	Awarding Organization
2018 Shanghai Municipal Quality Gold Award	Shanghai Municipal Government
2018 Shanghai Quality Benchmark	Shanghai Municipal Commission of Economy and informatization
2019 National Quality Benchmark	China Association for Quality
APQO Innovation Class Award	Asia Pacific Quality Organization (APQO)
1 First Prize, 2 Second Prizes, 1 Third Prize of the Shanghai Enterprise Management Modernization Innovation Results	Shanghai Enterprise Management Modernization Innovation Results Review Committee

MicroPort complies with all laws and regulations governing product quality and safety applicable at locations where it operates, including but not limited to Product Quality Law of the PRC, relevant requirements of the NMPA[5] and the European Union. During the reporting year, the Company complied with all relevant laws and regulations having a significant impact on the Group relating to product quality and safety issues.

CUSTOMER SATISFACTION

Feedback from customers are important for ongoing product improvement. The Company monitors customer satisfaction through regular surveys and meetings through marketing and customer services departments. The survey collects data on coronary stents implantation rate from hospitals and brand share in the market, analysing the expectations and feedback on our products and services. Around 100 customers are surveyed each year in our China operation. We have received positive feedback regarding product effectiveness and quality. Results show a high satisfaction rate of 91.4% on clinical performance of the Firebird2™ coronary stent, as well as 92.2% on overall performance of the Firehawk™ coronary stent. In the US operation, we strive to maintain excellent customer experiences. Our calls answer rate standing at 99%, exceeding our goal of 98%. We also achieved a rate of 95% for international customers in the annual customer experience survey.

Customer complaints are handled efficiently through an online system. Our customer complaints centre analyses each case and responds to complainants. Adverse events that affect patients' health are promptly reported to the authorities according to regulatory requirements. Cases that involve quality issues are investigated by the quality department before making appropriate modifications in the product. We strive to maintain smooth two-way communication with the complainants including health care professionals and patients for resolving the issues. Before closing the case, the analysis report must be approved by the customer complaints department. We conduct monthly, quarterly and yearly reviews on customer feedback analysis to evaluate the effectiveness of our product risk management and QMS.

Customer complaints handling procedure

5 National Medical Products Administration

Our quality department evaluates the necessity of the recall according to the product risk for human health. Rigorous policies and procedures are in place in assessing such risk which potentially lead to product corrections, recalls and withdrawal. In case of the need for a product recall due to customer complaints or internal detection of product risks, recall procedures are classified into three levels depending on the level of risks, with time limit specified for implementation of the recall. Recalled products are then corrected or destroyed based on the investigation results. The case is reported to the local authorities with all records kept. No cases of product recall due to product health and safety issues were recorded during the reporting year.

SUPPLY CHAIN MANAGEMENT

Ensuring the quality and safety of raw materials is vital for maintaining product quality. The Company has clearly defined requirements for supplier selection and evaluation. Suppliers are categorised by their nature and risks of the products provided, including raw materials, general materials and services suppliers, with different performance criteria applied. Suppliers providing key materials are required to be certified with ISO 9001 and ISO 13485 standards. Approved suppliers are listed in our qualified suppliers' list. Purchasing is conducted in accordance with our procurement management procedures. During the year, we maintained 87, 109 and 212 suppliers for operations in China, the US and Europe respectively.

To ensure all suppliers meet our quality and safety requirements, we conduct supplier performance reviews quarterly, through questionnaires, interviews and on-site audits. Supplier performance reports are prepared based on acceptance rate, on-time delivery rate, quality and compliance history, etc. We require corrective actions to be completed in cases where suppliers' non-conformity is found, and the effectiveness of those actions is evaluated before any further purchasing from such suppliers is permitted.

INTELLECTUAL PROPERTY RIGHTS

Our strong independent R&D and innovation efforts lay the foundation of business success and therefore we highly value intellectual property rights. In 2019, we had a total of 4,116 patents (including applications) in 28 countries and 2,085 trademarks (including applications) in 66 countries. We are committed to protecting intellectual properties of the Company and other parties, including patents, trademarks and copyrights. Use of all such properties must be in accordance with applicable laws and regulations. Any forms of infringement of intellectual property rights are forbidden. During the year, there was no reported incident of violation of intellectual property rights, patents or trademarks.

DATA SECURITY AND PRIVACY

MicroPort undertakes serious measures for protecting IT resources and data privacy of the Company and its stakeholders, including employees, business partners and customers. Our privacy policy and IT policy stipulate the principles and responsibilities on personal data protection, as well as preventive mechanisms for checking information leakage. Employees in high risk positions are required to sign confidentiality agreements. Disciplinary actions are taken against individuals who have violated the policy.

The Company takes the responsibility to ensure that no unauthorised person is able to access confidential information. We conduct information security audit periodically to monitor the effectiveness of our existing measures and raise the security level as needed. To minimise cyber risks, the network at the manufacturing area has been modified so that it is isolated from other networks. IT security system is upgraded, with focus on protecting R&D technologies. Management systems are in place to control information access to all, including visitors and in meeting rooms. We provide training to employees of all levels to raise their awareness on cybersecurity issues. During the year, the Group was not aware of any noncompliance with laws and regulations having a significant impact on the Group relating to customer privacy matters.

ADVERTISING AND LABELLING

Fair dealing and truthful advertising are essential for preserving the reputation of the Company. Throughout the marketing and sales processes, we ensure all marketing materials are based on facts, complied with relevant laws and regulations, and with correct use of trademarks and images. The materials are reviewed and approved by our legal department before distribution. Distribution of false and outdated materials is prohibited. Procedures are also established to control the printing and inspection of product labels to ensure its accuracy. During the year, the Group was not aware of any incidents of non-compliance with laws and regulations having a significant impact on the Group relating to advertising and labelling issues.

ANTI-CORRUPTION

MicroPort believes that integrity is at the core of its business. Hence, we are committed to complying with all applicable and relevant laws and regulations relating to bribery, extortion, fraud and money laundering[6], including but not limited to Criminal Law of the PRC, Law of the PRC Against Unfair Competition, United States Foreign Corrupt Practices Act, and United Kingdom Bribery Act.

To ensure ethical operations within MicroPort, the code of business conduct and ethics and the compliance manuals are established to clarify obligations and expectations for MircoPort representatives regarding proper conduct. All representatives are required to strictly adhere to provisions of the Code and the Manuals. Any violation is subject to disciplinary actions including termination of employment.

MicroPort emphasises the importance of education, reminding employees to stay vigilant about incidents of unethical behavior. MicroPort organises annual compliance training at all locations where it operates and provides courses in anti-bribery laws, business ethics and compliance, etc., targeting to groups including but not limited to directors, manufacturing employees, new hires, and distributors.

In addition to training, we promote a culture of openness, accountability, and integrity in the workplace. A speak-up policy is adopted to encourage employees and business partners to speak up, ask questions, and report suspected violations of the MicroPort Business Code of Conduct. Multiple channels such as direct reports to leadership, emails and phone calls are available for reporting alleged misconduct. All reported cases are handled confidentially. The Compliance Department also maintains continuous supervision against misconduct and reviews relevant policies to reduce the risks of bribery and corruption.

During the reporting period, the Company was not aware of any non-compliance with laws and regulations having a significant impact on the Group on bribery, extortion, fraud and money laundering, nor any legal cases regarding corrupt practices brought against the Company or the employees.

6 Details please refer to Applicable Laws and Regulations

ENVIRONMENTAL PROTECTION

We endeavour to measure, manage and minimise our environmental impacts by implementing an effective environmental management system aligned with international standards.

Environmental Management

The Company integrates environmental considerations into its operational strategy, ensuring that required resources are allocated to support effective implementation of the environmental management system. Our subsidiary MicroPort CRM in Europe, having an environmental management system certified with the ISO 14001:2015 standard, reaffirms its commitment to environmental protection through its Health, Safety and Environment (HSE) Policy, which sets out principles underpinning its approaches in managing and reducing the environmental impacts arising from its operations.

We have complied with all applicable environmental requirements[7] at all locations where we have operations. The functional departments of the Company regularly review the relevant laws and regulations, making sure the environmental management systems are up-to-date and in compliance with the latest standards and requirements. During the reporting period, we were not aware of any non-compliance of relevant laws and regulations that have a significant impact on the Company relating to air and greenhouse gas emissions, discharges into water and land and generation of hazardous and non-hazardous waste.

Resources Consumption

We strive to optimise our resources usage efficiency in operations which can lead to lower levels of resource consumption, emissions and waste generation. Through conducting various audits and analysis for our facilities, equipment and products, we scrutinise the resources consumption pattern of our production processes for the development of targeted measures to reduce and mitigate environmental impacts arising from our operations.

External Audits

We commission third party agencies to carry out energy audits at our facilities and carbon audits for our fleet of vehicles to review the patterns of energy consumption, formulate measures for conserving energy and reduce carbon footprint of our operations.

Life Cycle Analysis

In our operations in Europe, we perform life cycle analysis for our products, aiming to foster environmental inputs for upcoming devices.

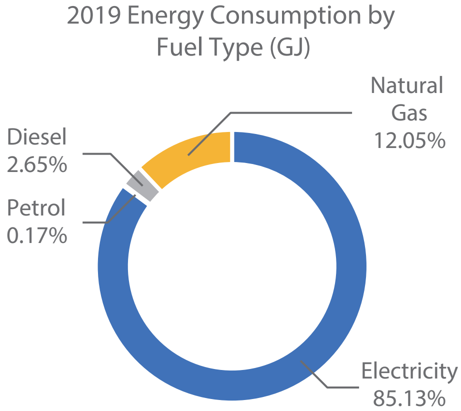
Value Quantification

We carry out valuation for resources used in our production processes, including energy and packaging materials, to quantify the value of waste disposed and thus promote maximisation of resources usage and reduction of waste generation.

7 Please refer to Applicable Laws and Regulations section for environment-related laws and regulations.

Energy

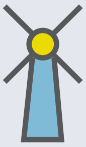
The major components of our energy consumption include direct consumption in the form of petrol, diesel and natural gas, and indirect consumption in the form of purchased electricity. During the year, the total energy consumption was 197,562 GJ, comprising 46,716,867 kWh of electricity (approximately 85% of total energy consumption), combustion of 10,782 litres of petrol, 156,385 litres of diesel and 611,571 cubic metres of natural gas. The energy consumption intensity was computed as 0.25 GJ per thousand USD revenue. The graph below shows a breakdown of our energy consumption in 2019 by fuel type:

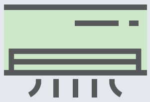


	2018	2019
Total Energy Consumption (GJ)	203,426	**197,562**
Energy Consumption Intensity (GJ/ thousand USD revenue)	0.30	**0.25**

We are committed to improving energy efficiency by integrating energy-saving considerations into relevant aspects of our operations. Measures include:


Increase the installation of LED lighting


Explore the use of renewable energy


Upgrade facilities to achieve greater reduction in electricity consumption

Optimising Energy Efficiency of our Facilities

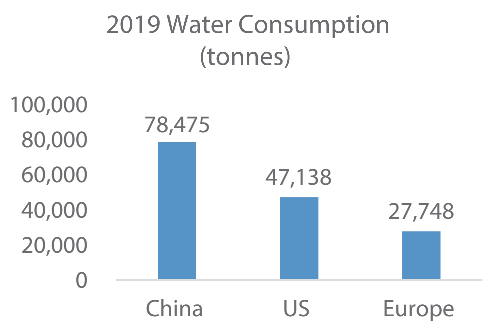
Recognising the environmental and economic values of improving energy efficiency of our facilities, MicroPort CRM commissioned an external energy audit for a facility in France. The audit showed that Heating, Ventilation and Air Conditioning (HVAC) system accounted for over 50% of the electricity consumption in the facility. By implementing measures to consistently improve energy efficiency of our facilities, consumption of electricity in MicroPort CRM has dropped by 25% against the baseline in 2011.

Water

The Group consumes water for production and daily operating purposes. To reduce water consumed in our operations, we keep track of the water consumption pattern through regular monitoring of water metres and monthly reports on consumption, to spot unusual water usage. Cases of water leakage in factories, water supply systems and other facilities are swiftly addressed. During the year, we have increased the installation of water-saving faucets to further reduce water consumption in our operations.

Green Irrigation in MicroPort CRM

To reduce tap water consumption for irrigation, MicroPort CRM has been using rainwater and water recovered from manufacturing processes for watering of the green space. By doing so, the consumption of tap water in MicroPort CRM has declined 50% against the baseline in 2011.



Packaging Materials

The Group consumes plastic bags, cartons, trays and lidstock and cardboard boxes for finished products packaging. Without compromising our product quality, we recycle packaging materials used in production processes to the greatest possible extent. Besides, the use of plastic wrap is also restricted in our operations in Europe.

During the year, the Group consumed 3.36 tonnes of plastic bags, 122.04 tonnes of cartons, 14 tonnes of trays and lidstock, and 3.85 tonnes of paper.

Emission Control

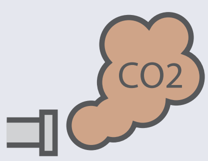
GHG Emissions

Our greenhouse gas (GHG) emissions include emissions generated by fuel combustion, indirect emissions from purchased electricity and heating. In 2019, our total GHG emissions amounted to 27,291 tCO_2e, of these Scope 1 and Scope 2 emissions accounted for 2,294 tCO_2e and 24,997 tCO_2e, respectively. Emission intensity was computed as 0.034 tCO_2e per thousand USD revenue.

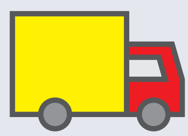
	2018	**2019**
Total GHG Emissions (tCO_2e)	26,284	**27,291**
Scope 1 (tCO_2e)	2,273	**2,294**
Scope 2 (tCO_2e)	24,001	**24,997**
GHG Emission Intensity (tCO_2e/ thousand USD revenue)	0.039	**0.034**

Measures taken for reducing GHG emissions from our operations include:

Enhance energy efficiency of the facilities



Implement a vehicle policy which sets out carbon dioxide emission limits



Renew or replace obsolete vehicles

Use greener products for cleaning activities

In addition, we have been exploring ways to reduce the overall GHG emissions, including Scope 3 emissions that arise from sources we do not own or control. Our subsidiary MicroPort CRM conducts comprehensive carbon audits to keep track of the carbon footprint of our Europe operations, and has adopted an approach advocated by Association Bilan Carbone, a French agency for go-green actions, to reduce Scope 3 GHG emissions associated with employee commuting and business trips. We also prioritise local suppliers over overseas suppliers to reduce emissions associated with logistics and transportation.

Air Emissions

Air emissions from our operations mainly comprise mobile emissions from vehicles and stationary source emissions from production processes such as pickling, electropolishing, purification of chemical reagents and drug spraying. Based on usage, the Group's vehicles generated 2.61 kg, 1,038.48 kg and 88.94 kg of sulphur dioxides (SOx), nitrogen oxides (NOx) and particulate matter (PM) respectively during the year.

	2018	**2019**
SOx (kg)	3.68	**2.61**
NOx (kg)	1,096	**1,038.48**
PM (kg)	94.29	**88.94**

Volatile organic compounds (VOCs) generated from our operations in US and Europe also contribute to air pollution and we strive to reduce the VOC level to the minimal. The Company has installed an activated carbon absorption device, which has effectively reduced the VOCs generated from our preclinical medical research centre to a standard level. In 2019, VOCs generated from our operations amounted to 3.36 tonnes. Other emissions from our daily operations include fumes in canteens. Exhaust gases from stationery sources are purified by passing through a fume purification device, which filters pollutants from exhaust gas through electrostatic adsorption.

Noise

Noise generated by our wind turbines, air compressors and other equipment used in our operations may cause nuisance to the surrounding environment. In our Shanghai sites, we have installed a muffler device on air compressors and have built soundproof panels around the air compressors to lower the noise level. The noise level of our operations in Shanghai is assured by third-party agencies to ensure compliance with relevant national requirements such as the Law of the PRC on the Prevention and Control of Pollution from Environmental Noise.

Waste and Sewage Management

The Company recognises its responsibility as a medical devices manufacturer to ensure proper collection and handling of different hazardous and non-hazardous waste throughout the production processes. We have established policies to regulate collection of waste and maintain transparency in handling and disposal process for each type of waste. Whenever there is a new type of waste generated by a new equipment or production process, relevant departments of the Company carry out analysis to determine the disposal method of the new waste type, avoiding contamination of non-hazardous waste streams from hazardous waste.

Hazardous waste generated from our operations includes medical waste and chemical wastes. We store hazardous waste separately from non-hazardous waste in a waste repository and appoint qualified third-party agents for proper and legal disposal. In our operations in the US, waste handling records are kept and submitted to the government.

Non-hazardous municipal solid waste is collected and handled daily by the sanitation department of the Company. To reduce waste generation, in addition to promoting recycling within our operations, we reduce our paper usage by digitalising our communications with internal and external stakeholders, such as making transactions online.

In 2019, our operations generated approximately 77 tonnes of hazardous waste and 155 tonnes of non-hazardous waste, 50% of the non-hazardous waste generated was recycled.

	2018	**2019**
Hazardous Waste (tonnes)	59	**77**
Non-hazardous Waste (recycled, tonnes)	76	**78**
Non-hazardous Waste (non-recycled, tonnes)	103	**77**

In case of sewage management, we ensure that the sewage generated from our operations is strictly monitored and assured by third-parties for legal discharge. Prior to discharging to municipal sewers, sewage is subjected to treatment until the pollutant concentration reaches an acceptable level bound by local requirements such as the Integrated Wastewater Discharge Standard in Shanghai. In our US operations, a Process Water Neutralisation System is in place for maintaining the permitted level of pH in sewage.

Emergency Management

We strive to prevent any fire incidents or other unexpected disturbances that can cause damage to the environment. We regularly inspect firefighting equipment and power distribution facilities to ensure that they are well-maintained. In case of incidents happening, including fire emergency and natural disasters, we strictly follow the emergency plan for efficient and effective emergency management.

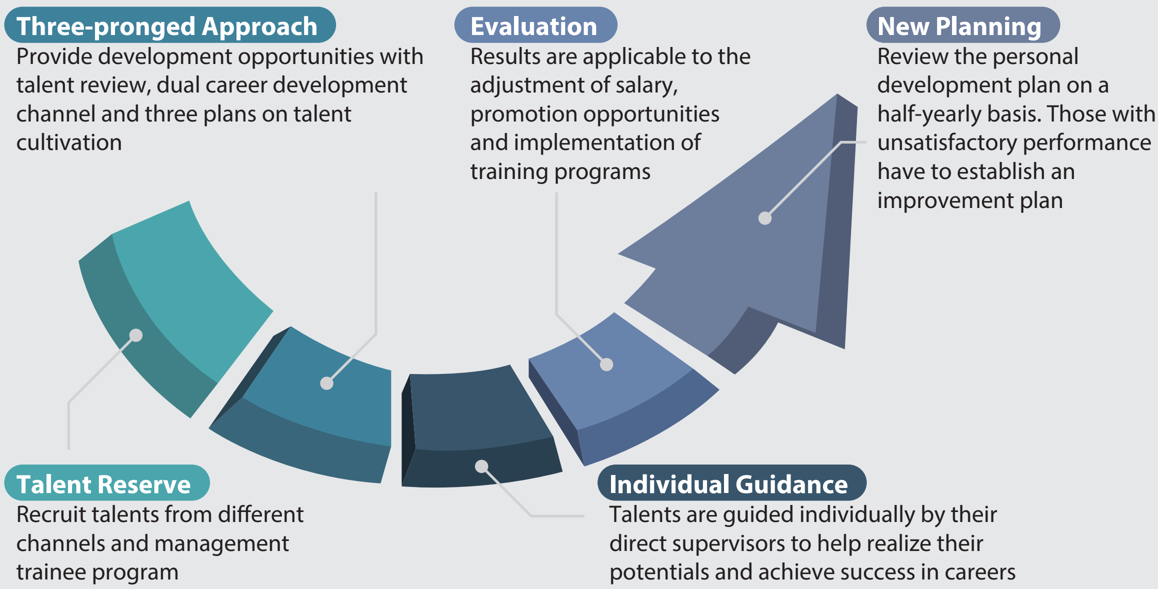
EMPLOYEE CARE

We see employees as our most valuable assets. We cannot succeed without employees' dedication and commitment. MicroPort is determined to embrace diversity and earn a reputation as an 'employer of distinction' by treating all employees as individuals, with respect, honesty and fairness.

Talent Acquisition

MicroPort aims at cultivating talents in a long run, encouraging employees to realise their full potential and to keep pace with growth of the Company.

Acquiring young talents who aspire to anticipate challenges is one of our key objectives. We have established a talent management approach to develop talents and facilitate their professional growth. Our management trainee programme recruits outstanding talents from leading local and international institutions. Laying a solid foundation for diversified talents, a talent reserve is built to support the continuous development of the Company.



Talent Management Approach

Training

To help our employees realise their potentials and contribute to the long-term development of the Company, we arrange training programmes which align with the Company's strategic plan and employees' appraisal results.

MicroPort has redesigned the Faculty Structure of the Innovation Institute to deliver tailor-made training for promoting professionalism among its employees at different levels and in the medical devices industry, for example, general skills, leadership skills and professional skills training.

The Company values transference of knowledge and skills among the workforce. A group of internal trainers and mentors, graduates from the Innovation Institute actively support knowledge and experience sharing among employees. They are assessed regularly by the Human Resources and Innovation Institute Department to determine their qualifications.

The Company allocates substantial resources for training programmes for its employees. All employees based in the US have to complete training through the newly established learning management system, UltiPro Learning. If the internal training programmes cannot satisfy the developmental needs, we subsidise our employees to participate in qualified external training programmes. During the year, 87,967 hours of training were provided and the total average training hours were approximately 14 hours.

Management training programs

To enhance capabilities of our management, we launched the Management 101 training for supervisors and Management 201 for directors and senior directors in the US subsidiary. This pilot course involves workshops that build up their management and leadership skills as a multi-level manager. More than 30 employees at the management level have completed the training.

Occupational health and safety

MicroPort understands that productivity and health status of employees are closely related. Employees' safety and health is always one of our top priorities. We proactively reduce injury risks and occupational diseases by establishing management systems and organising safety training for our workforce.

During the year, the Company was not aware of any violation of relevant laws and regulations that have a significant impact on the Company relating to providing a safe working environment and protection of employees from occupational hazards.

Health and Safety Management

We believe that establishing and implementing a sound occupational health and safety management system is an important way to protect employees from potential safety risks. Our operations in all the three locations have been regularly evaluating the safety management approach.

Europe Operations

- Certified with OHSAS 18001:2007 Health and Safety Management System
- Conduct a certification follow up audit by a qualified third party annually
- Identify improvement areas and address them in designs of management system tools

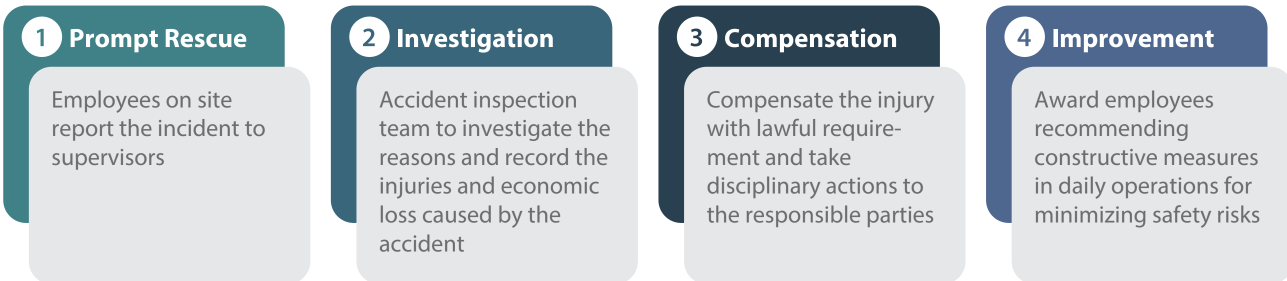
China Operations

- Operations in Shanghai certified with ISO 45001:2018 Occupational Health and Safety Management System
- Formulated "Environmental, Occupational Health and Safety Management Policy" with the international standards
- Safety and Production Committee to monitor daily operations and review related policies to ensure compliance
- Upload the most up to date safety information to the internal system

US Operations

- Safety Committee audits different working areas and discusses safety issues regularly
- Strengthen employees' safety awareness by communicating related topics via the intranet and through departmental meetings

Employees have to follow procedures laid out in the internal policy when there is a safety incident, such as the "Emergency Response Plan" and "Incident Report, Investigation and Handling Procedures" implemented during the year by the US and China operations respectively. In 2019, there were 27 work-related injuries and 440 lost days recorded. The injury rate was 0.43% and there were no work-related fatalities reported. To monitor the health status of our employees, we schedule body check-ups for them on a regular basis, especially for those working in positions with potential hazards.



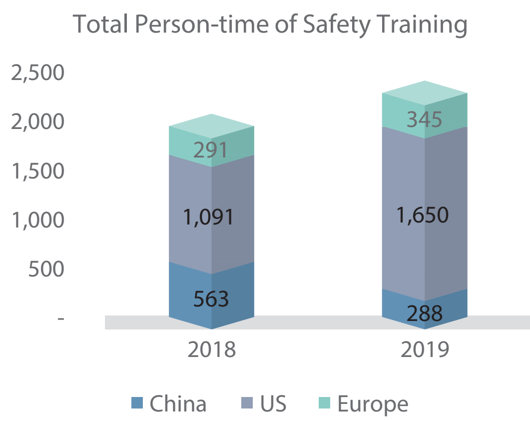
Accidents handling procedures

Safety Operation

To ensure that we operate in a safe manner, we conduct safety inspections regularly. We have established the Safety Production Inspection Policy covering fire prevention, electronic appliances, hazardous materials handling, daily operations and emergency situations handling. The responsible departments have to make the corresponding improvements when any potential safety risks are identified. The inspection team follows up on implementation of corrective measures. During the year, we conducted a safety assessment and made corrections on noise remediation and personal protective equipment provision.

Safety Training

MicroPort regards safety training as a vital enabler of minimisation of occupational health diseases and injury risks. We have allocated resources for organising safety training for our workforce. In 2019, there was a total of 2,283 safety training person-times and 6,764 training hours.



Management Safety Training

- To deliver courses on national safety laws and regulations, safety technical knowledge and safety management skills to managerial staff

Training For New Adoptions

- The Technical Department educates all employees when the Company adopts new production processes, new technology, new materials or commissions new facilities
- Employees have to pass the examination before reporting for duty

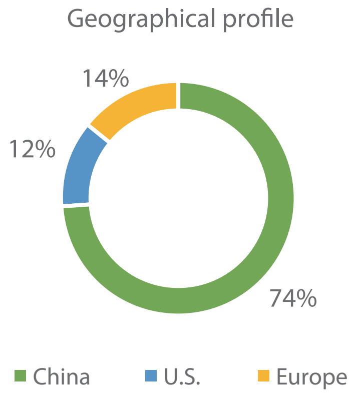
Technical Training

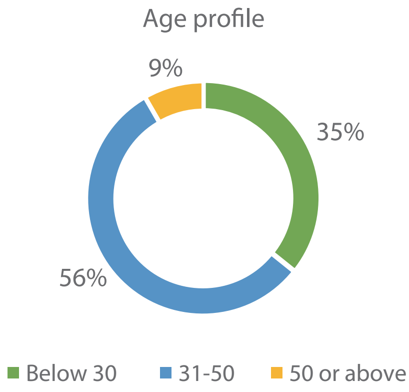
- To equip employees with professional knowledge, including but not limited to hazardous waste handling, certified training and specific position training

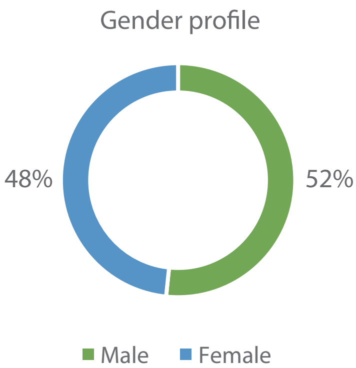
Safety Training Programs

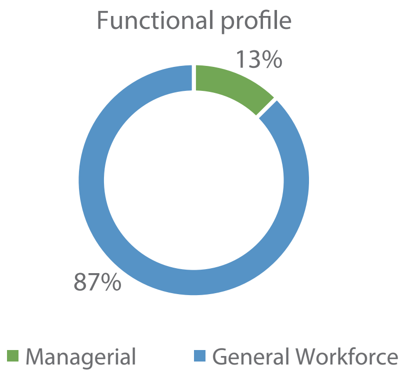
Employee Profile

As of the end of 2019, we had a total of 6,475 employees; 4,799 in China (74%), 771 in the U.S. (12%) and 905 in Europe (14%). In terms of age groups, 35% of the workforce is below 30; 56% is in the 31-50 age group; and 9% are 50 or above. The gender ratio is 1:1.083, which is approaching 1:1. 13% of the employees are managerial level and the remaining 87% are the general workforce.

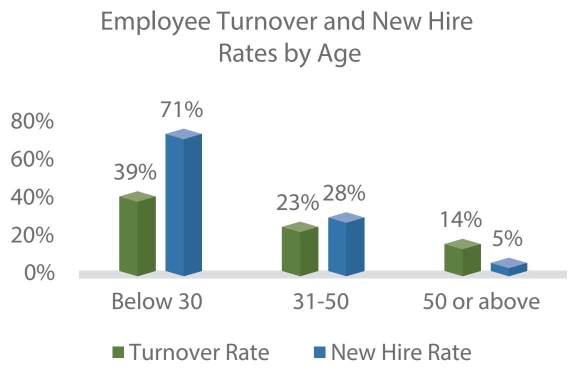


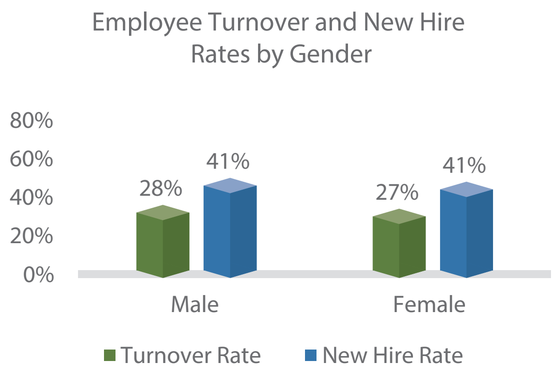






The overall turnover rate in the three regions taken together is approximately 27% and the overall new hire rate is 41%. The distribution by age and gender is presented as below.





Lawful Recruitment

The Company ensures its obligations on legal recruitment by complying all employment-related laws and regulations where we have operations, including but not limited to the Labor Law of the PRC and Guidelines from the U.S. Department of Labors.[8] During the year, the Company was not aware of any non-compliance of laws and regulations that have a significant impact on the Company relating to labour practices, nor was there any reported case regarding the use of child or forced labour.

We are committed to adopting lawful recruitment procedures with joint efforts by the Company and its staff. The Control Procedure of Employment, which is applicable to all employees, is established to standardise the employment procedure and management by the Human Resources (HR) Department and other departments involved in talent acquisition.

Echoing the relevant laws and regulations,[9] MicroPort makes efforts to prevent any forms of child and forced labour. To avoid the use of child labour, identification documents, such as Social Security Number in the US, of new hires are checked to ensure that no staff is under the legal age for employment. Labour contracts are based on mutual agreement between the Company and employees. Prompt measures, such as reports to authorities and cancellation of contracts, are taken if child or forced labour is identified.

Promoting Equal Opportunity

As an equal-opportunity employer, we follow fair practices relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination and other benefits and welfare.

MicroPort believes that diversity and inclusion are critical to its success as a global company. Instructions on equal employment are included in the human resources policy to encourage affirmative actions for equal employment opportunities. We only take job-related qualifications, merit and business needs into account when making employment-related decisions. Under our policies, the HR Department is responsible for ensuring that all personnel related actions including compensation, benefits, transfers, and terminations are administered without regard to race, nationality, sex, genetic information, gender identity, age, disability, or veteran's status etc.. Employees may direct suggestions, questions or complaints to the management for improvements on equality in the workplace.

8 Details please refer to Applicable Laws and Regulations section
9 Details please refer to Applicable Laws and Regulations section

To maintain a comfortable and respectful workplace, we have established an ethics reporting system administered by the HR department. The system allows employees to report to their supervisor, HR, or the MicroPort Assessment & Care Team directly if there are any suspected cases of discrimination or harassment. They are protected from any retaliation actions. Every case is investigated expeditiously in which appropriate disciplinary actions are taken for confirm the allegations, appropriate corrective actions are taken. We maintain smooth communication with employees on complaints handling.

Benefits and Communication

MicroPort values the contributions of its employees, and believes that competitive compensation and benefit plans can act as rewards for and recognition of their efforts and hard work that contribute to our Company's growth. We actively review employee benefit policies to maintain satisfaction of employees and provide them with motivations to improve. Current employee welfare measures include economic benefits, certifications, bonus plans, working meals, etc.

In addition, we have established work and holidays regulations to protect our employees' rights and welfare entitlements. To further accommodate special needs of employees, our subsidiary in the US has established the telework and remote work plan, which offers flexibility to employees in case of ad hoc work. These measures ensure the contributions of employees, and at the same time encourage work-life balance and employee well-being. As part of our family-friendly policies and benefits, MicroPort supports breast feeding mothers by arranging private rooms and corresponding facilities with special access for the nursing mothers.

Team spirit are important for maintaining a harmonious work atmosphere. Hence, team building and recreational activities such as Fall Picnic, Spring Cookout, and Holiday meal are regularly organised to strengthen the bonding between employees. To further enhance relationships between managers and employees, new management training approaches and restructured manufacturing supervision were introduced during the year.

COMMUNITY INVOLVEMENT

MicroPort focuses on contributing to community healthcare services and propelling youth development. We work together with employees, hospitals and schools to support various community projects and make charitable donations, striving to achieve a win-win situation for business operations and the community.

Since 2007, MicroPort has established two Hope Primary Schools in Shandong Province and Guizhou Province to support the growth of children in rural areas in China. In 2019, we contributed around RMB169,792 to support teachers and students in Shandong and Guizhou to broaden their horizons by joining summer camp "Explore the World outside of the Mountains" in Shanghai. Donations were made in the form of scholarships to students from MicroPort Hope Primary Schools in Guizhou and Shandong respectively.

To improve the living environment of the underprivileged in mainland China, we contributed RMB860,538 to support poverty alleviation projects in rural areas such as Yunan and Guangxi in 2019. During the year, RMB1,051,285.71 was contributed to education and poverty alleviation, and a total number of 613.5 voluntary hours were contributed by our employees. We believe that engaging employees in community projects generates synergistic effects on the Company's growth.

In Europe, we have continued to support our local community with donations, fund-raising and volunteering contributing 820,000 Euros during the year. We have established the Donations and Grants Policy and Procedure which aims to standardise the procedure and ensure the proper use of every dollar of our donations with transparency. Accordingly, we have been striving for building connections with charity organisations in support of our voluntary work in hospitals. School kits were also provided by MicroPort to children of its employees to propel quality education. In US, we made our contribution to various charity organisation, targeting to beneficiaries including but not limited to Gallaway Nursing home, Arthritis Foundation, Arlington Middle School and Southwest Community College, with USD 53,620 of donations and 491 voluntary hours contributed.

We believe that community involvement can bring positive impacts to society, including enhancing community well-being and nurturing our next generation talents. In the future, MicroPort will continue to broaden the scope of its community projects to help more people in need.

PERFORMANCE DATA SUMMARY

Environmental performance

	Unit	2019	2018±
Total Resources Consumption			
Total Energy Consumption	GJ	197,562	203,426
China	GJ	84,296	74,047
US	GJ	77,400	83,155
Europe	GJ	35,866	46,223
Total Energy Intensity (by revenue)	GJ/USD ('000)	0.25	0.30
Electricity Consumption	kWh	46,716,867	42,631,265
China	kWh	22,531,241	19,964,955
US	kWh	16,566,586	18,082,516
Europe	kWh	7,619,040	4,583,794
Natural gas Consumption	m^3	611,571	1,072,949
China	m^3	47,334	0
US	m^3	453,036	459,616
Europe	m^3	111,201#	613,333
Diesel Consumption	Litres	156,385	217,843
China	Litres	31,300	54,622
US	Litres	0	0
Europe	Litres	125,085	163,221
Gasoline Consumption	Litres	10,782	12,001
China	Litres	6,896	6,825
US	Litres	3,886	5,175
Europe	Litres	0	1
Water			
Water Consumption	Tonnes	153,361	172,442
China	Tonnes	78,475	67,438
US	Tonnes	47,138	89,200
Europe	Tonnes	27,748	15,804
Water Intensity (by revenue)	Tonnes /USD ('000)	0.19	0.26
Steam	Tonnes	4,295	3,131
Packaging Materials Consumption			
Plastic Bags	Tonnes	3.36	4.04
Carton	Tonnes	122.04	120
Trays and Lidstock	Tonnes	14.00	16
Paper	Tonnes	3.85	4

	Unit	2019	2018±
Emissions			
GHG emissions			
Scope 1: direct carbon emissions	tCO_2e	2,294	2,273
Scope 2: indirect carbon emissions	tCO_2e	24,997	24,011
Total GHG Emissions	tCO_2e	27,291	26,284
GHG Emission Intensity	tCO_2e/USD ('000)	0.034	0.039
Air pollutants			
SOx	kg	2.61	4
NOx	kg	1,038.48	1,096
PM	kg	88.94	94.29
VOC	Tonnes	3.36	3
Waste			
Hazardous waste	Tonnes	76.79	59
China	Tonnes	59.99	56
US	Tonnes	2.32	1.5
Europe	Tonnes	14.48#	1.5
Total hazardous waste intensity (by revenue)	Tonnes /USD ('000)	0.000097	0.000088
Non-hazardous waste (recyclable)	Tonnes	77.80	76
China	Tonnes	0	0
US	Tonnes	42.65	57
Europe	Tonnes	35.15	19
Non-hazardous waste (non-recyclable)	Tonnes /USD ('000)	77.34	103
China	Tonnes	29.80	32
US	Tonnes	34.04	60
Europe	Tonnes	13.50	11
Total non-hazardous waste intensity (by revenue)	Tonnes	0.00020	0.00027

± 2018 environmental data from Europe covers the period from May to December of that year.

The reporting boundary of natural gas consumption and hazardous waste generation from Europe has been optimised in 2019. We will strengthen our data collection progress in the future.

Workforce Demographics

	2019	2018
Total Headcount	6,475	4,910
By Geography		
China	4,799	3,426
US	771	577
Europe	905	907
By Age		
Below 30	2,281	1,613
31-50	3,624	2,768
50 above	570	529
By Gender		
Male	3,385	2,440
Female	3,090	2,470
By Educational Background *		
Degree or above	2,564	2,015
High School or below	3,006	1,988
Employee Turnover Rate ^		
Total	27%	17%
By Age		
Below 30	39%	25%
31-50	23%	14%
50 above	14%	8%
By Gender		
Male	28%	19%
Female	27%	15%
Employee New Hire Rate		
Total	41%	30%
By Age		
Below 30	71%	53%
31-50	28%	22%
50 above	5%	4%
By Gender		
Male	41%	31%
Female	41%	29%

* Employee profile by education excludes the data from Europe.

^ Number of employee turnover in 2018 in Europe only covers from third to fourth quarter that year.

Employee Training

	2019			2018		
	China	US	Europe	China	US	Europe
Cumulative Training Percentage						
By Gender						
Male	66%	65%	52%	64%	99.7%	37.3%
Female	59%	65%	54%	57%	95.3%	29.7%
By Function						
Managerial staff	84%	65%	58%	66%	94.6%	21.0%
General staff	60%	65%	52%	59%	99.1%	35.3%
Average Training Hours per Person						
By Gender						
Male	14.6	9.1	14.0	11.1	33.9	10.6
Female	14.9	13.6	12.2	10.0	29.6	9.8
By Function						
Managerial staff	43.3	10.1	17.0	6.6	23.9	3.6
General staff	11.3	10.6	12.2	11.9	34.5	11.4

Health and Safety

	2019			2018		
	China	US	Europe	China	US	Europe
Number of work-related injuries	7	6	14	0	6	23
Injury rate (total)	0.42%			0.59%		
Lost days due to work-related injury	407	2	31	0	3	195
Work-related fatalities	0	0	0	0	0	0
Safety training (Person-times)	288	1,650	345	563	1,091	291
Safety training hours	3,232	2,162	1,370	6,755	2,308	1,522

APPLICABLE LAWS AND REGULATIONS

Aspect	Laws and Regulations	Section
Environment	China • Environmental Protection Law of the PRC • Law of the PRC on Atmospheric Pollution Prevention and Control • Law of the PRC on Water Pollution Prevention and Control • Law of the PRC on Prevention and Control of Radioactive Pollution • Law of the PRC on the Prevention and Control of Pollution Caused by Solid Waste • Law of the PRC on the Prevention and Control of Pollution from Environmental Noise • Law of the PRC on Conserving Energy • Law of the PRC on the Promotion of Clean Production • Integrated Emission Standard of Air Pollutants • Integrated Wastewater Discharge Standard US • Resource Conservation and Recovery Act • Hazardous Waste Management Act • Tennessee Waste Minimisation Law Europe • Law on Waste Disposal and Materials Recovery (Loi relative à l'élimination des déchets et à la récupération des matériaux)	Environmental Protection
Employment and labour standards	China • Labor Law of the PRC • Labor Contract Law of the PRC • Provisions on the Prohibition of Using Child Labor US • Fair Labor Standards Act and regulations issued thereunder • Tennessee Wage Regulations Act • Tennessee Prevailing Wage Act • Tennessee Illegal Alien Act • Tennessee Lawful Employment Act • Tennessee Non-Smoker Protection Act	Employee Care
Occupational health and safety	China • Law of the PRC on the Prevention and Treatment of Occupational Diseases • Law of the PRC on Production Safety US • US Occupational Safety and Health Act and regulations issued thereunder • Tennessee Occupational Safety and Health Act and regulations issued thereunder	Employee Care

Aspect	Laws and Regulations	Section
Product Responsibility	• Restriction of Hazardous Substances【Directive 2002/95/EC】(RoHS) • European Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) China • Law of the PRC on Product Quality • Law of the PRC on Protection of Consumer Rights and Interests • Patent Law of the PRC US • Food and Drug Administration, 21 CFR 820.198, Quality System Regulations, Complaint Files • Council Directive 93/42/EEC of 14 June 1993 concerning medical devices (Medical Device Directive), as amended by 2007/47/EEC • Food and Drug Administration, 21 CFR 803, Medical Device Reporting Europe • French Code of Intellectual Property (Code de la Propriété Intellectuelle (CPI) in French, mainly Livre VI (Patents) & Livre VII (Trademarks)) • the European Patent Convention (EPC, Convention sur le Brevet Européen (CBE))	Operational Excellence
Anti-corruption	• Kuala Lumpur Principles • United Kingdom Bribery Act (UKBA) • United States Foreign Corrupt Practices Act (FCPA) • French Sapin II Law • Law of the PRC Against Unfair Competition • Criminal Law of the PRC (China) • Kim Young Ran Act (South Korea) • Criminal Liability of Legal Persons Act (Slovakia) • The Integrity and Anti-Corruption Law No. 13 (Jordan) • Bribery Act 2016 (Kenya)	Operational Excellence

HKEX CONTENT INDEX

KPIs	HKEX ESG Reporting Guide Requirements		Section/Remarks
A. Environmental			
Aspect A1: Emissions	**General Disclosure** Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.		Environmental Management
	KPI A1.1	The types of emissions and respective emissions data.	Emission Control
	KPI A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity.	Emission Control
	KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity.	Waste and sewage management
	KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity.	Waste and sewage management
	KPI A1.5	Description of measures to mitigate emissions and results achieved.	Emission Control
	KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	Waste and sewage management
Aspect A2: Use of Resources	**General Disclosure** Policies on the efficient use of resources, including energy, water and other raw materials.		Resources Consumption
	KPI A2.1	Direct and/or indirect energy consumption by type in total (kWh in '000s) and intensity.	Resources Consumption
	KPI A2.2	Water consumption in total and intensity.	Resources Consumption
	KPI A2.3	Description of energy use efficiency initiatives and results achieved.	Resources Consumption
	KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	Resources Consumption
	KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	Resources Consumption

KPIs	HKEX ESG Reporting Guide Requirements		Section/Remarks
Aspect A3: The Environment and Natural Resources	**General Disclosure** Policies on minimizing the issuers' significant impact on the environment and natural resources.		Environmental Management
	KPI A3.1	Description of significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Environmental Management
B. Social			
Aspect B1: Employment	**General Disclosure** Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.		Employee Care
	KPI B1.1	Total workforce by gender, employment type, age group and geographical region.	Performance Data Summary
	KPI B1.2	Employee turnover rate by gender, age group and geographical region.	Performance Data Summary
Aspect B2: Health and Safety	**General Disclosure** Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.		Occupational health and safety
	KPI B2.1	Number and rate of work-related fatalities.	Performance Data Summary
	KPI B2.2	Lost days due to work injury.	Performance Data Summary
	KPI B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	Occupational health and safety

KPIs	HKEX ESG Reporting Guide Requirements		Section/Remarks
Aspect B3: Development and Training	**General Disclosure** Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.		Training and development
	KPI B3.1	The percentage of employees trained by gender and employee category.	Performance Data Summary
	KPI B3.2	The average training hours completed per employee by gender and employee category.	Performance Data Summary
Aspect B4: Labour Standards	**General Disclosure** Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child or forced labour.		Lawful Recruitment
Aspect B5: Supply Chain Management	**General Disclosure** Policies on managing environmental and social risks of the supply chain		Supply chain management
	KPI B5.1	Number of suppliers by geographical region.	Supply chain management
	KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	Supply chain management
Aspect B6: Product Responsibility	**General Disclosure** Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.		Operational Excellence
	KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Customer Satisfaction
	KPI B6.2	Number of products and service related complaints received and how they are dealt with.	Customer Satisfaction
	KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	Intellectual property rights
	KPI B6.4	Description of quality assurance process and recall procedures.	Quality Assurance
	KPI B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	Data security and privacy

<table>
<tr><th>KPIs</th><th colspan="2">HKEX ESG Reporting Guide Requirements</th><th>Section/Remarks</th></tr>
<tr><td rowspan="3">Aspect B7: Anti-corruption</td><td colspan="2">General Disclosure

Information on:

(a) the policies; and

(b) compliance with relevant laws and regulations that have a significant impact on the issuer

relating to bribery, extortion, fraud and money laundering.</td><td>Anti-corruption</td></tr>
<tr><td>KPI B7.1</td><td>Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.</td><td>Anti-corruption</td></tr>
<tr><td>KPI B7.2</td><td>Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.</td><td>Anti-corruption</td></tr>
<tr><td rowspan="3">Aspect B8: Community Investment</td><td colspan="2">General Disclosure

Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.</td><td>Community Involvement</td></tr>
<tr><td>KPI B8.1</td><td>Focus areas of contribution.</td><td>Community Involvement</td></tr>
<tr><td>KPI B8.2</td><td>Resources contributed to the focus area.</td><td>Community Involvement</td></tr>
</table>

Independent auditor's report
to the shareholders of MicroPort Scientific Corporation
(Incorporated in the Cayman Islands with limited liability)

OPINION

We have audited the consolidated financial statements of MicroPort Scientific Corporation ("the Company") and its subsidiaries ("the Group") set out on pages 104 to 220, which comprise the consolidated statement of financial position as at 31 December 2019, the consolidated statement of profit or loss, the consolidated statement of profit or loss and other comprehensive income, the consolidated statement of changes in equity and the consolidated cash flow statement 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.

BASIS FOR OPINION

We conducted our audit in accordance with Hong Kong Standards on Auditing ("HKSAs") 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") together with any ethical requirements that are relevant to our audit of the consolidated financial statements in the Cayman Islands, and we have fulfilled our other ethical responsibilities in accordance with these requirements and 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.

KEY AUDIT MATTERS (CONTINUED)

Revenue recognition

Refer to note 3 to the consolidated financial statements and the accounting policies on pages 138 to 139.

The Key Audit Matter	How the matter was addressed in our audit
The Group recognises revenue from the sale of medical devices at a point in time when control of goods is transferred to the customer. The amount to which the Group expects to be entitled can vary due to sales rebates granted to customers and the rights of customers to return the goods sold by the Group explicitly identified in the sales contracts signed with customers. In addition, in respect of the cardiac rhythm management ("CRM") business, the Group renders certain post-sales services to patients in accordance with industry practice, to ensure the safe and effective use of the sold devices implanted into the patients until the implanted device needs to be replaced. This implied promise in the contract with the customer requires the allocation of the transaction price between the sale of devices performance obligation and the post-sales services performance obligation. The sales rebates granted to customers are primarily volume based. Revenue from sales subject to volume rebate arrangements is recognised at the net amount of consideration to which the Group is entitled, after adjusting for the estimated amount that the Group may be required to rebate to the customer in respect of these sales, unless it is highly probable that the customer will not satisfy the rebate entitlement criteria within the rebate period.	Our audit procedures to assess the recognition of revenue included the following: • obtaining an understanding of and assessing the design, implementation and operating effectiveness of management's key internal controls in relation to revenue recognition including the identification of performance obligations in contracts with customers, the variable consideration and management's review of the calculation of and adjustments for sales rebates and sales returns; • inspecting, on a sample basis, key customer contracts to identify terms and conditions relating to transfer of goods control, sales rebates, the rights of return of goods sold and identification of performance obligations and assessing the Group's revenue recognition policies with reference to the requirements of the prevailing accounting standards; • selecting a sample of sales rebate transactions recorded during the year and comparing the parameters used in the calculation of the rebate (including purchase volumes and rebate rates) with the relevant source documents (including sales invoices, sales contracts and cumulative sales data in the computer system records) to assess whether the methodology adopted in the calculation of the sales rebates was in accordance with the terms and conditions defined in the corresponding customer contract;

KEY AUDIT MATTERS (CONTINUED)

Revenue recognition (continued)

Refer to note 3 to the consolidated financial statements and the accounting policies on pages 138 to 139.

The Key Audit Matter	How the matter was addressed in our audit
Revenue from sales where the customer has the right of return is recognised net of the estimated amount of consideration which the Group expects to have to refund to customers, based on the expected level of returns. When the Group no longer expects to rebate or refund the customer, any amounts previously deferred are recognised as revenue. For the CRM business, the total transaction price is allocated to each performance obligation in an amount based on the estimated relative standalone selling prices of the goods or services underlying each performance obligation. If the observable stand-alone selling prices are not available, the Group uses an expected cost plus a margin approach to estimate the stand-alone selling price. Upon the sales of those implanted devices, which require post-sales service, the Group defers revenue allocated to those unfulfilled performance obligations and recognises these services over the service period when they are rendered, which is estimated as 7 to 11 years based on the expected product lives of different implanted devices. We identified the recognition of revenue as a key audit matter because (i) revenue is a key performance indicator of the Group and is, therefore, subject to possible manipulation through the timing of revenue recognition to meet targets or expectations, (ii) the variety of different terms of sale may affect the timing of the recognition of revenue; and because significant management judgement can be required to estimate sales rebates, and sales returns for all products and to estimate the standalone selling price and product lives of implanted devices for CRM business.	• comparing the actual sales rebates and sales returns recorded after the financial year end with the variable consideration adjustments estimated by the management in these respects during the year in order to assess the reliability of management's process for determining the consideration to which the Group is entitled and to assess if the adjustments for the related variable consideration had been made as a reduction of the transaction price in the appropriate financial period; • understanding the methodology in deriving the deferred revenue in relation to the post-sales services for CRM business; performing the retrospective review on the historical information in terms of the estimated product lives used in the calculation; evaluating the key assumptions adopted in the estimation of stand-alone selling prices including the average costs and frequency of the provision of each post-sales service; benchmarking the key assumptions and estimations with the available industry reports or government statistics; • comparing, on a sample basis, specific revenue transactions recorded before and after the financial year end date with relevant underlying documentation, which included goods dispatch notes, shipping documents and goods receipt notes, as applicable under the different sales contracts, to assess whether the related revenue had been recognised in the appropriate financial period on the basis of the terms of sale as set out in the respective sales contracts; and • inspecting underlying documentation for journal entries relating to revenue which were considered to be material or met other specific risk-based criteria.

KEY AUDIT MATTERS (CONTINUED)

Assessing potential impairment of intangible assets and goodwill

Refer to notes 11 and 12 to the consolidated financial statements and the accounting policies on pages 130 to 131.

The Key Audit Matter	How the matter was addressed in our audit
The carrying values of the Group's intangible assets and goodwill as at 31 December 2019 were US$125.8 million and US$160.5 million, respectively. Goodwill arose from the previous acquisitions which has been primarily allocated to the orthopedics devices business and CRM business. Intangible assets principally comprise technology, product licenses, customer relationships and capitalised development costs, which have been allocated to various segments. Management performs annual impairment assessments of the Group's goodwill and intangible assets that are not yet available for use by comparing the carrying values of these assets with their recoverable amounts, which are assessed using the value in use method by preparing discounted cash flow forecasts for each separately identifiable cash-generating unit ("CGU") to which the assets have been allocated. The preparation of discounted cash flow forecasts involves the exercise of significant management judgment, in particular in assessing future revenue growth, future gross margins future capital expenditure and working capital movements and in determining the long-term growth rate and appropriate discount rates. We identified the assessment of potential impairment of intangible assets and goodwill as a key audit matter because determining the level of impairment, if any, involves a significant degree of management judgement, which can be inherently uncertain and could be subject to management bias.	Our audit procedures to assess the potential impairment of intangible assets and goodwill included the following: • evaluating management's identification of CGUs and the allocation of intangible assets and goodwill to each CGU and assessing the methodology adopted by management in its impairment assessments with reference to the requirements of the prevailing accounting standards; • evaluating the key assumptions adopted in the preparation of the discounted cash flow forecasts by comparing data in the discounted cash flow forecasts with the relevant data, including forecast revenue, forecast cost of sales and forecast operating expenses, in the financial budgets which was approved by the board of directors and with available industry statistics; • comparing the data in discounted cash flow forecasts prepared in the prior year with the current year's performance to assess how accurate the prior year's discounted cash flow forecasts were and making enquiries of management as to the reasons for any significant variations identified; • engaging our internal valuation specialists to assist us in comparing the long-term growth rates and discount rates applied in the discounted cash flow forecasts with those of comparable companies and external market data if available; • performing a sensitivity analysis of key assumptions, including future revenue growth rates, future gross margins and the discount rates applied in the discounted cash flow forecasts and considering the resulting impact on the impairment charge for the year and whether there were any indicators of management bias in the selection of these key assumptions; and • considering the disclosures in the consolidated financial statements in respect of management's impairment assessments of intangible assets and goodwill with reference to the requirements of the prevailing accounting standards.

INFORMATION OTHER THAN THE CONSOLIDATED FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

The directors are responsible for the other information. The other information comprises all the information included in the annual report, other than the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF THE DIRECTORS FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The directors 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 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 either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

The directors are assisted by the Audit Committee in discharging their responsibilities for overseeing the Group's financial reporting process.

AUDITOR'S RESPONSIBILITY 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. This report is made solely to you, as a body, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

AUDITOR'S RESPONSIBILITY FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAs 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 HKSAs, 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.

- 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 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.

The engagement partner on the audit resulting in this independent auditor's report is Au, Yat Fo.

KPMG
Certified Public Accountants

8th Floor, Prince's Building
10 Chater Road
Central, Hong Kong

30 March 2020

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

for the year ended 31 December 2019
(Expressed in United States dollars)

	Note	**2019**	2018
			(Note)
		US$'000	US$'000
Revenue	*3*	**793,493**	669,490
Cost of sales		**(229,068)**	(199,474)
Gross profit		**564,425**	470,016
Other net income	*4*	**18,667**	13,796
Research and development costs		**(151,486)**	(104,814)
Distribution costs		**(275,266)**	(217,792)
Administrative expenses		**(119,345)**	(95,742)
Other operating costs		**(8,538)**	(13,410)
Profit from operations		**28,457**	52,054
Finance costs	*5(a)*	**(22,698)**	(21,020)
Gain on disposal of subsidiaries	*29(a)*	**63,105**	–
Gain on deemed disposal of a joint venture		**–**	4,133
Share of losses of equity-accounted investees	*14*	**(5,656)**	(2,238)
Profit before taxation	*5*	**63,208**	32,929
Income tax	*6(a)*	**(34,199)**	(14,548)
Profit for the year		**29,009**	18,381
Attributable to:			
Equity shareholders of the Company		**46,281**	23,913
Non-controlling interests		**(17,272)**	(5,532)
Profit for the year		**29,009**	18,381
Earnings per share	*9*		
Basic (in cents)		**2.92**	1.63
Diluted (in cents)		**1.98**	1.28

Note: The Group has initially applied HKFRS 16 at 1 January 2019 using the modified retrospective approach. Under this approach, the comparative information is not restated. See note 1(c).

The notes on pages 112 to 220 form part of these financial statements. Details of dividends payable to equity shareholders of the Company attributable to the profit for the year are set out in note 28(b).

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

for the year ended 31 December 2019
(Expressed in United States dollars)

	2019	2018
		(Note)
	US$'000	US$'000
Profit for the year	**29,009**	18,381
Other comprehensive income for the year, net of tax		
Items that will not be reclassified to profit or loss:		
Remeasurement of net defined benefit liabilities	**(786)**	272
Items that may be reclassified subsequently to profit or loss:		
Exchange differences on translation of financial statements, net of nil tax	**(13,703)**	(44,229)
Other comprehensive income for the year	**(14,489)**	(43,957)
Total comprehensive income for the year	**14,520**	(25,576)
Attributable to:		
Equity shareholders of the Company	**34,399**	(15,640)
Non-controlling interests	**(19,879)**	(9,936)
Total comprehensive income for the year	**14,520**	(25,576)

Note: The Group has initially applied HKFRS 16 at 1 January 2019 using the modified retrospective approach. Under this approach, the comparative information is not restated. See note 1(c).

The notes on pages 112 to 220 form part of these financial statements.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

(Expressed in United States dollars)

	Note	**31 December 2019 US$'000**	31 December 2018 *(Note)* US$'000
Non-current assets			
Investment properties	*10*	**5,222**	5,451
Other property, plant and equipment	*10*	**428,786**	336,263
Land use rights	*10*	**–**	15,087
		434,008	356,801
Intangible assets	*11*	**125,811**	117,489
Goodwill	*12*	**160,520**	162,673
Equity-accounted investees	*14*	**54,183**	17,391
Other financial assets	*15*	**20,125**	11,910
Deferred tax assets	*24(b)*	**13,171**	15,291
Prepayments for non-current assets		**7,551**	6,222
Other non-current assets	*16*	**41,628**	31,979
		856,997	719,756
Current assets			
Inventories	*17*	**192,321**	175,957
Trade and other receivables	*18*	**266,789**	245,143
Pledged deposits and time deposits		**1,767**	3,537
Cash and cash equivalents	*19*	**280,077**	130,054
		740,954	554,691
Current liabilities			
Trade and other payables	*20*	**283,780**	236,813
Contract liabilities	*21*	**9,522**	10,060
Interest-bearing borrowings	*22*	**32,092**	100,901
Convertible bonds	*26*	**83,107**	86,834
Lease liabilities	*23*	**10,178**	–
Income tax payable	*24(a)*	**13,122**	5,782
		431,801	440,390
Net current assets		**309,153**	114,301
Total assets less current liabilities		**1,166,150**	834,057

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

(Expressed in United States dollars)

	Note	**31 December 2019**	31 December 2018 *(Note)*
		US$'000	US$'000
Non-current liabilities			
Interest-bearing borrowings	*22*	**288,107**	137,829
Lease liabilities	*23*	**44,527**	–
Deferred income	*25*	**24,895**	23,905
Contract liabilities	*21*	**21,463**	27,766
Convertible bonds	*26*	**–**	3,571
Other payables	*20*	**116,789**	93,625
Derivative financial liabilities	*30(e)*	**12,804**	10,640
Deferred tax liabilities	*24(b)*	**3,600**	7,775
		512,185	305,111
NET ASSETS		**653,965**	528,946
CAPITAL AND RESERVES			
Share capital	*28(c)*	**16**	16
Reserves		**519,008**	442,780
Total equity attributable to equity shareholders of the Company		**519,024**	442,796
Non-controlling interests		**134,941**	86,150
TOTAL EQUITY		**653,965**	528,946

Note: The Group has initially applied HKFRS 16 at 1 January 2019 using the modified retrospective approach. Under this approach, the comparative information is not restated. See note 1(c).

Approved and authorised for issue by the board of directors on 30 March 2020.

Zhaohua Chang
Chairman

Jonathan H. Chou
Director

The notes on pages 112 to 220 form part of these financial statements.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

for the year ended 31 December 2019
(Expressed in United States dollars)

		Attributable to equity shareholders of the Company								
	Note	Share capital US$'000	Share premium US$'000	Exchange reserve US$'000	Capital reserve US$'000	Statutory general reserve US$'000	Retained profits US$'000	Total US$'000	Non-controlling interests US$'000	Total equity US$'000
Balance at 1 January 2018		14	258,482	5,164	56,895	22,845	54,040	397,440	37,691	435,131
Changes in equity for 2018:										
Profit for the year		–	–	–	–	–	23,913	23,913	(5,532)	18,381
Other comprehensive income		–	–	(39,757)	204	–	–	(39,553)	(4,404)	(43,957)
Total comprehensive income		–	–	(39,757)	204	–	23,913	(15,640)	(9,936)	(25,576)
Changes in equity interests of non– controlling shareholders of subsidiaries		–	–	–	(4,597)	–	–	(4,597)	62,615	58,018
Transfer between reserves		–	–	–	–	(1,839)	1,839	–	–	–
Appropriation of statutory general reserve		–	–	–	–	8,158	(8,158)	–	–	–
Equity-settled share-based transactions		–	–	–	4,365	–	–	4,365	208	4,573
Shares issued under share option scheme	*28(c)(iii)*	1	4,445	–	(1,492)	–	–	2,954	–	2,954
Shares purchased under share award scheme	*27(b)*	–	–	–	(6,237)	–	–	(6,237)	–	(6,237)
Shares granted under share award scheme	*27(b)*	–	–	–	5,820	–	–	5,820	–	5,820
Conversion of convertible bonds		1	85,087	–	(17,686)	–	–	67,402	–	67,402
Change in carrying amounts of share repurchase obligations of a subsidiary	*20*	–	–	–	(5,129)	–	–	(5,129)	–	(5,129)
Dividends paid in respect of the previous year	*28(b)*	–	1,075	–	–	–	(4,657)	(3,582)	–	(3,582)
Dividends to holders of non–controlling interests		–	–	–	–	–	–	–	(4,428)	(4,428)
Balance at 31 December 2018		16	349,089	(34,593)	32,143	29,164	66,977	442,796	86,150	528,946

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

for the year ended 31 December 2019
(Expressed in United States dollars)

		Attributable to equity shareholders of the Company								
	Note	Share capital US$'000	Share premium US$'000	Exchange reserve US$'000	Capital reserve US$'000	Statutory general reserve US$'000	Retained profits US$'000	Total US$'000	Non-controlling interests US$'000	Total equity US$'000
Balance at 31 December 2018		16	349,089	(34,593)	32,143	29,164	66,977	442,796	86,150	528,946
Impact on initial application of HKFRS 16	*1(c)*	–	–	–	–	–	(648)	(648)	(216)	(864)
Adjusted balance at 1 January 2019		16	349,089	(34,593)	32,143	29,164	66,329	442,148	85,934	528,082
Changes in equity for 2019:										
Profit for the year		–	–	–	–	–	46,281	46,281	(17,272)	29,009
Other comprehensive income		–	–	(11,291)	(591)	–	–	(11,882)	(2,607)	(14,489)
Total comprehensive income		–	–	(11,291)	(591)	–	46,281	34,399	(19,879)	14,520
Changes in equity interests of non– controlling shareholders of subsidiaries	*29*	–	–	–	54,283	–	–	54,283	71,543	125,826
Disposal of subsidiaries	*29(a)*	–	–	–	–	–	–	–	(1,618)	(1,618)
Appropriation of statutory general reserve		–	–	–	–	16,291	(16,291)	–	–	–
Equity-settled share-based transactions		–	–	–	6,571	–	–	6,571	238	6,809
Shares issued under share option scheme	*28(c)(iii)*	–	3,481	–	(874)	–	–	2,607	–	2,607
Lapse of share options		–	–	–	(774)	–	774	–	–	–
Shares purchased under share award scheme	*27(b)*	–	–	–	(17,632)	–	–	(17,632)	–	(17,632)
Shares granted under share award scheme	*27(b)*	–	–	–	10,578	–	–	10,578	–	10,578
Conversion of convertible bonds	*26*	–	7,416	–	(1,447)	–	–	5,969	–	5,969
Change in carrying amounts of share repurchase obligations of a subsidiary	*20*	–	–	–	(16,469)	–	–	(16,469)	–	(16,469)
Dividends paid in respect of the previous year	*28(b)*	–	2,521	–	–	–	(5,951)	(3,430)	–	(3,430)
Dividends to holders of non– controlling interests		–	–	–	–	–	–	–	(1,277)	(1,277)
Balance at 31 December 2019		16	362,507	(45,884)	65,788	45,455	91,142	519,024	134,941	653,965

Note: The Group has initially applied HKFRS 16 at 1 January 2019 using the modified retrospective approach. Under this approach, the comparative information is not restated. See note 1(c).

The notes on pages 112 to 220 form part of these financial statements.

CONSOLIDATED CASH FLOWS STATEMENT

for the year ended 31 December 2019
(Expressed in United States dollars)

	Note	2019 US$'000	2018 *(Note)* *US$'000*
Operating activities			
Cash generated from operations	*19(b)*	**50,652**	100,328
Income tax refund received		**4,776**	293
Tax paid:			
– The People's Republic of China ("PRC") income tax paid		**(26,014)**	(14,877)
– Non-PRC income tax paid		**(2,963)**	(1,614)
Net cash generated from operating activities		**26,451**	84,130
Investing activities			
Payments for the purchase of property, plant and equipment		**(97,042)**	(68,590)
Payments for acquisition of subsidiaries, net of cash acquired		**–**	(184,025)
Proceeds from disposal of subsidiaries, net of cash disposed	*29(a)*	**31,028**	–
Placement of security deposits to a related party		**–**	(17,733)
Proceeds from sale of property, plant and equipment and intangible assets		**3,467**	2,276
Payments for intangible assets		**(18,050)**	(21,510)
Proceeds from government grants related to non-current assets		**331**	1,362
Decrease/(increase) in pledged deposits and time deposits		**1,770**	(2,777)
Uplift of structured deposits with banks		**23,469**	–
Placement of structured deposits with banks		**(23,464)**	–
Interest received		**2,674**	1,208
Payments for the investments in equity– accounted investees		**(2,920)**	(9,061)
Payments for the investments in other non– current financial assets		**(8,044)**	(8,556)
Loans to equity-accounted investees	*32(b)*	**(3,905)**	(4,736)
Loans repaid by equity-accounted investees	*32(b)*	**1,485**	9,511
Advances repaid by/(lent to) a third party	*18*	**11,900**	(11,900)
Others		**(2,655)**	(141)
Net cash used in investing activities		**(79,956)**	(314,672)

CONSOLIDATED CASH FLOWS STATEMENT

for the year ended 31 December 2019
(Expressed in United States dollars)

	Note	2019 US$'000	2018 (Note) US$'000
Financing activities			
Capital element of lease rentals paid	19(c)	**(8,479)**	–
Interest element of lease rentals paid	19(c)	**(2,469)**	–
Proceeds from other interest-bearing borrowings, net of transaction costs	19(c)	**161,971**	194,013
Repayments of interest-bearing borrowings	19(c)	**(76,624)**	(61,541)
Proceeds from preferred shares issued by a subsidiary	29(c)	**45,000**	–
Acquisition of additional equity interests in a subsidiary		**(1,563)**	–
Capital contributions from non-controlling interests		**124,724**	98,066
Proceeds from shares issued under the share option scheme	28(c)(iii)	**1,854**	2,954
Interest paid for the convertible bonds	26	**(3,219)**	(5,599)
Interest paid for interest-bearing borrowings	19(c)	**(13,533)**	(9,107)
Advances from an equity-accounted investee	32(b)	**2,038**	–
Payment for repurchase of shares under share award scheme	27(b)	**(17,632)**	(6,237)
Dividends paid to holders of non-controlling interests		**(1,277)**	(4,428)
Dividends paid to equity shareholders of the Company	28(b)	**(3,430)**	(3,582)
Net cash generated from financing activities		**207,361**	204,539
Net increase/(decrease) in cash and cash equivalents		**153,856**	(26,003)
Cash and cash equivalents at 1 January		**130,054**	160,229
Effect of foreign exchange rate changes		**(3,833)**	(4,172)
Cash and cash equivalents at 31 December		**280,077**	130,054

Note: The Group has initially applied HKFRS 16 at 1 January 2019 using the modified retrospective approach. Under this approach, the comparative information is not restated. See note 1(c).

The notes on pages 112 to 220 form part of these financial statements.

1. SIGNIFICANT ACCOUNTING POLICIES

(a) Statement of compliance

These financial statements have been prepared in accordance with all applicable Hong Kong Financial Reporting Standards ("HKFRSs"), which collective term includes all applicable individual 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 disclosure requirements of the Hong Kong Companies Ordinance. These financial statements also comply with the applicable disclosure provisions of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited. Significant accounting policies adopted by the Group are disclosed below.

The HKICPA has issued certain new and revised HKFRSs that are first effective or available for early adoption for the current accounting period of the Group. Note 1(c) provides information on any changes in accounting policies resulting from initial application of these developments to the extent that they are relevant to the Group for the current and prior accounting periods reflected in these financial statements.

(b) Basis of preparation of the financial statements

The consolidated financial statements for the year ended 31 December 2019 comprise the Company and its subsidiaries (together referred to as the "Group") and the Group's interest in equity-accounted investees.

The measurement basis used in the preparation of the financial statements is the historical cost basis except that the following assets and liabilities are stated at their fair value as explained in the accounting policies set out below:

– investments in debt and equity securities (see note 1(g)); and

– derivative financial instruments (see note 1(h))

The preparation of financial statements in conformity with HKFRSs requires management to make judgements, estimates and assumptions that affect the application of policies and reported amounts of assets, liabilities, income and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Judgements made by management in the application of HKFRSs that have significant effect on the financial statements and major sources of estimation uncertainty are discussed in note 2.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(c) Changes in accounting policies

The HKICPA has issued a new HKFRS, HKFRS 16, Leases, and a number of amendments to HKFRSs that are first effective for the current accounting period of the Group.

Except for HKFRS 16, Leases, none of the developments have had a material effect on how the Group's results and financial position for the current or prior periods have been prepared or presented. The Group has not applied any new standard or interpretation that is not yet effective for the current accounting period.

HKFRS 16, *Leases*

HKFRS 16 replaces HKAS 17, *Leases,* and the related interpretations, HK(IFRIC) 4, *Determining whether an arrangement contains a lease,* HK(SIC) 15, *Operating leases – incentives,* and HK(SIC) 27, *Evaluating the substance of transactions involving the legal form of a lease*. It introduces a single accounting model for lessees, which requires a lessee to recognise a right-of-use asset and a lease liability for all leases, except for leases that have a lease term of 12 months or less ("short-term leases") and leases of low-value assets. The lessor accounting requirements are brought forward from HKAS 17 substantially unchanged.

HKFRS 16 also introduces additional qualitative and quantitative disclosure requirements which aim to enable users of the financial statements to assess the effect that leases have on the financial position, financial performance and cash flows of an entity.

The Group has initially applied HKFRS 16 as from 1 January 2019. The Group has elected to use the modified retrospective approach and has therefore recognised the cumulative effect of initial application as an adjustment to the opening balance of equity at 1 January 2019. Comparative information has not been restated and continues to be reported under HKAS 17.

Further details of the nature and effect of the changes to previous accounting policies and the transition options applied are set out below:

a. *New definition of a lease*

The change in the definition of a lease mainly relates to the concept of control. HKFRS 16 defines a lease on the basis of whether a customer controls the use of an identified asset for a period of time, which may be determined by a defined amount of use. Control is conveyed where the customer has both the right to direct the use of the identified asset and to obtain substantially all of the economic benefits from that use.

The Group applies the new definition of a lease in HKFRS 16 only to contracts that were entered into or changed on or after 1 January 2019. For contracts entered into before 1 January 2019, the Group has used the transitional practical expedient to grandfather the previous assessment of which existing arrangements are or contain leases. Accordingly, contracts that were previously assessed as leases under HKAS 17 continue to be accounted for as leases under HKFRS 16 and contracts previously assessed as non-lease service arrangements continue to be accounted for as executory contracts.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(c) Changes in accounting policies (continued)

HKFRS 16, *Leases (continued)*

b. Lessee accounting and transitional impact

HKFRS 16 eliminates the requirement for a lessee to classify leases as either operating leases or finance leases, as was previously required by HKAS 17. Instead, the Group is required to capitalise all leases when it is the lessee, including leases previously classified as operating leases under HKAS 17, other than those short-term leases and leases of low-value assets which are exempt. As far as the Group is concerned, these newly capitalised leases are primarily in relation to property, plant and equipment as disclosed in note 31(b). For an explanation of how the Group applies lessee accounting, see note 1(l)(i).

At the date of transition to HKFRS 16 (i.e. 1 January 2019), the Group determined the length of the remaining lease terms and measured the lease liabilities for the leases previously classified as operating leases at the present value of the remaining lease payments, discounted using the relevant incremental borrowing rates at 1 January 2019. The weighted average of the incremental borrowing rates used for determination of the present value of the remaining lease payments was 4.83%.

To ease the transition to HKFRS 16, the Group applied the following recognition exemption and practical expedients at the date of initial application of HKFRS 16:

(i) the Group elected not to apply the requirements of HKFRS 16 in respect of the recognition of lease liabilities and right-of-use assets to leases for which the remaining lease term ends within 12 months from the date of initial application of HKFRS 16, i.e. where the lease term ends on or before 31 December 2019;

(ii) when measuring the lease liabilities at the date of initial application of HKFRS 16, the Group applied a single discount rate to a portfolio of leases with reasonably similar characteristics (such as leases with a similar remaining lease term for a similar class of underlying asset in a similar economic environment); and

(iii) when measuring the right-of-use assets at the date of initial application of HKFRS 16, the Group relied on the previous assessment for onerous contract provisions as at 31 December 2018 as an alternative to performing an impairment review.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(c) Changes in accounting policies (continued)

HKFRS 16, *Leases (continued)*

b. Lessee accounting and transitional impact (continued)

The following table reconciles the operating lease commitments as disclosed in note 31(b) as at 31 December 2018 to the opening balance for lease liabilities recognised as at 1 January 2019:

	1 January 2019 US$'000
Operating lease commitments at 31 December 2018	**55,458**
Less: commitments relating to leases exempt from capitalisation:	
– short-term leases and other leases with remaining lease term ending on or before 31 December 2019	**(2,305)**
	53,153
Less: total future interest expenses	**(7,784)**
Present value of remaining lease payments, discounted using the incremental borrowing rate at 1 January 2019	**45,369**
Add: finance lease liabilities recognised as at 31 December 2018	**3,868**
Total lease liabilities recognised at 1 January 2019	**49,237**

The right-of-use assets in relation to leases previously classified as operating leases have been recognised at an amount equal to the amount recognised for the remaining lease liabilities, adjusted by the amount of any prepaid or accrued lease payments relating to that lease recognised in the statement of financial position at 31 December 2018, except for a lease of property in France, when the right-of-use assets have been recognised as if HKFRS 16 had always been applied since the commencement date of the lease (other than discounting using the relevant incremental borrowing rate at the date of initial application of HKFRS 16).

So far as the impact of the adoption of HKFRS 16 on leases previously classified as finance leases is concerned, the Group is not required to make any adjustments at the date of initial application of HKFRS 16, other than changing the captions for the balances. Accordingly, instead of "Trade and other payables", these amounts are included within "lease liabilities", and the depreciated carrying amount of the corresponding leased assets is identified as right-of-use assets. There is no impact on the opening balance of equity.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(c) Changes in accounting policies (continued)

HKFRS 16, *Leases (continued)*

b. Lessee accounting and transitional impact (continued)

The following table summarises the impacts of the adoption of HKFRS 16 on the Group's consolidated statement of financial position:

	Carrying amount at 31 December 2018 US$'000	Capitalisation of operating lease contracts US$'000	Reclassification US$'000	**Carrying amount at 1 January 2019 US$'000**
Line items in the consolidated statement of financial position impacted by the adoption of HKFRS 16:				
Other property, plant and equipment	336,263	59,671	–	**395,934**
Land use rights	15,087	(15,087)	–	**–**
Total non-current assets	719,756	44,584	–	**764,340**
Trade and other receivables	245,143	–	(90)	**245,053**
Total current assets	554,691	–	(90)	**554,601**
Trade and other payables (current)	(236,813)	–	1,250	**(235,563)**
Lease liabilities (current)	–	(9,456)	(1,160)	**(10,616)**
Current liabilities	(440,390)	(9,456)	90	**(449,756)**
Net current assets	114,301	(9,456)	–	**104,845**
Total assets less current liabilities	834,057	35,128	–	**869,185**
Other payables (non-current)	(93,625)	–	2,708	**(90,917)**
Lease liabilities (non-current)	–	(35,992)	(2,708)	**(38,700)**
Total non-current liabilities	(305,111)	(35,992)	–	**(341,103)**
Net assets	528,946	(864)	–	**528,082**
Reserve	(442,780)	648	–	**(442,132)**
Total equity attributable to equity shareholders of the Company	(442,796)	648	–	**(442,148)**
Non-controlling interests	(86,150)	216	–	**(85,934)**
Total equity	(528,946)	864	–	**(528,082)**

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(c) Changes in accounting policies (continued)

HKFRS 16, *Leases (continued)*

c. Impact on the financial result and cash flows of the Group

After the initial recognition of right-of-use assets and lease liabilities as at 1 January 2019, the Group as a lessee is required to recognise interest expense accrued on the outstanding balance of the lease liability, and the depreciation of the right-of-use asset, instead of the previous policy of recognising rental expenses incurred under operating leases on a straight- line basis over the lease term. This results in a positive impact on the reported profit from operations in the Group's consolidated statement of profit or loss, as compared to the results if HKAS 17 had been applied during the year.

In the cash flow statement, the Group as a lessee is required to split rentals paid under capitalised leases into their capital element and interest element (see note 19(c)). These elements are classified as financing cash outflows, similar to how leases previously classified as finance leases under HKAS 17 were treated, rather than as operating cash outflows, as was the case for operating leases under HKAS 17. Although total cash flows are unaffected, the adoption of HKFRS 16 therefore results in a significant change in presentation of cash flows within the cash flow statement (see note 19(d)).

The following tables give an indication of the estimated impact of the adoption of HKFRS 16 on the Group's financial result and cash flows for the year ended 31 December 2019, by adjusting the amounts reported under HKFRS 16 in these consolidated financial statements to compute estimates of the hypothetical amounts that would have been recognised under HKAS 17 if this superseded standard had continued to apply in 2019 instead of HKFRS 16, and by comparing these hypothetical amounts for 2019 with the actual 2018 corresponding amounts which were prepared under HKAS 17.

	2019				2018
	Amounts reported under HKFRS 16 (A) US$'000	**Add back: HKFRS 16 depreciation and interest expense (B) US$'000**	**Deduct: Estimated amounts related to operating leases as if under HKAS 17 (note 1) (C) US$'000**	**Hypothetical amounts for 2019 as if under HKAS 17 (D=A+B-C) US$'000**	Compared to amounts reported for 2018 under HKAS 17 US$'000
Financial result for year ended 31 December 2019 impacted by the adoption of HKFRS 16:					
Profit from operations	**28,457**	**10,728**	**(10,829)**	**28,356**	52,054
Finance costs	**(22,698)**	**2,469**	**–**	**(20,229)**	(21,020)
Profit before taxation	**63,208**	**13,197**	**(10,829)**	**65,576**	32,929
Profit for the year	**29,009**	**13,713**	**(10,829)**	**31,893**	18,381

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(c) Changes in accounting policies (continued)

HKFRS 16, *Leases (continued)*

c. Impact on the financial result and cash flows of the Group (continued)

	2019			2018
	Amounts reported under HKFRS 16 (A) US$'000	Estimated amounts related to operating leases as if under HKAS 17 (notes 1 & 2) (B) US$'000	Hypothetical amounts for 2019 as if under HKAS 17 (C=A+B) US$'000	Compared to amounts reported for 2018 under HKAS 17 US$'000
Line items in the consolidated cash flow statement for year ended 31 December 2019 impacted by the adoption of HKFRS 16:				
Cash generated from operations	**50,652**	**(10,188)**	**40,464**	100,328
Net cash generated from operating activities	**26,451**	**(10,188)**	**16,263**	84,130
Capital element of lease rentals paid	**(8,479)**	**7,719**	**(760)**	–
Interest element of lease rentals paid	**(2,469)**	**2,469**	**–**	–
Net cash generated from financing activities	**207,361**	**10,188**	**217,549**	204,539

Note 1: The "estimated amounts related to operating leases" is an estimate of the amounts of the cash flows in 2019 that relate to leases which would have been classified as operating leases, if HKAS 17 had still applied in 2019. This estimate assumes that there were no differences between rentals and cash flows and that all of the new leases entered into in 2019 would have been classified as operating leases under HKAS 17, if HKAS 17 had still applied in 2019. Any potential net tax effect is ignored.

Note 2: In this impact table these cash outflows are reclassified from financing to operating in order to compute hypothetical amounts of net cash generated from operating activities and net cash generated from financing activities as if HKAS 17 still applied.

d. Lessor accounting

The Group leases out the investment properties as the lessor of operating leases. The accounting policies applicable to the Group as a lessor remain substantially unchanged from those under HKAS 17.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(d) Subsidiaries and non-controlling interests

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. When assessing whether the Group has power, only substantive rights (held by the Group and other parties) are considered.

An investment in a subsidiary is consolidated into the consolidated financial statements from the date that control commences until the date that control ceases. Intra-group balances, transactions and cash flows and any unrealised profits arising from intra-group transactions are eliminated in full in preparing the consolidated financial statements. Unrealised losses resulting from intra-group transactions are eliminated in the same way as unrealised gains but only to the extent that there is no evidence of impairment.

Non-controlling interests represent the equity in a subsidiary not attributable directly or indirectly to the Company, and in respect of which the Group has not agreed any additional terms with the holders of those interests which would result in the Group as a whole having a contractual obligation in respect of those interests that meets the definition of a financial liability. For each business combination, the Group can elect to measure any non-controlling interests either at fair value or at the non-controlling interests' proportionate share of the subsidiary's net identifiable assets.

Non-controlling interests are presented in the consolidated statement of financial position within equity, separately from equity attributable to the equity shareholders of the Company. Non-controlling interests in the results of the Group are presented on the face of the consolidated statement of profit or loss and the consolidated statement of profit or loss and other comprehensive income as an allocation of the total profit or loss and total comprehensive income for the year between non-controlling interests and the equity shareholders of the Company. Loans from holders of non-controlling interests and other contractual obligations towards these holders are presented as financial liabilities in the consolidated statement of financial position in accordance with notes 1(r), (s) and (u) depending on the nature of the liability.

Changes in the Group's interests in a subsidiary that do not result in a loss of control are accounted for as equity transactions, whereby adjustments are made to the amounts of controlling and non-controlling interests within consolidated equity to reflect the change in relative interests, but no adjustments are made to goodwill and no gain or loss is recognised.

When the Group loses control of a subsidiary, it is accounted for as a disposal of the entire interest in that subsidiary, with a resulting gain or loss being recognised in profit or loss. Any interest retained in that former subsidiary at the date when control is lost is recognised at fair value and this amount is regarded as the fair value on initial recognition of a financial asset (see note 1(g)) or, when appropriate, the cost on initial recognition of an investment in an associate or joint venture (see note 1(e)).

In the Company's statement of financial position, an investment in a subsidiary is stated at cost less impairment losses (see note 1(m)(iii)).

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(e) Associates and joint ventures

An associate is an entity in which the Group or Company has significant influence, but not control or joint control, over its management, including participation in the financial and operating policy decisions.

A joint venture is an arrangement whereby the Group or Company and other parties contractually agree to share control of the arrangement, and have rights to the net assets of the arrangement.

An investment in an associate or a joint venture is accounted for in the consolidated financial statements under the equity method. Under the equity method, the investment is initially recorded at cost, adjusted for any excess of the Group's share of the acquisition-date fair values of the investee's identifiable net assets over the cost of the investment (if any). The cost of the investment includes purchase price, other costs directly attributable to the acquisition of the investment, and any direct investment into the associate or joint venture that forms part of the Group's equity investment. Thereafter, the investment is adjusted for the post acquisition change in the Group's share of the investee's net assets and any impairment loss relating to the investment (see notes 1(f) and 1(m)(iii)). Any acquisition-date excess over cost, the Group's share of the post-acquisition, post-tax results of the investees and any impairment losses for the year are recognised in the consolidated statement of profit or loss, whereas the Group's share of the post-acquisition post-tax items of the investees' other comprehensive income is recognised in the consolidated statement of profit or loss and other comprehensive income.

When the Group's share of losses exceeds its interest in the associate or the joint venture, the Group's interest is reduced to nil and recognition of further losses is discontinued except to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the investee. For this purpose, the Group's interest is the carrying amount of the investment under the equity method together with any other long-term interests that in substance form part of the Group's net investment in the associate or the joint venture (after applying the expected credit losses ("ECL") model to such other long-term interests where applicable (see note 1(m)(i)).

Unrealised profits and losses resulting from transactions between the Group and its associates and joint venture are eliminated to the extent of the Group's interest in the investee, except where unrealised losses provide evidence of an impairment of the asset transferred, in which case they are recognised immediately in profit or loss.

If an investment in an associate becomes an investment in a joint venture or vice versa, the retained interest is not remeasured. Instead, the investment continues to be accounted for under the equity method.

In all other cases, when the Group ceases to have significant influence over an associate or joint control over a joint venture, it is accounted for as a disposal of the entire interest in that investee, with a resulting gain or loss being recognised in profit or loss. Any interest retained in that former investee at the date when significant influence or joint control is lost is recognised at fair value and this amount is regarded as the fair value on initial recognition of a financial asset (see note 1(g)).

In the Company's statement of financial position, investments in associates and joint venture are accounted for using the equity method.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(f) Goodwill

Goodwill represents the excess of

(i) the aggregate of the fair value of the consideration transferred, the amount of any non- controlling interest in the acquiree and the fair value of the Group's previously held equity interest in the acquiree; over

(ii) the net fair value of the acquiree's identifiable assets and liabilities measured as at the acquisition date.

When (ii) is greater than (i), then this excess is recognised immediately in profit or loss as a gain on a bargain purchase.

Goodwill is stated at cost less accumulated impairment losses. Goodwill arising on a business combination is allocated to each cash-generating unit, or groups of cash generating units, that is expected to benefit from the synergies of the combination and is tested annually for impairment (see note 1(m)).

On disposal of a cash-generating unit during the year, any attributable amount of purchased goodwill is included in the calculation of the profit or loss on disposal.

(g) Other investments in debt and equity securities

The Group's policies for investments in debt and equity securities, other than investments in subsidiaries, associates and a joint venture, are set out below.

Investments in debt and equity securities are recognised/derecognised on the date the Group commits to purchase/sell the investment. The investments are initially stated at fair value plus directly attributable transaction costs, except for those investments measured at fair value through profit or loss ("FVPL") for which transaction costs are recognised directly in profit or loss. For an explanation of how the Group determines fair value of financial instruments, see note 30(e). These investments are subsequently accounted for as follows, depending on their classification.

(i) Investments other than equity investments

Non-equity investments held by the Group are classified into one of the following measurement categories:

– amortised cost, if the investment is held for the collection of contractual cash flows which represent solely payments of principal and interest. Interest income from the investment is calculated using the effective interest method (see note 1(y)(v)).

– fair value through other comprehensive income ("FVOCI") – recycling, if the contractual cash flows of the investment comprise solely payments of principal and interest and the investment is held within a business model whose objective is achieved by both the collection of contractual cash flows and sale. Changes in fair value are recognised in other comprehensive income, except for the recognition in profit or loss of expected credit losses, interest income (calculated using the effective interest method) and foreign exchange gains and losses. When the investment is derecognised, the amount accumulated in other comprehensive income is recycled from equity to profit or loss.

– fair value at profit or loss ("FVPL") if the investment does not meet the criteria for being measured at amortised cost or FVOCI (recycling). Changes in the fair value of the investment (including interest) are recognised in profit or loss.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(g) Other investments in debt and equity securities (continued)

(ii) Equity investments

An investment in equity securities is classified as FVPL unless the equity investment is not held for trading purposes and on initial recognition of the investment the Group makes an irrevocable election to designate the investment at FVOCI (non-recycling) such that subsequent changes in fair value are recognised in other comprehensive income. Such elections are made on an instrument-by-instrument basis, but may only be made if the investment meets the definition of equity from the issuer's perspective. Where such an election is made, the amount accumulated in other comprehensive income remains in the fair value reserve (non-recycling) until the investment is disposed of. At the time of disposal, the amount accumulated in the fair value reserve (non-recycling) is transferred to retained earnings. It is not recycled through profit or loss. Dividends from an investment in equity securities, irrespective of whether classified as at FVPL or FVOCI, are recognised in profit or loss as other income in accordance with the policy set out in note 1(y)(iv).

(h) Derivative financial instruments

Derivative financial instruments are recognised at fair value. At the end of each reporting period the fair value is remeasured. The gain or loss on remeasurement to fair value is recognised immediately in profit or loss.

(i) Investment property

Investment properties are land and/or buildings which are owned or held under a leasehold interest (see note 1(l)) to earn rental income and/or for capital appreciation. These include land held for a currently undetermined future use and property that is being constructed or developed for future use as investment property.

Investment properties are stated at cost less accumulated depreciation and impairment losses (see note 1(m)). Depreciation is calculated to write off the cost of investment property less its estimated residual value using the straight line method over its estimated useful life. Rental income from investment properties is accounted for as described in note 1(y)(iii).

In the comparative period, when the Group held a property interest under an operating lease and used the property to earn rental income and/or for capital appreciation, the Group could elect on a property-by-property basis to classify and account for such interest as an investment property.

(j) Other property, plant and equipment

Other property, plant and equipment, including right-of-use assets arising from leases of underlying plant and equipment (see note 1(l)) are stated at cost less accumulated depreciation and impairment losses (see note 1(m)).

The cost of self-constructed items of property, plant and equipment includes the cost of materials, direct labour, the initial estimate, where relevant, of the costs of dismantling and removing the items and restoring the site on which they are located, and an appropriate proportion of production overheads and borrowing costs (see note 1(aa)).

Gains or losses arising from the retirement or disposal of an item of property, plant and equipment are determined as the difference between the net disposal proceeds and the carrying amount of the item and are recognised in profit or loss on the date of retirement or disposal.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(j) Other property, plant and equipment (continued)

Depreciation is calculated to write off the cost of items of property, plant and equipment, less their estimated residual value, if any, using the straight line method over their estimated useful lives as follows:

– Freehold land is not depreciated;

– Buildings situated on leasehold land are depreciated over the shorter of the unexpired term of lease and their estimated useful lives, being no more than 50 years after the date of completion;

– Leasehold improvements are depreciated over the shorter of the unexpired term of lease and their estimated useful lives, being 5 to 10 years from the date of completion;

–	Equipment and machinery	5 to 11 years
–	Office equipment, furniture and fixtures	3 to 10 years
–	Motor vehicles	4 to 10 years

Where parts of an item of property, plant and equipment have different useful lives, the cost of the item is allocated on a reasonable basis between the parts and each part is depreciated separately. Both the useful life of an asset and its residual value, if any, are reviewed annually.

(k) Intangible assets (other than goodwill)

Expenditure on research activities is recognised as an expense in the period in which it is incurred. Expenditure on development activities is capitalised if the product or process is technically and commercially feasible and the Group has sufficient resources and the intention to complete development. The expenditure capitalised includes the costs of materials, direct labour, and an appropriate proportion of overheads and borrowing costs, where applicable (see note 1(aa)). Capitalised development costs are stated at cost less accumulated amortisation and impairment losses (see note 1(m)). Other development expenditure is recognised as an expense in the period in which it is incurred.

Other intangible assets that are acquired by the Group are stated at cost less accumulated amortisation (where the estimated useful life is finite) and impairment losses (see note 1(m)). Expenditure on internally generated goodwill and brands is recognised as an expense in the period in which it is incurred.

(Expressed in United States dollars unless otherwise indicated)

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(k) Intangible assets (other than goodwill) (continued)

Amortisation of intangible assets with finite useful lives is charged to profit or loss on a straight-line basis over the assets' estimated useful lives. The following intangible assets with finite useful lives are amortised from the date they are available for use and their estimated useful lives are as follows:

– Technologies	9 to 17 years
– Products licences	12 to 17 years
– Capitalised development costs	5 to 10 years
– Customer contracts and related customer relationship	1.5 to 10 years
– Trademark and others	35 months to 20 years

Both the period and method of amortisation are reviewed annually.

(l) Leased assets

At inception of a contract, the Group assesses whether the contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. Control is conveyed where the customer has both the right to direct the use of the identified asset and to obtain substantially all of the economic benefits from that use.

(i) As a lessee

(A) Policy applicable from 1 January 2019

Where the contract contains lease component(s) and non-lease component(s), the Group has elected not to separate non-lease components and accounts for each lease component and any associated non-lease components as a single lease component for all leases.

At the lease commencement date, the Group recognises a right-of-use asset and a lease liability, except for short-term leases that have a lease term of 12 months or less and leases of low-value assets which, for the Group are primarily laptops and office furniture. When the Group enters into a lease in respect of a low-value asset, the Group decides whether to capitalise the lease on a lease-by-lease basis. The lease payments associated with those leases which are not capitalised are recognised as an expense on a systematic basis over the lease term.

Where the lease is capitalised, the lease liability is initially recognised at the present value of the lease payments payable over the lease term, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, using a relevant incremental borrowing rate. After initial recognition, the lease liability is measured at amortised cost and interest expense is calculated using the effective interest method. Variable lease payments that do not depend on an index or rate are not included in the measurement of the lease liability and hence are charged to profit or loss in the accounting period in which they are incurred.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(l) Leased assets (continued)

(i) As a lessee (continued)

(A) Policy applicable from 1 January 2019 (continued)

The right-of-use asset recognised when a lease is capitalised is initially measured at cost, which comprises the initial amount of the lease liability plus any lease payments made at or before the commencement date, and any initial direct costs incurred. Where applicable, the cost of the right-of-use assets also includes an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, discounted to their present value, less any lease incentives received. The right-of-use asset is subsequently stated at cost less accumulated depreciation and impairment losses (see notes 1(j) and 1(m)(iii)).

The lease liability is remeasured when there is a change in future lease payments arising from a change in an index or rate, or there is a change in the Group's estimate of the amount expected to be payable under a residual value guarantee, or there is a change arising from the reassessment of whether the Group will be reasonably certain to exercise a purchase, extension or termination option. When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right- of-use asset has been reduced to zero.

The Group presents right-of-use assets that do not meet the definition of investment property in 'other property, plant and equipment' and presents lease liabilities separately in the statement of financial position.

(B) Policy applicable prior to 1 January 2019

In the comparative period, as a lessee the Group classified leases as finance leases if the leases transferred substantially all the risks and rewards of ownership to the Group. Leases which did not transfer substantially all the risks and rewards of ownership to the Group were classified as operating leases, with the following exceptions:

– property held under operating leases that would otherwise meet the definition of an investment property was classified as investment property on a property-by-property basis and, if classified as investment property, was accounted for as if held under a finance lease (see note 1(i)); and

– land held for own use under an operating lease, the fair value of which could not be measured separately from the fair value of a building situated thereon at the inception of the lease, was accounted for as being held under a finance lease, unless the building was also clearly held under an operating lease. For these purposes, the inception of the lease was the time that the lease was first entered into by the Group, or taken over from the previous lessee.

Where the Group acquired the use of assets under finance leases, the amounts representing the fair value of the leased asset, or, if lower, the present value of the minimum lease payments, of such assets were recognised as property, plant and equipment and the corresponding liabilities, net of finance charges, were recorded as obligations under finance leases. Depreciation was provided at rates which wrote off the cost or valuation of the assets over the term of the relevant lease or, where it was likely the Group would obtain ownership of the asset, the life of the asset, as set out in note 1(j). Impairment losses were accounted for in accordance with the accounting policy as set out in note 1(m). Finance charges implicit in the lease payments were charged to profit or loss over the period of the leases so as to produce an approximately constant periodic rate of charge on the remaining balance of the obligations for each accounting period. Contingent rentals were charged to profit or loss in the accounting period in which they were incurred.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(l) Leased assets (continued)

(i) As a lessee (continued)

(B) Policy applicable prior to 1 January 2019 (continued)

Where the Group had the use of assets held under operating leases, payments made under the leases were charged to profit or loss in equal instalments over the accounting periods covered by the lease term, except where an alternative basis was more representative of the pattern of benefits to be derived from the leased asset.
Lease incentives received were recognised in profit or loss as an integral part of the aggregate net lease payments made. Contingent rentals were charged to profit or loss in the accounting period in which they were incurred.

(ii) As a lessor

When the Group acts as a lessor, it determines at lease inception whether each lease is a finance lease or an operating lease. A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to the ownership of an underlying assets to the lessee. If this is not the case, the lease is classified as an operating lease.

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. The rental income from operating leases is recognised in accordance with note 1(y)(iii).

(m) Credit losses and impairment of assets

(i) Credit losses from financial instruments, contract assets and lease receivables

The Group recognises a loss allowance for ECL on the following items:

– financial assets measured at amortised cost (including cash and cash equivalents, pledged deposits, time deposits, trade and other receivables and amounts due from equity-accounted investees, which are held for the collection of contractual cash flows which represent solely payments of principal and interest);

– contract assets as defined in HKFRS 15 (see note 1(o)); and

– lease receivables.

Other financial assets measured at fair value, including equity and debt securities measured at FVPL and derivative financial assets, are not subject to the ECL assessment.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(m) Credit losses and impairment of assets (continued)

(i) Credit losses from financial instruments, contract assets and lease receivables (continued)

Measurement of ECLs

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all expected cash shortfalls (i.e. the difference between the cash flows due to the Group in accordance with the contract and the cash flows that the Group expects to receive).

The expected cash shortfalls are discounted using the following discount rates where the effect of discounting is material:

– fixed-rate financial assets, trade and other receivables and contract assets: effective interest rate determined at initial recognition or an approximation thereof;

– variable-rate financial assets: current effective interest rate; and

– lease receivables: discount rate used in the measurement of the lease receivable.

The maximum period considered when estimating ECLs is the maximum contractual period over which the Group is exposed to credit risk.

In measuring ECLs, the Group takes into account reasonable and supportable information that is available without undue cost or effort. This includes information about past events, current conditions and forecasts of future economic conditions.

ECLs are measured on either of the following bases:

– 12-month ECLs: these are losses that are expected to result from possible default events within the 12 months after the reporting date; and

– lifetime ECLs: these are losses that are expected to result from all possible default events over the expected lives of the items to which the ECL model applies.

Loss allowances for trade receivables, lease receivables and contract assets are always measured at an amount equal to lifetime ECLs. ECLs on these financial assets are estimated using a provision matrix based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors and an assessment of both the current and forecast general economic conditions at the reporting date.

For all other financial instruments, the Group recognises a loss allowance equal to 12-month ECLs unless there has been a significant increase in credit risk of the financial instrument since initial recognition, in which case the loss allowance is measured at an amount equal to lifetime ECLs.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(m) Credit losses and impairment of assets (continued)

(i) Credit losses from financial instruments, contract assets and lease receivables (continued)

Significant increases in credit risk

In assessing whether the credit risk of a financial instrument has increased significantly since initial recognition, the Group compares the risk of default occurring on the financial instrument assessed at the reporting date with that assessed at the date of initial recognition. In making this reassessment, the Group considers that a default event occurs when the borrower is unlikely to pay its credit obligations to the Group in full, without recourse by the Group to actions such as realising security (if any is held). The Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

In particular, the following information is taken into account when assessing whether credit risk has increased significantly since initial recognition:

– failure to make payments of principal or interest on their contractually due dates;

– an actual or expected significant deterioration in a financial instrument's external or internal credit rating (if available);

– an actual or expected significant deterioration in the operating results of the debtor; and

– existing or forecast changes in the technological, market, economic or legal environment that have a significant adverse effect on the debtor's ability to meet its obligation to the Group.

Depending on the nature of the financial instruments, the assessment of a significant increase in credit risk is performed on either an individual basis or a collective basis. When the assessment is performed on a collective basis, the financial instruments are grouped based on shared credit risk characteristics, such as past due status and credit risk ratings.

ECLs are remeasured at each reporting date to reflect changes in the financial instrument's credit risk since initial recognition. Any change in the ECL amount is recognised as an impairment gain or loss in profit or loss. The Group recognises an impairment gain or loss for all financial instruments with a corresponding adjustment to their carrying amount through a loss allowance account, except for investments in debt securities that are measured at FVOCI (recycling), for which the loss allowance is recognised in other comprehensive income and accumulated in the fair value reserve (recycling).

Basis of calculation of interest income

Interest income recognised in accordance with note 1(y)(v) is calculated based on the gross carrying amount of the financial asset unless the financial asset is credit-impaired, in which case interest income is calculated based on the amortised cost (i.e. the gross carrying amount less loss allowance) of the financial asset.

At each reporting date, the Group assesses whether a financial asset is credit-impaired. A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(m) Credit losses and impairment of assets (continued)

(i) Credit losses from financial instruments, contract assets and lease receivables (continued)

Basis of calculation of interest income (continued)

Evidence that a financial asset is credit-impaired includes the following observable events:

– significant financial difficulties of the debtor;

– a breach of contract, such as a default or past due event;

– it becoming probable that the borrower will enter into bankruptcy or other financial reorganisation;

– significant changes in the technological, market, economic or legal environment that have an adverse effect on the debtor; or

– the disappearance of an active market for a security because of financial difficulties of the issuer.

Write-off policy

The gross carrying amount of a financial asset, lease receivable or contract asset is written off (either partially or in full) to the extent that there is no realistic prospect of recovery. This is generally the case when the Group determines that the debtor does not have assets or sources of income that could generate sufficient cash flows to repay the amounts subject to the write-off.

Subsequent recoveries of an asset that was previously written off are recognised as a reversal of impairment in profit or loss in the period in which the recovery occurs.

(ii) Credit losses from financial guarantees issued

Financial guarantees are contracts that require the issuer (i.e. the guarantor) to make specified payments to reimburse the beneficiary of the guarantee (the "holder") for a loss the holder incurs because a specified debtor fails to make payment when due in accordance with the terms of a debt instrument.

Financial guarantees issued are initially recognised within "trade and other payables" at fair value, which is determined by reference to fees charged in an arm's length transaction for similar services, when such information is obtainable, or to interest rate differentials, by comparing the actual rates charged by lenders when the guarantee is made available with the estimated rates that lenders would have charged, had the guarantees not been available, where reliable estimates of such information can be made. Where consideration is received or receivable for the issuance of the guarantee, the consideration is recognised in accordance with the Group's policies applicable to that category of asset. Where no such consideration is received or receivable, an immediate expense is recognised in profit or loss.

Subsequent to initial recognition, the amount initially recognised as deferred income is amortised in profit or loss over the term of the guarantee as income from financial guarantees issued.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(m) Credit losses and impairment of assets (continued)

(ii) Credit losses from financial guarantees issued (continued)

The Group monitors the risk that the specified debtor will default on the contract and recognises a provision when ECLs on the financial guarantees are determined to be higher than the amount carried in "trade and other payables" in respect of the guarantees (i.e. the amount initially recognised, less accumulated amortisation).

To determine ECLs, the Group considers changes in the risk of default of the specified debtor since the issuance of the guarantee. A 12-month ECL is measured unless the risk that the specified debtor will default has increased significantly since the guarantee is issued, in which case a lifetime ECL is measured. The same definition of default and the same assessment of significant increase in credit risk as described in note 1(m)(i) apply.

As the Group is required to make payments only in the event of a default by the specified debtor in accordance with the terms of the instrument that is guaranteed, an ECL is estimated based on the expected payments to reimburse the holder for a credit loss that it incurs less any amount that the Group expects to receive from the holder of the guarantee, the specified debtor or any other party. The amount is then discounted using the current risk- free rate adjusted for risks specific to the cash flows.

(iii) Impairment of other non-current assets

Internal and external sources of information are reviewed at the end of each reporting period to identify indications that the following assets may be impaired or, except in the case of goodwill, an impairment loss previously recognised no longer exists or may have decreased:

– investment properties;

– other property, plant and equipment, including right-of-use assets;

– intangible assets;

– goodwill;

– investments in equity-accounted investees; and

– investments in subsidiaries in the Company's statement of financial position.

If any such indication exists, the asset's recoverable amount is estimated. In addition, for goodwill and intangible assets that are not yet available for use, the recoverable amount is estimated annually whether or not there is any indication of impairment.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(m) Credit losses and impairment of assets (continued)

(iii) Impairment of other non-current assets (continued)

– *Calculation of recoverable amount*

The recoverable amount of an asset is the greater of its fair value less costs of disposal and value in use. 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. Where an asset does not generate cash inflows largely independent of those from other assets, the recoverable amount is determined for the smallest group of assets that generates cash inflows independently (i.e. a cash-generating unit).

– *Recognition of impairment losses*

An impairment loss is recognised in profit or loss if the carrying amount of an asset, or the cash-generating unit to which it belongs, exceeds its recoverable amount. Impairment losses recognised in respect of cash-generating units are allocated first to reduce the carrying amount of any goodwill allocated to the cash-generating unit (or group of units) and then, to reduce the carrying amount of the other assets in the unit (or group of units) on a pro rata basis, except that the carrying value of an asset will not be reduced below its individual fair value less costs of disposal (if measurable) or value in use (if determinable).

– *Reversals of impairment losses*

In respect of assets other than goodwill, an impairment loss is reversed if there has been a favourable change in the estimates used to determine the recoverable amount. An impairment loss in respect of goodwill is not reversed.

A reversal of an impairment loss is limited to the asset's carrying amount that would have been determined had no impairment loss been recognised in prior years. Reversals of impairment losses are credited to profit or loss in the year in which the reversals are recognised.

(iv) Interim financial reporting and impairment

Under the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited, the Group is required to prepare an interim financial report in compliance with HKAS 34, Interim financial reporting, in respect of the first six months of the financial year. At the end of the interim period, the Group applies the same impairment testing, recognition, and reversal criteria as it would at the end of the financial year (see note 1(m)).

Impairment losses recognised in an interim period in respect of goodwill are not reversed in a subsequent period. This is the case even if no loss, or a smaller loss, would have been recognised had the impairment been assessed only at the end of the financial year to which the interim period relates.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(n) Inventories

Inventories are assets which are held for sale in the ordinary course of business, in the process of production for such sale or in the form of materials or supplies to be consumed in the production process or in the rendering of services.

Inventories are carried at the lower of cost and net realisable value.

Cost is calculated using the first-in, first-out formula and comprises all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition.

Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

When inventories are sold, the carrying amount of those inventories is recognised as an expense in the period in which the related revenue is recognised.

The amount of any write-down of inventories to net realisable value and all losses of inventories are recognised as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories is recognised as a reduction in the amount of inventories recognised as an expense in the period in which the reversal occurs.

(o) Contract assets and contract liabilities

A contract asset is recognised when the Group recognises revenue (see note 1(y)) before being unconditionally entitled to the consideration under the payment terms set out in the contract. Contract assets are assessed for ECLs in accordance with the policy set out in note 1(m)(i) and are reclassified to receivables when the right to the consideration has become unconditional (see note 1(p)).

A contract liability is recognised when the customer pays non-refundable consideration before the Group recognises the related revenue (see note 1(y)). A contract liability would also be recognised if the Group has an unconditional right to receive non-refundable consideration before the Group recognises the related revenue. In such cases, a corresponding receivable would also be recognised (see note 1(p)).

For a single contract with the customer, either a net contract asset or a net contract liability is presented. For multiple contracts, contract assets and contract liabilities of unrelated contracts are not presented on a net basis.

When the contract includes a significant financing component, the contract balance includes interest accrued under the effective interest method (see note 1(y)(v)).

(p) Trade and other receivables

A receivable is recognised when the Group has an unconditional right to receive consideration. A right to receive consideration is unconditional if only the passage of time is required before payment of that consideration is due. If revenue has been recognised before the Group has an unconditional right to receive consideration, the amount is presented as a contract asset (see note 1(o)).

Receivables are stated at amortised cost using the effective interest method less allowance for credit losses (see note 1(m)(i)).

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(q) Cash and cash equivalents

Cash and cash equivalents comprise cash at bank and on hand, demand deposits with banks and other financial institutions, and short-term, highly liquid investments that are readily convertible into known amounts of cash and which are subject to an insignificant risk of changes in value, having been within three months of maturity at acquisition. Bank overdrafts that are repayable on demand and form an integral part of the Group's cash management are also included as a component of cash and cash equivalents for the purpose of the consolidated cash flow statement. Cash and cash equivalents are assessed for ECLs in accordance with the policy set out in note 1(m)(i).

(r) Convertible bonds issued

(i) Convertible bonds issued that contain an equity component

Convertible bonds that can be converted into ordinary shares at the option of the holder, where the number of shares to be issued is fixed, are accounted for as compound financial instruments, i.e. they contain both a liability component and an equity component.

At initial recognition the liability component of the convertible bonds is measured at fair value based on the future interest and principal payments, discounted at the prevailing market rate of interest for similar non-convertible instruments. The equity component is the difference between the initial fair value of the convertible bonds as a whole and the initial fair value of the liability component. Transaction costs that relate to the issue of a compound financial instrument are allocated to the liability and equity components in proportion to the allocation of proceeds.

The liability component is subsequently carried at amortised cost. Interest expense recognised in profit or loss on the liability component is calculated using the effective interest method. The equity component is recognised in the capital reserve until either the bonds are converted or redeemed.

If the bonds are converted, the capital reserve, together with the carrying amount of the liability component at the time of conversion, is transferred to share capital and share premium as consideration for the shares issued. If the bonds are redeemed, the capital reserve is released directly to retained profits.

(ii) Other convertible bonds issued

Convertible bonds which do not contain an equity component are accounted for as follows:

At initial recognition the derivative component of the convertible bonds is measured at fair value and presented as part of derivative financial instruments (see note 1(h)). Any excess of proceeds over the amount initially recognised as the derivative component is recognised as the host liability component. Transaction costs that relate to the issue of the convertible bonds are allocated to the host liability and derivative components in proportion to the allocation of proceeds. The portion of the transaction costs relating to the host liability component is recognised initially as part of the liability. The portion relating to the derivative component is recognised immediately in profit or loss.

The derivative component is subsequently remeasured in accordance with note 1(h). The host liability component is subsequently carried at amortised cost. Interest expense recognised in profit or loss on the host liability component is calculated using the effective interest method.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(r) Convertible notes issued (continued)

(ii) Other convertible bonds issued (continued)

If the bonds are converted, the shares issued are measured at fair value and any difference between the fair value of shares issued and the carrying amounts of the derivative and liability components are recognised in profit or loss. If the bonds are redeemed, any difference between the amount paid and the carrying amounts of both components is recognised in profit or loss.

(iii) Modification of convertible bonds

When the contractual cash flows of convertible bonds are renegotiated or otherwise modified and the renegotiation or modification does not result in the derecognition of that convertible bonds, an entity shall recalculate the gross carrying amount of the convertible bonds and shall recognise a modification gain or loss in profit or loss in the year of which the modification is made. The gross carrying amount of the convertible note shall be recalculated as the present value of the renegotiated or modified contractual cash flows that are discounted at its original effective interest. Any costs or fees incurred adjust the carrying amount of the modified convertible bonds and are amortised over the remaining term of the modified convertible bonds.

(s) Interest-bearing borrowings

Interest-bearing borrowings are measured initially at fair value less transaction costs. Subsequent to initial recognition, interest-bearing borrowings are stated at amortised cost using the effective interest method. Interest expenses is recognised in accordance with the Group's accounting policy for borrowing costs (see note 1(aa)).

(t) Repurchase and reissue of share capital (treasury shares)

When share capital recognised as equity is repurchased, the amount of the consideration paid, which includes directly attributable costs, is deducted from equity attributable to the Company's equity holders. Repurchased shares held at the end of reporting period are classified as treasury shares and are presented as a decrease in the capital reserve. When treasury shares are sold or reissued subsequently, the consideration received, net of any directly attributable transaction costs, is recognised as an increase in equity, and the resulting surplus or deficit on the transaction is presented in capital reserve.

(u) Trade and other payables

Trade and other payables are initially recognised at fair value. Except for financial guarantee liabilities measured in accordance with note 1(m)(ii), trade and other payables are subsequently stated at amortised cost unless the effect of discounting would be immaterial, in which case they are stated at cost.

(v) Employee benefits

(i) Short-term employee benefits and contributions to defined contribution retirement plans

Salaries, annual bonuses, paid annual leave, contributions to defined contribution retirement plans and the cost of non-monetary benefits are accrued in the year in which the associated services are rendered by employees. Where payment or settlement is deferred and the effect would be material, these amounts are stated at their present values.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(v) Employee benefits (continued)

(ii) Defined benefit retirement plan obligations

The Group's net obligation in respect of defined benefit retirement plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine the present value and the fair value of any plan assets is deducted. The calculation is performed by a qualified actuary using the projected unit credit method. When the calculation results in a benefit to the Group, the recognised asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan.

Service cost and net interest expense/(income) on the net defined benefit liability/(asset) are recognised in profit or loss and allocated by function as part of "cost of sales", "distribution costs" or "administrative expenses". Current service cost is measured as the increase in the present value of the defined benefit obligation resulting from employee service in the current period. Net interest expense/(income) for the period is determined by applying the discount rate used to measure the defined benefit obligation at the beginning of the reporting period to the net defined benefit liability/(asset). The discount rate is the yield at the end of the reporting period on high quality corporate bonds that have maturity dates approximating the terms of the Group's obligations.

When the benefits of a plan are changed, or when a plan is curtailed, current service cost for the portion of the changed benefit related to past service by employees, or the gain or loss on curtailment, is recognised as an expense in profit or loss at the earlier of when the plan amendment or curtailment occurs and when related restructuring costs or termination benefits are recognised

Remeasurements arising from defined benefit retirement plans are recognised in other comprehensive income. Remeasurements comprise actuarial gains and losses, the return on plan assets (excluding amounts included in net interest on the net defined benefit liability/(asset)) and any change in the effect of the asset ceiling (excluding amounts included in net interest on the net defined benefit liability/(asset)).

(iii) Share-based payments

The fair value of equity-settled share-based payment awards granted to employees is recognised as an employee cost with a corresponding increase in a capital reserve within equity. The fair value is measured at grant date using the binomial tree model, taking into account the terms and conditions upon which the equity-settled share-based payment awards were granted. Where the employees have to meet vesting conditions before becoming unconditionally entitled to the equity-settled share-based payment awards, the total estimated fair value of the equity-settled share-based payment awards is spread over the vesting period, taking into account the probability that the equity-settled share-based payment awards will vest.

During the vesting period, the number of equity-settled share-based payment awards that is expected to vest is reviewed. Any resulting adjustment to the cumulative fair value recognised in prior years is charged/credited to the profit or loss for the year of the review, unless the original employee expenses qualify for recognition as an asset, with a corresponding adjustment to the capital reserve. On vesting date, the amount recognised as an expense is adjusted to reflect the actual number of equity-settled share-based payment awards that vest (with a corresponding adjustment to the capital reserve) except where forfeiture is only due to not achieving vesting conditions that relate to the market price of the Company's shares. The equity amount is recognised in the capital reserve until either the equity-settled share-based payment awards is exercised (when it is included in the amount recognised in share capital for the share issued) or the equity-settled share-based payment awards expires (when it is released directly to retained profits).

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(v) Employee benefits (continued)

(iii) Share-based payments (continued)

The fair value of the amount payable to employees in respect of the long-term incentive awards, which are settled in cash, is recognised as an expense with a corresponding increase in liabilities, over the period during which the employees become unconditionally entitled to payment. The liability is remeasured at grant date and at the end of each reporting date after taking into account all vesting and non-vesting conditions, including service conditions and non-market performance conditions.

Share-based payment transactions in which the Company grants share based payment awards to subsidiaries' employees are accounted for as an increase in value of investment in subsidiaries in the Company's financial position which is eliminated on consolidation.

(iv) Termination benefits

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

(w) Income tax

Income tax for the year comprises current tax and movements in deferred tax assets and liabilities. Current tax and movements in deferred tax assets and liabilities are recognised in profit or loss except to the extent that they relate to items recognised in other comprehensive income or directly in equity, in which case the relevant amounts of tax are recognised in other comprehensive income or directly in equity, respectively.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the end of the reporting period, and any adjustment to tax payable in respect of previous years.

Deferred tax assets and liabilities arise from deductible and taxable temporary differences respectively, being the differences between the carrying amounts of assets and liabilities for financial reporting purposes and their tax bases. Deferred tax assets also arise from unused tax losses and unused tax credits.

Apart from certain limited exceptions, all deferred tax liabilities, and all deferred tax assets, to the extent that it is probable that future taxable profits will be available against which the asset can be utilised, are recognised. Future taxable profits that may support the recognition of deferred tax assets arising from deductible temporary differences include those that will arise from the reversal of existing taxable temporary differences, provided those differences relate to the same taxation authority and the same taxable entity, and are expected to reverse either in the same period as the expected reversal of the deductible temporary difference or in periods into which a tax loss arising from the deferred tax asset can be carried back or forward. The same criteria are adopted when determining whether existing taxable temporary differences support the recognition of deferred tax assets arising from unused tax losses and credits, that is, those differences are taken into account if they relate to the same taxation authority and the same taxable entity, and are expected to reverse in a period, or periods, in which the tax loss or credit can be utilised.

The limited exceptions to recognition of deferred tax assets and liabilities are those temporary differences arising from goodwill not deductible for tax purposes, the initial recognition of assets or liabilities that affect neither accounting nor taxable profit (provided they are not part of a business combination), and temporary differences relating to investments in subsidiaries to the extent that, in the case of taxable differences, the Group controls the timing of the reversal and it is probable that the differences will not reverse in the foreseeable future, or in the case of deductible differences, unless it is probable that they will reverse in the future.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(w) Income tax (continued)

The amount of deferred tax recognised is measured based on the expected manner of realisation or settlement of the carrying amount of the assets and liabilities, using tax rates enacted or substantively enacted at the end of the reporting period. Deferred tax assets and liabilities are not discounted.

The carrying amount of a deferred tax asset is reviewed at the end of each reporting period and is reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow the related tax benefit to be utilised. Any such reduction is reversed to the extent that it becomes probable that sufficient taxable profits will be available.

Additional income taxes that arise from the distribution of dividends are recognised when the liability to pay the related dividends is recognised.

Current tax balances and deferred tax balances, and movements therein, are presented separately from each other and are not offset. Current tax assets are offset against current tax liabilities, and deferred tax assets against deferred tax liabilities, if the Company or the Group has the legally enforceable right to set off current tax assets against current tax liabilities and the following additional conditions are met:

- in the case of current tax assets and liabilities, the Company or the Group intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously; or

- in the case of deferred tax assets and liabilities, if they relate to income taxes levied by the same taxation authority on either:

  - the same taxable entity; or

  - different taxable entities, which, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered, intend to realise the current tax assets and settle the current tax liabilities on a net basis or realise and settle simultaneously.

(x) Provisions, contingent liabilities and onerous contracts

(i) Provisions and contingent liabilities

Provisions are recognised when the Group has a legal or constructive obligation arising as a result of a past event, it is probable that an outflow of economic benefits will be required to settle the obligation and a reliable estimate can be made. Where the time value of money is material, provisions are stated at the present value of the expenditure expected to settle the obligation.

Where it is not probable that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Possible obligations, whose existence will only be confirmed by the occurrence or non-occurrence of one or more future events are also disclosed as contingent liabilities unless the probability of outflow of economic benefits is remote.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(x) Provisions, contingent liabilities and onerous contracts (continued)

(ii) Onerous contracts

An onerous contract exists when the Group has a contract under which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received from the contract. Provisions for onerous contracts are measured at the present value of the lower of the expected cost of terminating the contract and the net cost of continuing with the contract.

(iii) Contingent liabilities assumed in business combinations

Contingent liabilities assumed in a business combination which are present obligations at the date of acquisition are initially recognised at fair value, provided the fair value can be reliably measured. After their initial recognition at fair value, such contingent liabilities are recognised at the higher of the amount initially recognised, less accumulated amortisation where appropriate, and the amount that would be determined in accordance with note 1(x)(i).

Contingent liabilities assumed in a business combination that cannot be reliably fair valued or were not present obligations at the date of acquisition are disclosed in accordance with note 1(x)(i).

(y) Revenue and other income

Income is classified by the Group as revenue when it arises from the sale of goods, the provision of services or the use by others of the Group's assets under leases in the ordinary course of the Group's business.

Revenue is recognised when control over a product or service is transferred to the customer, or the lessee has the right to use the asset, at the amount of promised consideration to which the Group is expected to be entitled, excluding those amounts collected on behalf of third parties. Revenue excludes value added tax or other sales taxes and is after deduction of any trade discounts.

Where the contract contains a financing component which provides a significant financing benefit to the customer for more than 12 months, 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 with the customer, and interest income is accrued separately under the effective interest method. Where the contract contains a financing component which provides a significant financing benefit to the Group, revenue recognised under that contract includes the interest expense accreted on the contract liability under the effective interest method. The Group takes advantage of the practical expedient in paragraph 63 of HKFRS 15 and does not adjust the consideration for any effects of a significant financing component if the period of financing is 12 months or less.

Further details of the Group's revenue and other income recognition policies are as follows:

(i) Sale of medical devices

Revenue is recognised when the customer takes possession of and accepts the products. If the products are a partial fulfilment of a contract covering other goods and/or services, then the amount of revenue recognised is an appropriate proportion of the total transaction price under the contract, allocated between all the goods and services promised under the contract on a relative stand-alone selling price basis.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(y) Revenue and other income (continued)

(ii) Revenue from post-sales services

The Group also renders certain post-sales services to patients in accordance with industry practice, to ensure the safe and effective use of the sold devices implanted into the patient until the implanted device needs to be replaced. The total transaction price is allocated to each performance obligation in an amount based on the estimated relative standalone selling prices of the goods or services underlying each performance obligation. If the observable stand-alone selling prices are not available, the Group uses an expected costs plus a margin approach to estimate the stand-alone selling price. Upon the sales of those implanted devices, which requires post-sales service, the Group defers revenue allocated to those unfulfilled performance obligations and recognises these services over the service period when they are rendered, which is estimated as 7 to 11 years based on the expected product lives of different implanted devices.

(iii) Rental income from operating leases

Rental income receivable under operating leases is recognised in profit or loss in equal instalments over the periods covered by the lease term, except where an alternative basis is more representative of the pattern of benefits to be derived from the use of the leased asset. Lease incentives granted are recognised in profit or loss as an integral part of the aggregate net lease payments receivable. Variable lease payments that do not depend on an index or a rate are recognised as income in the accounting period in which they are earned.

(iv) Dividends

– Dividend income from unlisted investments is recognised when the shareholder's right to receive payment is established.

– Dividend income from listed investments is recognised when the share price of the investment goes ex-dividend.

(v) Interest income

Interest income is recognised as it accrues using the effective interest method.

(vi) Government grants

Government grants are recognised in the statement of financial position initially when there is reasonable assurance that they will be received and that the Group will comply with the conditions attaching to them. Grants that compensate the Group for expenses incurred are recognised as income in profit or loss on a systematic basis in the same periods in which the expenses are incurred. Grants that compensate the Group for the cost of an asset are recognised as deferred income and subsequently recognised in profit or loss on a systematic basis over the useful life of the asset.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(z) Translation of foreign currencies

Foreign currency transactions during the year are translated at the foreign exchange rates ruling at the transaction dates. Monetary assets and liabilities denominated in foreign currencies are translated at the foreign exchange rates ruling at the end of the reporting period. Exchange gains and losses are recognised in profit or loss.

Non-monetary assets and liabilities that are measured in terms of historical cost in a foreign currency are translated using the foreign exchange rates ruling at the transaction dates. The transaction date is the date on which the Company initially recognises such non-monetary assets or liabilities. Non-monetary assets and liabilities denominated in foreign currencies that are stated at fair value are translated using the foreign exchange rates ruling at the dates the fair value was measured.

The results of foreign operations are translated into United States dollars ("US$") at the exchange rates approximating the foreign exchange rates ruling at the dates of the transactions. Statement of financial position items, including goodwill arising on consolidation of foreign operations, are translated into US$ at the closing foreign exchange rates at the end of the reporting period. The resulting exchange differences are recognised in other comprehensive income and accumulated separately in equity in the exchange reserve.

On disposal of a foreign operation, the cumulative amount of the exchange differences relating to that foreign operation is reclassified from equity to profit or loss when the profit or loss on disposal is recognised.

(aa) Borrowing costs

Borrowing costs that are directly attributable to the acquisition, construction or production of an asset which necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of that asset. Other borrowing costs are expensed in the period in which they are incurred.

The capitalisation of borrowing costs as part of the cost of a qualifying asset commences when expenditure for the asset is being incurred, borrowing costs are being incurred and activities that are necessary to prepare the asset for its intended use or sale are in progress. Capitalisation of borrowing costs is suspended or ceases when substantially all the activities necessary to prepare the qualifying asset for its intended use or sale are interrupted or complete.

(bb) Related parties

(a) A person, or a close member of that person's family, is related to the Group if 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 the Group's parent.

1. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(bb) Related parties (continued)

(b) An entity is related to the Group if any of the following conditions applies:

(i) The entity and the Group are members of the same Group (which means that each parent, subsidiary and fellow subsidiary is related to the others).

(ii) One entity is an associate or joint venture of the other entity (or an associate or joint venture of a member of a Group of which the other entity is a member).

(iii) Both entities 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).

(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 Group's parent.

Close members of the family of a person are those family members who may be expected to influence, or be influenced by, that person in their dealings with the entity.

(cc) Segment reporting

Operating segments, and the amounts of each segment item reported in the financial statements, are identified from the financial information provided regularly to the Group's most senior executive management for the purposes of allocating resources to, and assessing the performance of, the Group's various lines of business and geographical locations.

Individually material operating segments are not aggregated for financial reporting purposes unless the segments have similar economic characteristics and are similar in respect of the nature of products and services, the nature of production processes, the type or class of customers, the methods used to distribute the products or provide the services, and the nature of the regulatory environment. Operating segments which are not individually material may be aggregated if they share a majority of these criteria.

2 ACCOUNTING JUDGEMENTS AND ESTIMATES

(a) Critical accounting judgements in applying the Group's accounting policies

In the process of applying the Group's accounting policies, management has made the following accounting judgement:

(i) Consolidation of the entity in which the Group holds less than a majority of voting rights

In accordance with HKIFRS 10, *Consolidated Financial Statements,* the Group controls an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. As at 31 December 2019, the Group's interest in Shanghai MicroPort Endovascular Medtech Co., Ltd. ("MP Endo") decreased from 61.79% as at 31 December 2018 to 46.34% upon the completion of a separate listing of MP Endo (see note 29(b)). Management believe the Group retains control over MP Endo even through it holds less than half of the voting rights of MP Endo.

In making this judgement, the Group has taken into account that the Group continues to be the single major shareholder of MP Endo and holds relatively larger voting rights than other dispersed public shareholders in aggregate.

If the Group loses control of MP Endo, the Group shall derecognise the assets and liabilities of MP Endo from the consolidated statement of financial position. MP Endo would become an equity-accounted investee of the Group under equity method thereafter.

(b) Sources of estimation uncertainty

Notes 5(b), 12, 27 and 30 contain information about the assumptions and their risk factors relating to defined benefit retirement plans, goodwill impairment, fair value of share options granted and financial instruments. Other key sources of estimation uncertainty are as follows:

(i) Net realisable value of inventories

Net realisable value of inventories is the estimated selling price in the ordinary course of business, less estimated costs of completion and distribution expenses. These estimates are based on the current market condition and historical experience of selling products of similar nature. It could change significantly as a result of competitor actions in response to changes in market conditions. Management reassesses these estimations at the balance sheet dates to ensure inventory is shown at the lower of cost and net realisable value.

(ii) Income tax

Determining income tax provisions involves judgement on the future tax treatment of certain transactions. The management carefully evaluates tax implications of transactions and tax provisions are set up accordingly. The tax treatment of these transactions is reconsidered periodically to take into account changes in tax legislations. Deferred tax assets are recognised for deductible temporary differences. As those deferred tax assets can only be recognised to the extent that it is probable that future taxable profit will be available against which they can be utilised, management's judgement is required to assess the probability of future taxable profits. Management's assessment is constantly reviewed and additional deferred tax assets are recognised if it becomes probable that future taxable profits will allow the deferred tax asset to be recovered.

2 ACCOUNTING JUDGEMENTS AND ESTIMATES (CONTINUED)

(iii) Impairment of non-current assets

Internal and external sources of information are reviewed by the Group at the end of each reporting period to assess whether there is any indication that an asset may be impaired. If any such indication exists, the recoverable amount of the asset or the cash-generating unit to which it belongs is estimated to determine impairment losses on the asset. Changes in facts and circumstances may result in revisions to the conclusion of whether an indication of impairment exists and revised estimates of recoverable amount, which would affect profit or loss in future years. Goodwill and intangible assets not yet available for use are tested for impairment at least annually even if there is no indication of impairment.

(iv) Allocation and recognition of post-sales services

For the CRM business, the total transaction price is allocated to each performance obligation in an amount based on the estimated relative stand-alone selling prices of the goods or services underlying each performance obligation. The Group allocated the transaction price of each performance obligation and recognised the post-sales services over the period, by considering the average costs and frequency of the provision of each post-sales service and the estimated product lives. These estimates are based on the historical information as well as prevailing market conditions. Management reassessed the estimation based on related available information at the balance sheet date. Changes in facts and circumstances may result in revisions to the conclusion, which would affect profit or loss in future years.

(v) Determining the lease term

As explained in policy note 1(l), the lease liability is initially recognised at the present value of the lease payments payable over the lease term. In determining the lease term at the commencement date for leases that include renewal options exercisable by the Group, the Group evaluates the likelihood of exercising the renewal options taking into account all relevant facts and circumstances that create an economic incentive for the Group to exercise the option, including favourable terms, leasehold improvements undertaken and the importance of that underlying asset to the Group's operation. The lease term is reassessed when there is a significant event or significant change in circumstance that is within the Group's control. Any increase or decrease in the lease term would affect the amount of lease liabilities and right-of-use assets recognised in future years.

3 REVENUE AND SEGMENT REPORTING

(a) Revenue

The Group derives revenue principally from the sales of medical devices through appointed distributors and direct force sales, as well as rendering of post-sales services primarily for cardiac rhythm management business ("CRM business") acquired in April 2018. Further details regarding the Group's principal activities are disclosed in note 3(b).

(i) Disaggregation of revenue

Disaggregation of revenue from contracts with customers by major products or service lines is as follows:

	2019	2018
	US$'000	US$'000
Revenue from contracts with customers within the scope of HKFRS 15		
Sales of medical devices	**779,557**	661,162
Revenue from post-sales services	**13,701**	7,868
	793,258	669,030
Revenue from other sources		
Gross rentals from investment properties	**235**	460
	793,493	669,490

Disaggregation of revenue from contracts with customers by the timing of revenue recognition and by geographic markets is disclosed in notes 3(b)(i) and 3(b)(iii) respectively.

The Group's customer base is diversified. For the years ended 31 December 2019 and 2018, there was no customer with whom transactions have exceeded 10% of the Group's revenue. Details of concentrations of credit risk arising from the Group's largest customers are set out in note 30(a).

3 REVENUE AND SEGMENT REPORTING (CONTINUED)

(a) Revenue (continued)

(ii) Revenue expected to be recognised in the future arising from contracts with customers in existence at the reporting date

As at 31 December 2019, the aggregated amount of the transaction price allocated to the remaining performance obligation under the Group's existing contracts is US$29,097,000 (2018: US$35,463,000). This amount represents revenue expected to be recognised in the future from rendering post-sales services. The Group will recognise the expected revenue in future when or as the service is rendered, which is expected to occur over the estimated product lives of different implanted devices.

The Group has applied the practical expedient in paragraph 121 of HKFRS 15 such that the above information does not include information about revenue that the Group will be entitled to when it satisfies the remaining performance obligations under the contracts for sales of medical devices that had an original expected duration of one year or less.

(b) Segment reporting

The Group manages its businesses by divisions, which are organised by a mixture of both lines of business lines and geography. In a manner consistent with the way in which information is reported internally to the Group's most senior executive management for the purposes of resource allocation and performance assessment, the Group has identified a number of reportable segments. The Group presented the surgical robot and heart valve business segments as two reportable segments, which were previously included in the cardiovascular devices business segment. The Group excluded results from a few of segments below the quantitative thresholds from reportable segments since 2019 due to the change of the assessment by the Group's most senior executive management. The comparative information has also been re-presented to reflect such change. No operating segments have been aggregated to form the following reportable segments.

- Cardiovascular devices business: sales, manufacture, research and development of cardiovascular devices, such as drug eluting stents.
- Orthopedics devices business: sales, manufacture, research and development of orthopedics devices.
- CRM business: sales, manufacture, research and development of cardiac rhythm management devices.
- Endovascular devices business: sales, manufacture, research and development of endovascular devices.
- Neurovascular devices business: sales, manufacture, research and development of neurovascular devices.
- Surgical devices business: sales, manufacture, research and development of surgical devices.
- Heart valve business: sales, manufacture, research and development of heart valve devices.
- Surgical robot devices business: sales, manufacture, research and development of surgical robot devices.

3 REVENUE AND SEGMENT REPORTING (CONTINUED)

(b) Segment reporting (continued)

(i) Segment results, assets and liabilities

For the purposes of assessing segment performance and allocating resources between segments, the Group's senior executive management monitors the results, assets and liabilities attributable to each reportable segment on the following bases:

Segment assets include all tangible, intangible assets and current assets with the exception of corporate assets. Segment liabilities include trade and other payables and deferred income attributable to the activities of each individual segment and interest-bearing borrowings managed directly by the segments.

Revenue and expenses are allocated to the reportable segments with reference to sales generated by those segments and the expenses incurred by those segments or which otherwise arise from the depreciation or amortisation of assets attributable to those segments. However, other than reporting inter-segment sales, assistance provided by one segment to another, including sharing of assets and technical know-how, is not measured.

The measure used for reporting segment profit/(loss) is "reportable segment net profit/(loss)". Items that are not specifically attributed to individual segments, such as unallocated exchange gain/(loss), unallocated corporate income and expenses, equity-settled share- based payment expenses and the PRC dividends withholding tax are excluded from segment net profit/(loss).

In addition to receiving segment information concerning reportable segment net profit/(loss), management is provided with segment information concerning revenue from external customers, depreciation and amortisation, income tax, write-down of inventories, impairment losses of non-current assets and additions to non-current segment assets used by the segments in their operations.

Disaggregation of revenue from contracts with customers by the timing of revenue recognition, as well as information regarding the Group's reportable segments as provided to the Group's most senior executive management for the purposes of resource allocation and assessment of segment performance for the years ended 31 December 2019 and 2018 is set out below.

3 REVENUE AND SEGMENT REPORTING (CONTINUED)

(b) Segment reporting (continued)

(i) Segment results, assets and liabilities (continued)

	2019									
	Cardiovascular devices business US$'000	Orthopedics devices business US$'000	CRM business# US$'000	Endovascular devices business US$'000	Neurovascular devices business US$'000	Surgical devices business US$'000	Heart valve business US$'000	Surgical robot devices business US$'000	Others* US$'000	Total US$'000
Disaggregated by timing of revenue recognition										
Point in time - sales of medical devices	264,607	232,232	195,324	48,527	27,631	4,695	3,119	-	3,422	779.557
Over time - post-sales services	-	-	13,701	-	-	-	-	-	-	13,701
Over time - rental income	26	209	-	-	-	-	-	-	-	235
	264,633	232,441	209,025	48,527	27,631	4,695	3,119	-	3,422	793,493
Reportable segment net profit/(loss)	111,357	(30,794)	(54,837)	20,465	5,050	(5,192)	(20,962)	(6,735)	(11,877)	6,475
Interest income from bank deposits and structured deposits	541	56	5	1,351	15	6	9	98	5	2,086
Interest expense	212	5,088	5,512	159	242	6	1,389	-	55	12,663
Depreciation and amortisation for the year	14,907	26,539	13,257	2,012	1,587	842	1,643	187	208	61,182
Income tax	18,869	976	(1,224)	3,574	1,120	125	-	-	-	23,440
Increase/(decrease) of inventory provision	1,116	2,632	(2,166)	219	373	200	-	-	-	2,374
Provision for/(reversal of) impairment of:	418	32	-	-	-	-	-	-	-	450
- Property, plant and equipment	123	(266)	-	82	-	-	-	-	-	(61)
- Trade and other receivables										
Reportable segment assets	506,566	420,770	341,016	168,139	50,996	33,710	76,638	15,814	47,316	1,660,965
Additions to non-current segment assets during the year	45,925	38,051	13,085	3,887	9,669	2,290	8,680	2,536	236	124,359
Reportable segment liabilities	111,886	226,645	212,613	16,109	17,590	19,787	57,392	3,981	397	666,400

3 REVENUE AND SEGMENT REPORTING (CONTINUED)

(b) Segment reporting (continued)

(i) Segment results, assets and liabilities (continued)

	2018 (Re-presented) (Note)									
	Cardiovascular devices business US$'000	Orthopedics devices business US$'000	CRM business# US$'000	Endovascular devices business US$'000	Neurovascular devices business US$'000	Surgical devices business US$'000	Heart valve business US$'000	Surgical robot devices business US$'000	Others* US$'000	Total US$'000
Disaggregated by timing of revenue recognition										
Point in time - sales of medical devices	202,487	236,279	150,508	34,975	18,297	5,925	-	-	12,691	661,162
Over time - post-sales services	-	-	7,868	-	-	-	-	-	-	7,868
Over time - rental income	330	-	-	-	130	-	-	-	-	460
	202,817	236,279	158,376	34,975	18,427	5,925	-	-	12,691	669,490
Reportable segment net profit/(loss)	85,198	(13,081)	(24,205)	13,521	4,100	(6,595)	(9,084)	(4,605)	(1,253)	43,996
Interest income from bank deposits	398	56	16	28	7	19	137	4	16	681
Interest expense	3	2,684	1,935	-	36	-	-	-	225	4,883
Depreciation and amortisation for the year	12,026	21,470	4,953	1,245	1,037	1,089	233	83	1,099	43,235
Income tax	11,039	1,132	(819)	2,898	232	63	-	-	-	14,545
Increase/(decrease) of inventory provision	554	2,411	3,565	260	152	213	-	-	(25)	7,130
Provision for/(reversal of) impairment of:										
- Property, plant and equipment	900	-	-	-	-	-	-	-	-	900
- Intangible assets	-	754	-	-	-	1,683	-	-	-	2,437
- Trade and other receivables	800	325	-	10	-	371	-	-	(21)	1,485
Reportable segment assets	433,955	426,403	334,045	39,170	27,854	28,551	55,743	7,819	25,032	1,378,572
Additions to non-current segment assets during the year	52,644	43,614	7,300	3,751	4,902	523	21,557	3,031	1,250	123,384
Reportable segment liabilities	125,379	241,423	138,310	7,985	8,068	18,921	2,950	7,565	10,457	561,058

Note: The Group has initially applied HKFRS 16 using the modified retrospective approach. Under this approach, the comparative information is not restated. See note 1(c).

* Revenues and results from segments below the quantitative thresholds are mainly attributable to electrophysiology devices business, which was disposed during the year ended 31 December 2019 (note 29(a)), diabetes and endocrinal devices business, etc. None of those segments individually met any of the quantitative thresholds for reportable segments.

\# The Group completed the acquisition of the CRM business on 30 April 2018. 2019 is the first full year of CRM business operated by the Group.

3 REVENUE AND SEGMENT REPORTING (CONTINUED)

(b) Segment reporting (continued)

(ii) Reconciliation of reportable segment profit or loss, assets and liabilities

	2019 US$'000	2018 *(Re-presented)* *(Note)* US$'000
Profit or loss		
Reportable segment net profit	**6,475**	43,996
Share awards scheme	**(2,993)**	(5,317)
Other equity-settled share-based payment expenses	**(7,258)**	(3,764)
Unallocated exchange gain	**1,385**	9,467
Gain on disposal of subsidiaries, net of tax (note 29(a))	**55,843**	–
Gain on deemed disposal of a joint venture	**–**	4,133
Unallocated expenses, net	**(24,443)**	(30,134)
Consolidated profit for the year	**29,009**	18,381
Assets		
Reportable segment assets	**1,660,965**	1,378,572
Elimination of inter-segment receivables	**(89,517)**	(135,042)
Unallocated corporate assets:		
– Cash and cash equivalents	**20,850**	13,364
– Other receivables	**–**	11,900
– Investments in debt and equity securities	**5,527**	4,691
– Others	**126**	962
Consolidated total assets	**1,597,951**	1,274,447

3 REVENUE AND SEGMENT REPORTING (CONTINUED)

(b) Segment reporting (continued)

(ii) Reconciliation of reportable segment profit or loss, assets and liabilities (continued)

	2019	2018 *(Re-presented)* *(Note)*
	US$'000	US$'000
Liabilities		
Reportable segment liabilities	**666,400**	561,058
Elimination of inter-segment payables	**(89,517)**	(134,951)
Derivative financial liabilities	**11,162**	10,640
Convertible bonds (note 26)	**83,107**	90,405
Interest-bearing borrowings	**169,142**	138,637
Share repurchase obligations (note 20)	**89,701**	73,449
Unallocated corporate liabilities	**13,991**	6,263
Consolidated total liabilities	**943,986**	745,501

Note: The Group has initially applied HKFRS 16 using the modified retrospective approach. Under this approach, the comparative information is not restated. See note 1(c).

(iii) Geographic information

The following table sets out information about the geographical location of (i) the Group's revenue from external customers and (ii) the Group's investment property, other property, plant and equipment, land use rights, intangible assets, goodwill and investments in equity-accounted investees ("specified non-current assets"). The geographical location of customers is based on the location at which the goods are delivered and services are rendered. The geographical location of the specified non-current assets is based on the physical location of the asset, in the case of property, plant and equipment, the location of the operation to which they are allocated, in case of intangible assets and goodwill, and the location of operations, in case of investments in equity-accounted investees.

3 REVENUE AND SEGMENT REPORTING (CONTINUED)

(b) Segment reporting (continued)

(iii) Geographic information (continued)

Revenue from external customers

	2019 US$'000	2018 US$'000
The PRC (country of domicile)	**361,242**	281,871
North America	**103,973**	109,536
Europe	**241,750**	192,652
Asia (excluding the PRC)	**56,338**	65,615
South America	**13,783**	11,648
Others	**16,407**	8,168
	432,251	387,619
	793,493	669,490

Specified non-current assets

	2019 US$'000	2018 *(Note)* US$'000
The PRC (country of domicile)	**458,072**	375,757
North America	**121,378**	120,705
Europe	**176,876**	146,756
Asia (excluding the PRC)	**13,971**	5,477
South America	**4,225**	5,659
	316,450	278,597
	774,522	654,354

Note: The Group has initially applied HKFRS 16 using the modified retrospective approach. Under this approach, the comparative information is not restated. See note 1(c).

4 OTHER NET INCOME

	2019 US$'000	2018 US$'000
Government grants (Note)	**16,345**	10,085
Interest income on bank deposits and structured deposits	**2,674**	1,018
Interest income on financial assets carried at amortised cost	**867**	763
Net gain/(loss) on disposal of property, plant and equipment	**594**	(727)
Net foreign exchange gain	**176**	9,602
Net realised and unrealised losses on financial instruments carried at FVPL	**(2,005)**	(6,611)
Gain on the modification of the convertible bonds (note 26)	**1,012**	–
Others	**(996)**	(334)
	18,667	13,796

Note: Majority of the government grants are subsidies received from government for encouragement of research and development projects.

Government grants recognised in "other net income" included unconditional grants of US$15,108,000 (2018: US$7,620,000) to compensate the Group for research expenses already incurred and conditional grants of US$1,237,000 (2018: US$2,465,000) transferred from deferred income as the conditions attaching to the grant were complied with during the year ended 31 December 2019 (note 25).

5 PROFIT BEFORE TAXATION

Profit before taxation is arrived at after charging/(crediting):

(a) Finance costs

	2019 US$'000	2018 *(Note)* US$'000
Interest on the convertible bonds (note 26)	**2,902**	8,985
Interest on other interest-bearing borrowings	**13,487**	9,593
Interest on preference shares issued by a subsidiary (note 20)	**1,099**	–
Interest on lease liabilities	**2,469**	–
Others	**1,372**	1,208
Total interest expense on financial liabilities not at fair value through profit or loss	**21,329**	19,786
Interest accrued on advance payments from customers (note 21)	**1,761**	1,676
Less: Interest expense capitalised into properties under development*	**(392)**	(442)
	22,698	21,020

Note: The Group has initially applied HKFRS 16 using the modified retrospective approach. Under this approach, the comparative information is not restated. See note 1(c).

* During 2019, the borrowing costs have been capitalised at a rate of 4.7% (2018: 4.7%) per annum.

5 PROFIT BEFORE TAXATION (CONTINUED)

(b) Staff costs

	2019 **US$'000**	2018 US$'000
Contributions to defined contribution retirement plans	**18,916**	15,541
Expenses recognised in respect of defined benefit retirement plans	**381**	245
Equity-settled share-based payment expenses (note 27(d))	**18,526**	9,890
Cash-settled share-based payment expenses (note 27(e))	**541**	3,917
Salaries, wages and other benefits	**284,959**	222,986
	323,323	252,579

(i) Defined contribution retirement plans

The PRC

As stipulated by the labour regulations of the PRC, the Group also participates in various defined contribution retirement plans organised by municipal and provincial governments for its employees. The Group is required to make contributions to the retirement plans at approximately 13% to 16% of the eligible employees' salaries for the year ended 31 December 2019.

The United States (the "US")

The Group sponsors a defined contribution plan under Section 401(k) of the Internal Revenue Code, which covers US employees who are 21 years of age and over. Under this plan, the Group matches voluntary employee contributions at a rate of 100% for the first 2% of an employee's annual compensation and at a rate of 50% for the next 2% of an employee's annual compensation. Employees vest in the employer contributions after three years of service.

(ii) Defined benefit retirement plans

The Group makes contribution to several defined benefit retirement plans in Italy, France, Germany and Japan. In Italy and France, the Group maintains a severance defined benefit plan that obligates the employer to pay a severance payment in case of resignation, dismissal or retirement. In other jurisdictions, non-contributory defined benefit plans are designated to provide a guaranteed minimum retirement benefits to eligible employees.

The defined benefit plans expose the Group to various demographic and economic risks such as longevity risk, investment risks, currency and interest risk and inflation risk. When calculating the defined benefit liabilities, the Group estimated the key assumptions by reference to actuarial valuations. The Group recorded the present value of funded obligation of EUR8,075,000 (equivalent to US$9,046,000) as at 31 December 2019 (31 December 2018: EUR7,702,000 (equivalent to US$8,806,000)), with actuarial loss of US$786,000 being recorded in other comprehensive income for the year ended 31 December 2019 (31 December 2018: gain of US$272,000).

5 PROFIT BEFORE TAXATION (CONTINUED)

(c) Other items

	2019 US$'000	2018 US$'000
Amortisation of intangible assets# (note 11)	**9,770**	8,178
Depreciation charge# (note 10)		
– investment properties, and other property, plant and equipment*	**40,978**	34,875
– right-of-use assets*	**11,083**	372
Less: Amounts capitalised as development costs	**(654)**	(1,049)
	51,407	34,198
Total minimum lease payments for leases previously classified as operating leases under HKAS 17*#	**–**	12,936
(Reversal of)/provision of impairment of:		
– trade and other receivables	**(61)**	1,485
– property, plant and equipment (note 10)	**450**	900
– intangible assets (note 11)	**–**	2,437
	389	4,822
Research and development costs (other than amortisation costs of intangible assets)	**166,625**	123,886
Less: Costs capitalised into intangible assets	**(18,960)**	(22,076)
	147,665	101,810
Rental income from investment properties	**235**	460
Cost of inventories# (note 17(b))	**244,389**	211,148
Auditors' remuneration		
– audit services	**2,178**	1,801
– non-audit services	**1,120**	3,704
	3,298	5,505

* The Group has initially applied HKFRS 16 using the modified retrospective approach and adjusted the opening balances at 1 January 2019 to recognise right-of-use assets relating to leases which were previously classified as operating leases under HKAS 17. The depreciated carrying amount of the finance lease assets which were previously included in property, plant and equipment is also identified as a right-of-use asset. After initial recognition of right-of-use assets at 1 January 2019, the Group as a lessee is required to recognise the depreciation of right-of-use assets, instead of the previous policy of recognising rental expenses incurred under operating leases on a straight-line basis over the lease term. Under this approach, the comparative information is not restated. See note 1(c).

\# Cost of inventories includes US$98,792,000 (2018: US$72,471,000) relating to staff costs, depreciation and amortisation expenses, lease expenses, which amount is also included in the respective total amounts disclosed separately above or in note 5(b) for each of these types of expenses.

6 INCOME TAX IN THE CONSOLIDATED STATEMENT OF PROFIT OR LOSS

(a) Taxation in the consolidated statement of profit or loss represents:

	2019 US$'000	2018 US$'000
Current tax – PRC Corporate Income Tax ("CIT")		
Provision for the year	**32,719**	14,957
Under/(over)-provision in respect of prior years	**579**	(326)
	33,298	14,631
Current tax – other jurisdictions		
Provision for the year	**2,580**	2,244
Over-provision in respect of prior years	**(65)**	(84)
	2,515	2,160
	35,813	16,791
Deferred tax		
Origination and reversal of temporary differences (note 24(b))	**(1,614)**	(2,243)
	34,199	14,548

(i) Cayman Islands and British Virgin Islands tax

Pursuant to the rules and regulations of Cayman Islands and British Virgin Islands, the Company and its subsidiaries located in British Virgin Islands are not subject to any income tax in these jurisdictions.

(ii) Hong Kong profits tax

The Company's subsidiaries incorporated in Hong Kong are subject to Hong Kong profits tax at 16.5% (2018: 16.5%) of the estimated assessable profits.

(iii) PRC CIT

Pursuant to the CIT Law of the PRC, all of the Company's PRC subsidiaries are liable to PRC CIT at a rate of 25% except for 9 entities entitled to a preferential income tax rate of 15% as they are certified as "High and New Technology Enterprise" ("HNTE").

The additional deduction of research and development expenditures have been increased from 50% to 75%, effective from 2018 to 2020, according to a new tax incentives policy promulgated by the State Tax Bureau of the PRC in September 2018.

The CIT law and its relevant regulations also impose a withholding tax at 10% on the foreign investors with respect to dividend distributions made out of the PRC entities from earnings accumulated from 1 January 2008, unless the foreign investors meet certain requirements specified in the relevant tax regulations in the PRC and accordingly are entitled to a preferential rate of 5%.

6 INCOME TAX IN THE CONSOLIDATED STATEMENT OF PROFIT OR LOSS (CONTINUED)

(a) Taxation in the consolidated statement of profit or loss represents: (continued)

(iv) US corporate tax

In the US, the Group is taxed at a federal corporate tax rate of 21% plus various state tax rates, taxes on certain foreign-sourced earnings and certain related-party payments, which are referred to as the global intangible low-taxed income tax and the base erosion tax, respectively. In addition, the Group has net operating loss in the US for federal and state tax purposes that may be carried forward indefinitely. The mandatory repatriation tax (one-time transition tax) was not applicable to the Group as the US does not have any controlled foreign subsidiaries.

(v) France tax

The Company's subsidiaries incorporated in France applied the French progressive taxation schemes, with first EUR500,000 income being taxed at 28% and the incremental increases in income taxed at higher tax rates at 33.33% and 31%, respectively for 2018 and 2019.

From year 2020 to 2022, the applicable French tax rates will be the flat statutory tax rates of 28%, 26.5% and 25%, respectively.

(vi) Taxation for other entities of the Group is charged at their respective applicable income tax rates ruling in the relevant jurisdictions.

(b) Reconciliation between income tax expense and accounting profit at applicable tax rates:

	2019 US$'000	2018 US$'000
Profit before taxation	**63,208**	32,929
Notional tax on profit before taxation, calculated at the rates applicable to profit in the countries concerned	**41,478**	16,267
Effect of the PRC preferential tax rate	**(17,348)**	(8,965)
Effect of other non-deductible expenses	**4,073**	5,562
Effect of additional deduction on research and development expenses	**(2,778)**	(3,646)
Effect of tax losses not recognised	**20,369**	7,676
Effect of non-taxable revenue	**(9,832)**	(962)
Effect of utilisation of temporary differences not recognised in previous years	**(3,366)**	(656)
Withholding tax on profit distributions	**287**	806
Under/(over)-provision in respect of prior years	**514**	(410)
Others	**802**	(1,124)
Actual tax expenses	**34,199**	14,548

7 DIRECTORS' EMOLUMENTS

Directors' emoluments disclosed pursuant to section 383(1) of the Hong Kong Companies Ordinance and Part 2 of the Companies (Disclosure of Information about Benefits of Directors) Regulation are as follows:

	2019					
	Directors' fees US$'000	Salaries, allowances and benefits in kind US$'000	Discretionary bonuses US$'000	Retirement scheme contributions US$'000	Equity-settled share-based payment (note) US$'000	Total US$'000
Executive directors						
Zhaohua Chang	–	96	–	–	3,530	3,626
Non-executive directors						
Norithiro Ashida	–	–	–	–	–	–
Hiroshi Shirafuji	–	–	–	–	–	–
Hongliang Yu	–	–	–	–	–	–
Independent non-executive directors						
Jonathan Chou	–	12	–	–	–	12
Guoen Liu	36	2	–	–	–	38
Chunyang Shao	36	2	–	–	–	38
	72	112	–	–	3,530	3,714

7 DIRECTORS' EMOLUMENTS (CONTINUED)

	2018					
	Directors' fees US$'000	Salaries, allowances and benefits in kind US$'000	Discretionary bonuses US$'000	Retirement scheme contributions US$'000	Equity-settled share-based payment (note) US$'000	Total US$'000
Executive directors						
Zhaohua Chang	–	96	100	–	1,699	1,895
Non-executive directors						
Norithiro Ashida	–	–	–	–	–	–
Hiroshi Shirafuji	–	–	–	–	–	–
Weiwei Chen (resigned on 21 June 2018)	–	–	–	–	–	–
Hongliang Yu (appointed on 21 June 2018)	–	–	–	–	–	–
Janine Junyuan Feng (resigned on 20 November 2018)	–	–	–	–	–	–
Independent non-executive directors						
Jonathan Chou	42	–	–	–	–	42
Guoen Liu	38	–	–	–	–	38
Chunyang Shao	38	–	–	–	–	38
	118	96	100	–	1,699	2,013

Note: These represent the estimated value of share options granted to the directors under the Company's share option scheme. The value of these share options is measured according to the Group's accounting policies for share-based payment transactions as set out in note 1(v)(iii) and, in accordance with that policy, includes adjustments to reverse amounts accrued in previous years where grants of equity instruments are forfeited prior to vesting.

The details of these benefits in kind, including the principal terms and number of options granted, are disclosed under the paragraph "Share option schemes" in report of the director and note 27.

8. INDIVIDUALS WITH HIGHEST EMOLUMENTS

Of the five individuals with the highest emoluments, one (2018: one) is director whose emoluments are disclosed in note 7. The aggregate of the emoluments in respect of the other four (2018: four) individual are as follows:

	2019 US$'000	2018 US$'000
Salaries and other benefits	**1,010**	1,530
Retirement scheme contributions	**33**	24
Discretionary bonuses	**944**	1,329
Equity-settled share-based payment	**1,329**	707
Cash-settled share-based payment	**–**	720
	3,316	4,310

The emoluments of the four (2018: four) individuals with the highest emoluments are within the following bands:

	2019 Number of Individuals	2018 Number of individuals
HK$3,500,001 to HK$4,500,000	**–**	–
HK$4,500,001 to HK$5,000,000	**–**	–
HK$5,000,001 to HK$5,500,000	**–**	–
HK$5,500,001 to HK$6,000,000	**–**	2
HK$6,000,001 to HK$7,000,000	**4**	1
HK$7,000,001 to HK$11,000,000	**–**	–
HK$11,000,000 to HK$15,000,000	**–**	1

9. EARNINGS PER SHARE

(a) Basic earnings per share

The calculation of basic earnings per share is based on the profit attributable to ordinary equity shareholders of the Company of US$46,281,000 (2018: US$23,913,000) and the weighted average number of ordinary shares of 1,583,651,000 shares (2018: 1,468,985,000 shares) in issue during the year, calculated as follows:

(i) Weighted average number of ordinary shares

	2019 **'000**	2018 '000
Issued ordinary shares at 1 January	**1,602,326**	1,457,063
Effect of issue of shares in lieu of cash dividends	**1,473**	319
Effect of share options exercised	**1,516**	5,158
Effect of shares under share award scheme	**(24,651)**	(13,260)
Effect of the conversion of the convertible bonds issued by the Company	**2,987**	19,705
Weighted average number of ordinary shares at 31 December	**1,583,651**	1,468,985

(b) Diluted earnings per share

The calculation of diluted earnings per share is based on the profit attributable to ordinary equity shareholders of the Company of US$33,245,000 (2018: US$19,956,000) and the weighted average number of ordinary shares of 1,674,874,000 shares (2018: 1,560,667,000 shares) after adjusting the effects of dilutive potential ordinary shares under the Company's share option scheme and a put option granted to Sino Rhythm Limited ("SRL") that may be settled in ordinary shares of the Company, calculated as follows:

(i) Profit attributable to ordinary equity shareholders of the Company (diluted)

	2019 **US$'000**	2018 US$'000
Profit attributable to ordinary equity shareholders	**46,281**	23,913
Effect of deemed exercise of put option granted to SRL in respect of share repurchase obligation (note 30(e))	**(13,036)**	(3,957)
Profit attributable to ordinary equity shareholders (diluted)	**33,245**	19,956

9. EARNINGS PER SHARE

(b) Diluted earnings per share

(ii) Weighted average number of ordinary shares (diluted)

	2019	2018
	'000	'000
Weighted average number of ordinary shares at 31 December	**1,583,651**	1,468,985
Effect of deemed exercise of put option granted to SRL in respect of share repurchase obligation	**53,247**	51,672
Effect of deemed issue of shares under the Company's share option scheme	**37,976**	40,010
Weighted average number of ordinary shares (diluted) at 31 December	**1,674,874**	1,560,667

The calculation of diluted earnings per share amount for the year ended 31 December 2019 has not included the potential effect of the deemed conversion of the convertible bonds (see note 26) and series C convertible preferred shares issued by a subsidiary during 2019 (see note 29(c)) into ordinary shares during the year, as it has an anti-dilutive effect on the basic earnings per share amount for the year.

The calculation of diluted earnings per share amount for the year ended 31 December 2018 had not included the potential effect of the deemed conversion of the convertible notes into ordinary shares during the year, as it had an anti-dilutive effect on the basic earnings per share amount for the year.

10. INVESTMENT PROPERTIES, OTHER PROPERTY, PLANT AND EQUIPMENT AND LAND USE RIGHTS

(a) Reconciliation of carrying amount

	Ownership interests in land and buildings held for own use US$'000	Leasehold improvements US$'000	Equipment and machinery US$'000	Office equipment, furniture and fixtures US$'000	Motor vehicles US$'000	Right-of-use assets US$'000	Construction in progress US$'000	Sub-total US$'000	Investment properties US$'000	Land use rights US$'000	Total US$'000
Cost:											
At 1 January 2018	159,121	14,807	159,115	49,496	3,186	–	38,046	423,771	6,649	18,727	449,147
Exchange adjustments	(7,151)	(744)	(5,118)	(1,688)	(150)	–	(2,407)	(17,258)	(319)	(898)	(18,475)
Transfer from construction in progress	17,081	738	17,902	5,662	–	–	(41,383)	–	–	–	–
Additions	1,743	1,251	12,044	3,967	355	–	60,339	79,699	–	–	79,699
Additions through acquisition	840	2	15,810	3,796	12	–	2,327	22,787	–	–	22,787
Disposals	(68)	(437)	(1,435)	(1,237)	(394)	–	–	(3,571)	–	–	(3,571)
At 31 December 2018	**171,566**	**15,617**	**198,318**	**59,996**	**3,009**	**-**	**56,922**	**505,428**	**6,330**	**17,829**	**529,587**
Impact on initial application of HKFRS 16 (Note)	**-**	**-**	**-**	**-**	**-**	**68,141**	**-**	**68,141**	**-**	**(17,829)**	**50,312**
At 1 January 2019	**171,566**	**15,617**	**198,318**	**59,996**	**3,009**	**68,141**	**56,922**	**573,569**	**6,330**	**-**	**579,899**
Exchange adjustments	**(3,162)**	**(305)**	**(1,409)**	**(598)**	**(40)**	**(974)**	**(454)**	**(6,942)**	**(133)**	**-**	**(7,075)**
Transfer to investment property	**63,068**	**1,909**	**28,340**	**6,073**	**357**	**-**	**(100,098)**	**(351)**	**351**	**-**	**-**
Additions	**1,196**	**1,046**	**14,415**	**2,953**	**8**	**11,819**	**66,010**	**97,447**	**-**	**-**	**97,447**
Disposals	**(2,263)**	**(274)**	**(23,974)**	**(8,289)**	**(337)**	**(477)**	**(819)**	**(36,433)**	**-**	**-**	**(36,433)**
Disposal of subsidiaries (note 29(a))	**(3,718)**	**(366)**	**(2,578)**	**(484)**	**(65)**	**-**	**-**	**(7,211)**	**-**	**-**	**(7,211)**
At 31 December 2019	**226,687**	**17,627**	**213,112**	**59,651**	**2,932**	**78,509**	**21,561**	**620,079**	**6,548**	**-**	**626,627**

10. INVESTMENT PROPERTIES, OTHER PROPERTY, PLANT AND EQUIPMENT AND LAND USE RIGHTS (CONTINUED)

(a) Reconciliation of carrying amount (continued)

	Ownership interests in land and buildings held for own use US$'000	Leasehold improvements US$'000	Equipment and machinery US$'000	Office equipment, furniture and fixtures US$'000	Motor vehicles US$'000	Right-of-use assets US$'000	Construction in progress US$'000	Sub-total US$'000	Investment properties US$'000	Land use rights US$'000	Total US$'000
Accumulated depreciation, amortisation and impairment:											
At 1 January 2018	17,422	8,012	82,835	30,833	2,389	–	–	141,491	750	2,503	144,744
Exchange adjustments	(791)	(288)	(3,179)	(313)	(107)	–	–	(4,678)	(42)	(133)	(4,853)
Charge for the year	5,205	1,849	20,986	7,334	230	–	–	35,604	171	372	36,147
Written back on disposals	(52)	(434)	(1,229)	(1,172)	(365)	–	–	(3,252)	–	–	(3,252)
At 31 December 2018	21,784	9,139	99,413	36,682	2,147	–	–	169,165	879	2,742	172,786
Impact on initial application of HKFRS 16 (Note)	-	-	-	-	-	4,619	-	4,619	-	(2,742)	1,877
At 1 January 2019	21,784	9,139	99,413	36,682	2,147	4,619	-	173,784	879	-	174,663
Exchange adjustments	(112)	(142)	(206)	(197)	(32)	(96)	-	(785)	(43)	-	(828)
Transfer	(317)	-	-	-	-	-	-	(317)	317	-	-
Charge for the year	6,787	1,815	23,464	8,873	316	11,083	-	52,338	173	-	52,511
Written back on disposals	(815)	(101)	(22,663)	(7,954)	(290)	(94)	-	(31,917)	-	-	(31,917)
Written back on disposal of subsidiaries (note 29(a))	(634)	(235)	(632)	(247)	(62)	-	-	(1,810)	-	-	(1,810)
At 31 December 2019	26,693	10,476	99,376	37,157	2,079	15,512	-	191,293	1,326	-	192,619
Net book value:											
At 31 December 2019	199,994	7,151	113,736	22,494	853	62,997	21,561	428,786	5,222	-	434,008
At 31 December 2018	149,782	6,478	98,905	23,314	862	-	56,922	336,263	5,451	15,087	356,801

Note: The Group has initially applied HKFRS 16 using the modified retrospective method and adjusted the opening balances at 1 January 2019 to recognise right-of-use assets relating to leases which were previously classified as operating leases under HKAS 17. See note 1(c).

10. INVESTMENT PROPERTIES, OTHER PROPERTY, PLANT AND EQUIPMENT AND LAND USE RIGHTS (CONTINUED)

(b) Right-of-use assets

The analysis of the net book value of right-of-use assets by class of underlying asset is as follows:

	Notes	**31 December 2019 US$'000**	1 January 2019 US$'000
Land use rights, carried at depreciated cost	(i)	**14,241**	15,087
Other properties leased for own use, carried at depreciated cost	(ii)	**43,585**	35,658
Other leases		**5,171**	12,777
		62,997	63,522

The analysis of expense items in relation to leases recognised in profit or loss is as follows:

	2019 US$'000	2018 (Note) US$'000
Depreciation charge of right-of-use assets by class of underlying asset:		
Land use rights	**355**	372
Other properties leased for own use	**9,551**	–
Other leases	**1,177**	–
	11,083	372
Interest on lease liabilities (note 5(a))	**2,469**	
Expense relating to short-term leases and other leases with remaining lease term ending on or before 31 December 2019, and leases of low- value assets	**9,167**	–
Total minimum lease payments for leases previously classified as operating leases under HKAS 17	**–**	55,458

Note: The Group has initially applied HKFRS 16 using the modified retrospective approach and adjusted the opening balances at 1 January 2019 to recognise right-of-use assets relating to leases which were previously classified as operating leases under HKAS 17. The depreciated carrying amount of the finance lease assets which were previously included in property, plant and equipment is also identified as a right-of- use asset. After initial recognition of right-of-use assets at 1 January 2019, the Group as a lessee is required to recognise the depreciation of right-of-use assets, instead of the previous policy of recognising rental expenses incurred under operating leases on a straight-line basis over the lease term. Under this approach, the comparative information is not restated. See note 1(c).

10. INVESTMENT PROPERTIES, OTHER PROPERTY, PLANT AND EQUIPMENT AND LAND USE RIGHTS (CONTINUED)

(b) Right-of-use assets (continued)

During the year, the Group entered into a number of lease agreements for use of property and machinery, and therefore recognised the additions to right-of-use assets of US$11,720,000.

Details of total cash outflow for leases and the maturity analysis of lease liabilities are set out in notes 19(c) and 23, respectively.

(i) Land use rights

The Group has obtained land use rights in the PRC where certain manufacturing facilities are located. The land use rights are typically granted for 30 to 50 years, on the expiry of which the land reverts back to the PRC state. The payment for leasing the land is normally made in full at the start of the land use rights period.

(ii) Other properties leased for own use

The Group has obtained the right to use other properties as its manufacturing facilities, warehouses and office buildings through tenancy agreements. The leases typically run for an initial period of 1 to 10 years. None of the leases includes variable lease payments.

11 INTANGIBLE ASSETS

	Technologies US$'000	Products licences US$'000	Capitalised development costs US$'000	Customer contracts and related customer relationship US$'000	Trademark and others US$'000	Total US$'000
Cost						
At 1 January 2018	15,244	8,700	74,597	9,794	2,327	110,662
Exchange adjustments	(276)	(504)	(4,534)	(754)	(333)	(6,401)
Additions	–	3,029	22,076	–	787	25,892
Additions through acquisition	8,785	811	–	12,312	1,702	23,610
Write-off	(1,225)	(396)	–	–	–	(1,621)
At 31 December 2018 and 1 January 2019	22,528	11,640	92,139	21,352	4,483	152,142
Exchange adjustments	(131)	(174)	(687)	(323)	(100)	(1,415)
Additions	–	–	18,960	–	5,032	23,992
Disposal of subsidiaries (note 29(a))	–	–	(6,847)	–	–	(6,847)
At 31 December 2019	22,397	11,466	103,565	21,029	9,415	167,872
Accumulated amortisation and impairment:						
At 1 January 2018	6,844	5,035	8,340	6,234	305	26,758
Exchange adjustments	(18)	(313)	(650)	(118)	–	(1,099)
Amortisation charge for the year	1,952	854	2,992	1,703	677	8,178
Impairment charge for the year	–	2,036	–	401	–	2,437
Write-off	(1,225)	(396)	–	–	–	(1,621)
At 31 December 2018 and 1 January 2019	7,553	7,216	10,682	8,220	982	34,653
Exchange adjustments	37	(171)	(198)	(62)	(33)	(427)
Amortisation charge for the year	2,223	956	4,035	2,282	274	9,770
Disposal of subsidiaries (note 29(a))	–	–	(1,935)	–	–	(1,935)
At 31 December 2019	9,813	8,001	12,584	10,440	1,223	42,061
Net book value:						
At 31 December 2019	12,584	3,465	90,981	10,589	8,192	125,811
At 31 December 2018	14,975	4,424	81,457	13,132	3,501	117,489

11 INTANGIBLE ASSETS (CONTINUED)

Capitalised development costs primarily related to cardiovascular, endovascular and neurovascular devices business segments. Of which, US$49,095,000 (2018: US$59,457,000) are not yet available for use as at 31 December 2019.

Amortisation of intangible assets has been charged to the consolidated statement of profit or loss as follows:

	2019 **US$'000**	2018 US$'000
Cost of sales	**366**	350
Research and development costs	**4,766**	3,755
Distribution costs	**1,181**	1,313
Administrative expenses	**3,457**	2,760
	9,770	8,178

12 GOODWILL

	US$'000
Cost:	
At 1 January 2018	81,315
Exchange adjustments	(7,797)
Addition through acquisition	114,724
At 31 December 2018 and 1 January 2019	188,242
Exchange adjustments	(2,566)
At 31 December 2019	185,676
Accumulated impairment losses:	
At 1 January 2018	26,857
Exchange adjustments	(1,288)
At 31 December 2018 and 1 January 2019	25,569
Exchange adjustments	(413)
At 31 December 2019	25,156
Carrying amount:	
At 31 December 2019	160,520
At 31 December 2018	162,673

12 GOODWILL (CONTINUED)

Impairment tests for cash-generating units containing goodwill

Goodwill is allocated to the Group's cash-generation units ("CGU") identified according to place of operations and operating segment as follow:

	2019 US$'000	2018 US$'000
OrthoRecon business	**54,458**	54,458
CRM business – overseas	**98,136**	100,159
CRM business – the PRC	**7,926**	8,056
	160,520	162,673

The recoverable amounts of the CGUs are determined based on value-in-use calculations. These calculations use cash flow projections based on financial budgets approved by the directors with the final year representing a steady state in the development of the business. Cash flows beyond the budget period are extrapolated using an estimated weighted average growth rate.

The key assumptions for the value-in-use calculation are as follows, which are based on either the past experience or external sources of information:

	At 31 December 2019		
	OrthoRecon business	**CRM business – overseas**	**CRM business – the PRC**
Annualised revenue growth rate during the budget period	**5% – 7%**	**–3% – 11%**	**26% – 52%**
Gross profit ratio	**68% – 73%**	**58% – 64%**	**25% – 52%**
Steady growth rate used in the extrapolation after budget period	**3%**	**2%**	**3%**
Pre-tax discount rate	**15%**	**10%**	**16%**

	At 31 December 2018		
	OrthoRecon business	CRM business – overseas	CRM business – the PRC
Annualised revenue growth rate during the budget period	3% – 12%	–10% – 7%	21% – 65%
Gross profit ratio	68% – 70%	57% – 63%	27% – 47%
Steady growth rate used in the extrapolation after budget period	3%	2%	3%
Pre-tax discount rate	15%	10%	15%

The recoverable amount of the CGU of OrthoRecon Business, overseas CRM business and the PRC CRM business is estimated to exceed the carrying amount of the CGU at 31 December 2019 by US$66,636,000, US$19,289,000 and US$17,815,000, respectively.

(Expressed in United States dollars unless otherwise indicated)

12 GOODWILL (CONTINUED)

Impairment tests for cash-generating units containing goodwill (continued)

The recoverable amount of each CGU would equal its carrying amount if there were following changes in key assumptions:

	At 31 December 2019		
	OrthoRecon business	**CRM business – overseas**	**CRM business – the PRC**
Decrease in annualised revenue growth rate during the budget period	**4.3% - 6.3%**	**2.9% - 10.9%**	**25.7% - 51.7%**
Decrease in gross profit ratio	**66.9% - 71.9%**	**57.8% - 63.8%**	**23.9% - 50.9%**
Increase in pre-tax discount rate	**2.5%**	**0.4%**	**1.4%**

	At 31 December 2018		
	OrthoRecon business	CRM business – overseas	CRM business – the PRC
Decrease in annualised revenue growth rate during the budget period	2.5% - 11.5%	-10.1% - 6.9%	20.9% - 64.9%
Decrease in gross profit ratio	64.2% - 66.2%	56.5% - 62.5%	26.6% - 46.4%
Increase in pre-tax discount rate	1.7%	0.3%	0.2%

13 INVESTMENTS IN SUBSIDIARIES

The following list contains only the particulars of subsidiaries which principally affected the results, assets or liabilities of the Group. The class of shares held is ordinary unless otherwise stated:

			Proportion of ownership interest		
Name of company	**Place of incorporation and business**	**Issued/ registered capital**	**As at 31 December 2019**	**As at 31 December 2018**	**Principal activity**
Shanghai MicroPort Medical (Group) Co., Ltd. ("MP Shanghai") (上海微創醫療器械 (集團) 有限公司) (i)	The PRC	US$350,000,000	100%	100%	Manufacturing, distribution, research and development of medical devices
Shanghai MicroPort Orthopedics Co., Ltd. (上海微創骨科醫療科技有限公司) (i)	The PRC	RMB2,075,000,000	100%	100%	Manufacturing, distribution, research and development of orthopedics devices
MicroPort NeuroTech (Shanghai) Co., Ltd. ("MP Neuro") (微創神通醫療科技 (上海) 有限公司) (iii)	The PRC	RMB53,500,000	83%	83%	Manufacturing, distribution,research and development of medical devices
Suzhou MicroPort Orthopedics Scientific (Group) Co., Ltd. ("Suzhou MP Orthopedics") (蘇州微創骨科學 (集團) 有限公司) (i)	The PRC	US$320,000,000	100%	100%	Manufacturing, distribution, research and development of orthopedics devices
Shanghai MicroPort Endovascular Medtech Co., Ltd. ("MP Endo") (上海微創心脈醫療科技股份 有限公司) (iii) (note 29(b))	The PRC	RMB71,978,147	46.34%	61.79%	Manufacturing, distribution, research and development of endovascular devices

(Expressed in United States dollars unless otherwise indicated)

13 INVESTMENTS IN SUBSIDIARIES

Name of company	Place of incorporation and business	Issued/ registered capital	Proportion of ownership interest		Principal activity
			As at 31 December 2019	As at 31 December 2018	
Dongguan Kewei Medical Instrument Co., Ltd. ("Dongguan Kewei") (東莞科威醫療器械有限公司) (ii)	The PRC	RMB73,125,025	61.54%	61.54%	Manufacturing, distribution, research and development of surgical devices
MicroPort Urocare (Jiaxing) Co., Ltd. ("Jiaxing Urocare ") (微創優通醫療科技 (嘉興) 有限公司) (iii)	The PRC	RMB32,500,000	60%	60%	Research and development of medical devices
MicroPort Medical (Jiaxing) Co., Ltd. (嘉興微創醫療科技有限公司) (i)	The PRC	RMB200,000,000	100%	100%	Research and development of medical devices
AccuPath Medical (Jiaxing) Co., Ltd. (脈通醫療科技 (嘉興) 有限公司) (i)	The PRC	RMB50,000,000	100%	100%	Manufacturing, distribution, research and development of medical devices
Suzhou MicroPort OrthoRecon Co., Ltd. (蘇州微創關節醫療科技 有限公司) (ii)	The PRC	RMB20,000,000	100%	100%	Manufacturing, distribution, research and development of orthopedics devices
MicroPort Orthopedic Instruments Suzhou Co., Ltd. (蘇州微創骨科醫療工具有限公司) (ii)	The PRC	RMB20,000,000	100%	100%	Manufacturing, distribution, research and development of orthopedics devices
Shanghai MicroPort CardioFlow Medtech Co., Ltd. ("MP CardioFlow Shanghai") (上海微創心通醫療科技有限公司) (i) (note 29(c))	The PRC	RMB283,410,316	64.72%	64.72%	Manufacturing, distribution, research and development of medical devices
MicroPort Scientific S.R.L	Italy	EUR2,000,000	100%	100%	Distribution of medical devices
MicroPort Orthopedics Japan K.K.	Japan	JPY100,000,000	100%	100%	Distribution of medical devices
MicroPort Scientific Ltd.	United Kingdom	GBP1	100%	100%	Distribution of medical devices
Sorin CRM SAS	France	EUR104,825,140	75%	75%	Manufacturing of cardiac rhythm management devices
Sorin Group DR, S.R.L	Dominican Republic	US$26,502,400	75%	75%	Manufacturing of cardiac rhythm management devices
MicroPort CRM S.R.L	Italy	EUR3,932,700	75%	75%	Manufacturing, distribution, research and development of cardiac rhythm management devices

Notes:

(i) These subsidiaries are wholly foreign-owned enterprises.

(ii) These subsidiaries are domestic enterprises.

(iii) These subsidiaries are sino-foreign equity joint venture enterprises. These entities are accounted for as the Group's subsidiaries as they are controlled by the Group.

13 INVESTMENTS IN SUBSIDIARIES (CONTINUED)

The following table lists out the information relating to a Group's subsidiary that has material non-controlling interests ("NCI") as at 31 December 2019. The summarised financial information presented below represents the amounts before any inter-company elimination.

	2019		
	MP Endo US$'000	**Other individually immaterial subsidiaries US$'000**	**Total US$'000**
NCI percentage (note 29(b))	**53.66%**		
Current assets	**141,961**		
Non–current assets	**26,623**		
Current liabilities	**(11,256)**		
Non–current liabilities	**(4,598)**		
Net assets	**152,730**		
Carrying amount of NCI	**81,955**	**52,986**	**134,941**
Revenue	**48,527**		
Profit for the year	**20,465**		
Total comprehensive income	**18,313**		
Profit/(loss) allocated to NCI	**8,785**	**(26,057)**	**(17,272)**
Dividend paid to NCI	**(1,277)**	**–**	**(1,277)**
Cash flows from operating activities	**20,277**		
Cash flows from investing activities	**(1,605)**		
Cash flows from financing activities	**103,064**		

	2018		
	MP Endo US$'000	Other individually immaterial subsidiaries US$'000	Total US$'000
NCI percentage	38.21%		
Current assets	16,906		
Non–current assets	22,261		
Current liabilities	(5,711)		
Non–current liabilities	(1,962)		
Net assets	31,494		
Carrying amount of NCI	12,034	74,116	86,150
Revenue	34,841		
Profit for the year	13,691		
Total comprehensive income	11,820		
Profit/(loss) allocated to NCI	5,231	(10,763)	(5,532)
Dividend paid to NCI	(3,864)	(564)	(4,428)
Cash flows from operating activities	16,107		
Cash flows from investing activities	(3,738)		
Cash flows from financing activities	–		

14 EQUITY-ACCOUNTED INVESTEES

	2019 US$'000	2018 US$'000
Investment in equity-accounted investees	**47,518**	14,331
Amounts due from equity-accounted investees	**6,665**	3,060
	54,183	17,391

The following list contains only the particulars of material equity-accounted investee, which is unlisted corporate entities whose quoted market price is not available:

				Proportion of ownership interest			
Name of equity-accounted investee	**Form of business structure**	**Place of incorporation**	**Particulars of issued and paid up capital**	**Goup's effective interest**	**Held by the Company**	**Held by a subsidiary**	**Principal Activity**
Shanghai MicroPort EP MedTech Co., Ltd. ("MP EP") (see note 29(a))	Incorporated	The PRC	RMB86,509,192	45.10%	–	45.10%	Manufacturing, distribution, research and development of electrophysiology devices

Summarised financial information of MP EP, adjusted for any differences in accounting policies, and reconciled to the carrying amounts in the consolidated financial statements, are disclosed below:

	2019 US$'000
Gross amount of MP EP	
Current assets	**23,348**
Non-current assets	**31,804**
Current liabilities#	**(80,872)**
Non-current liabilities	**(2,835)**
Equity#	**(28,555)**
Revenue	**13,540**
Loss for the year	**(6,562)**
Other comprehensive income	**–**
Total comprehensive income	**(6,562)**
Reconciled to the Group's interest in MP EP	
Gross amounts of MP EP's net liabilities#	**(28,555)**
Group's effective interest	**45.1%**
Group's share of MP EP's net liabilities#	**(12,878)**
Goodwill	**46,070**
Dilution effect of MP EP's share-based payments arrangement	**(73)**
Carrying amount in the consolidated financial statements	**33,119**

14 EQUITY-ACCOUNTED INVESTEES (CONTINUED)

In 2019, the Group lost control over MP EP upon the completion of the EP Disposal (see the definition set out in note 29(a)). Pursuant to a shareholders agreement entered into among the shareholders of MP EP (the "EP SHA"), in the events of liquidation as specified in the EP SHA, all assets of MP EP legally available for distribution to the shareholders shall be firstly distributed to Jiaxing Huajie I Equity Investment Limited Partners (Limited Partnership) ("Jiaxing Huajie", one of the shareholders of MP EP) with an amount equal to the original investment amount made by Jiaxing Huajie plus an annual return of 8% and declared but unpaid dividends.

As certain events of liquidation are out of the control of MP EP, the investments made by Jiaxing Huajie totalling RMB536.7 million were recognised as a liability of MP EP on initial recognition which is subsequently stated at amortised cost. As a result, MP EP had a deficiency of equity as at 31 December 2019.

Aggregate information of equity-accounted investees that are not individually material:

	2019 **US$'000**	2018 US$'000
Aggregate carrying amount of individually immaterial equity- accounted investees in the consolidated financial statements	**21,064**	17,391
Aggregate amounts of the Group's share of those equity- accounted investees'		
Loss for the year	**(2,697)**	(2,238)
Other comprehensive income	**(88)**	(126)
Total comprehensive income	**(2,785)**	(2,364)

All of the Group's investments in equity-accounted investees are accounted for using the equity method in the consolidated financial statements.

15 OTHER NON-CURRENT FINANCIAL ASSETS

	2019 **US$'000**	2018 US$'000
Financial assets measured at FVPL		
– Unlisted equity securities outside Hong Kong	**20,125**	11,910

16 OTHER NON-CURRENT ASSETS

	2019 **US$'000**	2018 US$'000
Security deposits (Note)	**17,755**	17,177
Income tax recoverable (note 24(a))	**13,095**	11,200
Value-added tax recoverable	**7,699**	–
Others	**3,079**	3,602
	41,628	31,979

Note: In order to secure future leasing of certain buildings from Shanghai Weichuang Investment Management Co., Ltd. (the "Landlord"), the Group entered into an agreement (the "Lease Security Agreement") with the Landlord in December 2017.

16 OTHER NON-CURRENT ASSETS (CONTINUED)

Pursuant to the Lease Security Agreement, the Landlord agreed to lease out certain buildings for five years starting from 2020 (the "Lease") when it has completed the constructions of those buildings. The annual rental charges for those buildings are preliminarily agreed as RMB56.4 million, subject to further adjustment based on the prevailing property market condition when the Lease commences in 2020. Both parties also agree to enter into a lease agreement (the "Future Lease Agreement") setting out the final annual rental charges, guarantee deposit amount and lease period prior to the commencement of the Lease. To secure the Lease, the Group paid security deposits totalling RMB112.8 million (the "Security Deposit"), representing two years' lease rental, to the Landlord in 2018. Pursuant to the Lease Security Agreement, the payment of the guarantee deposits and final annual rental charges, those amounts of which are yet to be agreed in the Future Lease Agreement, could be firstly deducted from the Security Deposit. The Group is liable for a compensation in the amount of 20% of the Security Deposit if the Group cancels the Lease without obtaining consent from the Landlord. The Group is entitled to a fee (the "Fee Income") from the Landlord during the period from the payment date of the Security Deposit through the commencement of the Lease. The Fee Income is calculated as the amount of Security Deposits multiplied by bank borrowing rate floated upward 10% in that period and could be used to offset the Group's payment obligation of final annual rental charges under the Lease.

17 INVENTORIES

(a) Inventories in the consolidated statement of financial position comprise:

	2019 **US$'000**	2018 US$'000
Raw materials	**36,986**	32,612
Work in progress	**41,803**	36,687
Finished goods	**113,532**	106,658
	192,321	175,957

(b) The analysis of the amount of inventories recognised as an expense and included in profit or loss is as follows:

	2019 **US$'000**	2018 US$'000
Carrying amount of inventories sold	**227,045**	192,344
Increase of inventory provision	**2,374**	7,130
Cost of inventories sold	**229,419**	199,474
Cost of inventories directly recognised as research and development costs and distribution costs	**14,970**	11,674
	244,389	211,148

18 TRADE AND OTHER RECEIVABLES

	31 December 2019 US$'000	31 December 2018 US$'000
Trade debtors and bills receivable due from:		
– third party customers	**216,489**	189,140
– related parties	**3,849**	1,133
	220,338	190,273
Less: Allowance for doubtful debts (note 30(a))	**(9,680)**	(10,607)
	210,658	179,666
Advances to Witney Global Limited (Note)	**–**	11,900
Other debtors	**31,013**	31,451
Income tax recoverable (note 24(a))	**3,765**	9,911
Deposits and prepayments	**21,353**	12,215
	266,789	245,143

Note: The Company made advances of US$11,900,000 to Witney Global Limited ("Witney"), which also made investments into two entities in which the Group has equity interests in 2018. The receivables have been fully repaid in 2019.

All of the trade and other receivables are expected to be recovered or recognised as expense within one year.

Ageing analysis

As of the end of the reporting period, the ageing analysis of trade debtors and bills receivable based on the invoice date (or date of revenue recognition, if earlier) and net of allowance, is as follows:

	2019 US$'000	2018 US$'000
Within 1 month	**98,515**	78,445
1 to 3 months	**82,625**	67,487
3 to 12 months	**23,419**	22,480
More than 12 months	**6,099**	11,254
	210,658	179,666

Trade debtors and bills receivable are due within 30 to 360 days from the date of billing. Further details of the Group's credit policy are set out in note 30(a).

19 CASH AND CASH EQUIVALENTS AND OTHER CASH FLOW INFORMATION

(a) Cash and cash equivalents

Cash and cash equivalents comprise cash at bank and on hand. As at 31 December 2019, cash and cash equivalents of the Group held in banks and financial institutions in the PRC amounted to US$243,041,000 (2018: US$86,438,000). The remittance of funds out of the PRC is subject to the relevant rules and regulations of foreign exchange control promulgated by the PRC government.

In July 2019, MP Endo, a subsidiary of the Group completed a separate listing (see note 29(b)) and raised a total of US$105,992,000 (net of transaction costs) (the "Fund-raising"), which are deposited in the designated bank accounts of MP Endo. The Fund-raising is not available for general usage and could only be used for purposes specified in the IPO prospectus of MP Endo. As at 31 December 2019, the balance of the Fund-raising of MP Endo is US$93,983,000.

(b) Reconciliation of profit before taxation to cash generated from operations:

	Note	**2019** US$'000	2018 (Note) US$'000
Profit before taxation		**63,208**	32,929
Adjustments for:			
Amortisation of right-of-use assets	5(c)	**11,083**	372
Amortisation of intangible assets	5(c)	**9,770**	8,178
Depreciation	5(c)	**40,324**	33,826
Impairment loss on intangible assets	5(c)	**–**	2,437
Impairment loss on property, plant and equipment	5(c)	**450**	900
Finance costs	5(a)	**19,565**	18,136
Gain on the modification of the convertible bonds	26	**(1,012)**	–
Interest income on bank deposits and structured deposits	4	**(2,674)**	(1,018)
Gain on disposal of subsidiaries	29(a)	**(63,105)**	–
Gain on deemed disposal of a joint venture		**–**	(4,133)
Changes in fair value of financial instruments carried at FVPL	4	**2,005**	6,611
Net (gain)/loss on disposal of property, plant and equipment	4	**(594)**	727
Share of losses of equity-accounted investees	14	**5,656**	2,238
Equity-settled share-based payment expenses	5(b)	**18,526**	9,890
Changes in working capital:			
Increase in inventories		**(24,073)**	(7,237)
Increase in trade and other receivables		**(44,454)**	(33,062)
Increase in trade and other payables		**21,693**	31,572
Decrease in contract liabilities		**(8,602)**	(290)
Increase/(decrease) in deferred income		**2,886**	(1,748)
Cash generated from operations		**50,652**	100,328

19 CASH AND CASH EQUIVALENTS AND OTHER CASH FLOW INFORMATION (CONTINUED)

(b) Reconciliation of profit before taxation to cash generated from operations: (continued)

Note: The Group has initially applied HKFRS 16 using the modified retrospective approach and adjusted the opening balances at 1 January 2019 to recognise right-of-use assets and lease liabilities relating to leases which were previously classified as operating leases under HKAS 17. Previously, cash payments under operating leases made by the Group as a lessee of US$12,936,000 were classified as operating activities in the consolidated cash flow statement. Under HKFRS 16, except for short-term lease payments, payments for leases of low value assets and variable lease payments not included in the measurement of lease liabilities, all other rentals paid on leases are now split into capital element and interest element (see note 19(c)) and classified as financing cash outflows. Under the modified retrospective approach, the comparative information is not restated. Further details on the impact of the transition to HKFRS 16 are set out in note 1(c).

(c) Reconciliation of liabilities arising from financing activities

The table below details changes in the Group's liabilities from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are liabilities for which cash flows were, or future cash flows will be, classified in the Group's consolidated cash flow statement as cash flows from financing activities.

	Interest-bearing borrowings (note 22) US$'000	Convertible bonds (note 26) US$'000	Series C preferred shares issued by a subsidiary (note 20) US$'000	Lease liabilities (note 23) US$'000	Total US$'000
At 31 December 2018	238,730	90,405	–	–	329,135
Impact on initial application of HKFRS 16 (Note)	–	–	–	49,237	49,237
At 1 January 2019	238,730	90,405	–	49,237	378,372
Changes from financing cash flows:					
Proceeds from interest-bearing borrowings, net of transaction costs	161,971	–	–	–	161,971
Repayments of interest-bearing borrowings	(76,624)	–	–	–	(76,624)
Interest paid for interest-bearing borrowings	(13,533)	–	–	–	(13,533)
Interest paid for the convertible bonds (note 26)	–	(3,219)	–	–	(3,219)
Proceeds from issuance of preferred shares	–	–	45,000	–	45,000
Capital element of lease rentals paid	–	–	–	(8,479)	(8,479)
Interest element of lease rentals paid	–	–	–	(2,469)	(2,469)
Total changes from financing cash flows	71,814	(3,219)	45,000	(10,948)	102,647

19 CASH AND CASH EQUIVALENTS AND OTHER CASH FLOW INFORMATION (CONTINUED)

(c) Reconciliation of liabilities arising from financing activities: (continued)

	Interest-bearing borrowings (note 22) US$'000	Convertible bonds (note 26) US$'000	Series C preferred shares issued by a subsidiary (note 20) US$'000	Lease liabilities (note 23) US$'000	Total US$'000
Exchange adjustments	(650)	–	–	(137)	(787)
Other changes:					
Interest charge (note 5(a))	13,487	2,902	1,099	2,469	19,957
Disposal of subsidiaries	(3,182)	–	–	–	(3,182)
Increase in lease liabilities from entering into new leases during the period	–	–	–	14,084	14,084
Effect of amendments to the convertible bonds (note 26)	–	(1,012)	–	–	(1,012)
Conversion of the convertible bonds (note 26)	–	(5,969)	–	–	(5,969)
Total other changes	10,305	(4,079)	1,099	16,553	23,878
At 31 December 2019	320,199	83,107	46,099	54,705	504,110

Note: The Group has initially applied HKFRS 16 using the modified retrospective method and adjusted the opening balances at 1 January 2019 to recognise lease liabilities relating to leases which were previously classified as operating leases under HKAS 17. See notes 1(c) and 19(b).

19 CASH AND CASH EQUIVALENTS AND OTHER CASH FLOW INFORMATION (CONTINUED)

(c) Reconciliation of liabilities arising from financing activities: (continued)

	Interest-bearing borrowings (note 23) US$'000	Convertible bonds (note 26) US$'000	Total US$'000
At 1 January 2018	97,054	154,421	251,475
Changes from financing cash flows:			
Proceeds from interest-bearing borrowings, net of transaction costs	194,013	–	194,013
Repayments of interest-bearing borrowings	(61,541)	–	(61,541)
Interest paid for interest-bearing borrowings	(9,107)	–	(9,107)
Interest paid for the convertible bonds	–	(5,599)	(5,599)
Total changes from financing cash flows	123,365	(5,599)	117,766
Exchange adjustments	(1,651)	–	(1,651)
Other changes:			
Interest charge (note 5(a))	9,593	8,985	18,578
Additions through acquisition	10,369	–	10,369
Conversion of convertible bonds	–	(67,402)	(67,402)
Total other changes	19,962	(58,417)	(38,455)
At 31 December 2018	238,730	90,405	329,135

(d) Total cash outflow for leases

Amounts included in the cash flow statement for leases comprise the following:

	2019 **US$'000**	2018 (Note) US$'000
Within operating cash flows	**492**	12,936
Within financing cash flows	**10,948**	–
	11,440	12,936

Note: As explained in the note to note 19(b), the adoption of HKFRS 16 introduces a change in classification of cash flows of certain rentals paid on leases. The comparative amounts have not been restated. The above amounts relate to the rental paid.

20 TRADE AND OTHER PAYABLES

	31 December 2019 US$'000	31 December 2018 US$'000
Current		
Trade payables due to third party suppliers (i)	**90,120**	105,016
Dividends payable to ordinary shareholders	**83**	89
Advances received in relation to a proposed disposal of partial interests in a subsidiary	**–**	6,358
Share repurchase obligations (ii)	**46,099**	–
Other payables and accrued charges	**147,478**	125,350
	283,780	236,813
Non-current		
Share repurchase obligations (ii)	**89,701**	73,449
Defined benefit retirement obligation (note 5(b)(ii))	**9,046**	8,806
Other payables (iii)	**18,042**	11,370
	116,789	93,625

Note i:

As of the end of the reporting period, the ageing analysis of the trade payables based on invoice date is as follows:

	2019 US$'000	2018 US$'000
Within 1 month	**52,173**	43,514
Over 1 month but within 3 months	**15,495**	28,750
Over 3 months but within 6 months	**1,921**	757
Over 6 months but within 1 year	**2,862**	1,098
Over 1 year	**17,669**	30,897
	90,120	105,016

20 TRADE AND OTHER PAYABLES (CONTINUED)

Note ii:

After the completion of a reorganisation in 2019 (see note 29(c)), the investors previously invested in MP CardioFlow Shanghai (the "Series B Investors") held 24,212,383 voting redeemable series B preferred shares (the "Series B Preferred Shares") in MicroPort CardioFlow Medtech Corporation ("MP CardioFlow Cayman", a subsidiary of the Group and the new holding company of the heart valve business).

In 2019, Qianyi Investment I L.P. (the "Series C Investor") subscribed for 11,250,000 voting redeemable series C preferred shares (the "Series C Preferred Shares") of MP CardioFlow Cayman.

Memorandum of association of MP CardioFlow Cayman regulates that upon the occurrence of certain specified events:

(i) the Series B Investors would have the right to ask Shanghai MicroPort Limited (the controlling shareholder of MP CardioFlow Cayman and a wholly-owned subsidiary of the Company) or other entity controlled by the Company to repurchase their Series B Preferred Shares in the form of cash; and

(ii) the Series C Investor would have the right to ask MP CardioFlow Cayman to repurchase its Series C Preferred Shares in the form of cash.

The redemption price equals to the original investment amounts of these investors plus applicable annual return of 15% or 12%, calculated on a compound basis.

The Group recorded the present value of the redemption price of the Series B Preferred Shares and the Series C Preferred Shares as payables under the amortised cost method.

During 2019, the change in the amortised costs of (a) the Series B Preferred Shares of US$16,469,000 (2018: US$5,129,000) has been recognised directly in equity as the Series B Preferred Shares were treated as a transaction within the shareholders of MP CardioFlow Cayman in their capacity as equity holders; and (b) the Series C Preferred Shares of US$1,099,000 has been recognised in profit or loss as the existence of obligation of repurchase by MP CardioFlow itself.

As at 31 December 2019, the balance of the Series B Preferred Shares and the Series C Preferred Shares were US$89,701,000 and US$46,099,000, respectively.

Note iii:

Others include the provision accrued for a financial guarantee provided to Oxford Finance LLC in respect of the senior debts of an entity which the Group invested in, which was calculated by an external valuer employed by the Group. As at 31 December 2019, the provision was US$4,201,000.

21 CONTRACT LIABILITIES

	31 December 2019 US$'000	31 December 2018 US$'000
Current		
Unfulfilled performance obligations (Note)	**7,753**	7,818
Advanced receipts from customers for sales of medical devices	**1,769**	2,242
	9,522	10,060
Non-current		
Unfulfilled performance obligations (Note)	**21,344**	27,645
Others	**119**	121
	21,463	27,766

Note: The Group provided non-contractual post-implant services for its CRM devices sold, which represents a future performance obligation. The Group recognised contract liabilities in respect of the unfulfilled performance obligation when the Group has an obligation to provide the post-implant services and payments from customers are received in advance of the services being rendered.

Movements in contract liabilities

	2019 US$'000	2018 US$'000
At 1 January	**37,826**	2,779
Exchange adjustments	**(108)**	(118)
Decrease in contract liabilities as a result of recognising revenue during the year that was included in the contract liabilities as at 1 January	**(15,889)**	(2,410)
Net increase in contract liabilities as a result of receiving advance payments and recognising revenue during the year	**7,395**	35,899
Increase in contract liabilities as a result of accruing interest expense on advances	**1,761**	1,676
At 31 December	**30,985**	37,826

22 INTEREST-BEARING BORROWINGS

As of the end of the reporting period, the interest-bearing borrowings were repayable as follows:

	2019 **US$'000**	2018 US$'000
Within 1 year or on demand	**32,092**	100,901
After 1 year but within 2 years	**57,606**	8,810
After 2 years but within 5 years	**230,501**	129,019
	288,107	137,829
	320,199	238,730

As of the end of the reporting period, the interest-bearing borrowings were secured as follows:

	2019 **US$'000**	2018 US$'000
Bank loans		
– secured	**127,602**	118,080
– unsecured	**192,597**	120,650
	320,199	238,730

At 31 December 2019, the bank facilities drawn down by the Group of US$43,753,000 (31 December 2018: US$29,295,000) were secured by pledged deposits, right-of-use assets and buildings held for own use with net book value of US$1,147,000, US$4,010,000 and US$51,090,000, respectively (31 December 2018: pledged deposits of US$2,841,000, right- of-use assets of US$4,172,000 and buildings held for own use of US$55,288,000, respectively).

At 31 December 2019, a bank loan of US$83,849,000 borrowed by the Company in connection with the acquisition of the CRM business was secured by the equity interests of the Company's four subsidiaries, namely MP Shanghai, MicroPort International Corp.
Limited, MicroPort International Corp. and MicroPort Cardiac Rhythm B.V. and guaranteed by MP Shanghai. The bank loan secured bears an interest rate of London Interbank Offered Rate ("LIBOR") plus 3.5% per annum and shall be repaid by instalments within five years since 30 April 2018.

Part of the Group's banking facilities are subject to the fulfilment of covenants relating to certain of the Group's balance sheet ratios, as are commonly found in lending arrangements with financial institutions. If the Group were to breach the covenants the drawn down facilities would become payable on demand. The Group regularly monitors its compliance with these covenants. Further details of the Group's management of liquidity risk are set out in note 30(b). As at 31 December 2019 and 2018, none of the covenants relating to drawn down facilities had been breached.

23 LEASE LIABILITIES

The following table shows the remaining contractual maturities of the Group's lease liabilities at the end of the current and previous reporting periods and at the date of transition to HKFRS 16:

	31 December 2019		1 January 2019 (Note)	
	Present value of the minimum lease payments US$'000	**Total minimum lease payments US$'000**	Present value of the minimum lease payments US$'000	Total minimum lease payments US$'000
Within 1 year	**10,178**	**12,316**	10,537	11,321
After 1 year but within 2 years	**9,045**	**10,955**	7,901	8,963
After 2 years but within 5 years	**23,165**	**26,598**	16,533	20,617
After 5 years	**12,317**	**13,317**	14,266	17,500
	44,527	**50,870**	38,700	47,080
	54,705	**63,186**	49,237	58,401
Less: total future interest expenses		**(8,481)**		(9,164)
Present value of lease liabilities		**54,705**		49,237

Note: The Group has initially applied HKFRS 16 using the modified retrospective approach and adjusted the opening balances at 1 January 2019 to recognise lease liabilities relating to leases which were previously classified as operating leases under HKAS 17. These liabilities have been aggregated with the brought forward balances relating to leases previously classified as finance leases. Comparative information as at 31 December 2018 has not been restated and relates solely to leases previously classified as finance leases. Further details on the impact of the transition to HKFRS 16 are set out in note 1(c).

24 INCOME TAX IN THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION

(a) Current taxation in the consolidated statement of financial position represents:

	2019 **US$'000**	2018 US$'000
Provision for the year	**35,299**	17,201
Provisional tax paid	**(23,741)**	(13,615)
Exchange adjustments	**(190)**	(168)
	11,368	3,418
Income tax recoverable acquired through acquisition	**-**	(17,701)
Balance of profits tax provision relating to prior years	**(15,106)**	(1,046)
	(3,738)	(15,329)

	2019 **US$'000**	2018 US$'000
Represented by:		
Current income tax recoverable	**(3,765)**	(9,911)
Non-current income tax recoverable	**(13,095)**	(11,200)
Income tax payable	**13,122**	5,782
	(3,738)	(15,329)

Income tax recoverable primarily represents to a tax credit of US$16,695,000 (2018: US$15,700,000) from French government, which is an incentive tax programme to support the research and development projects of a subsidiary in France ("France CIR"). The French CIR is deductible from the following 3 years' income tax or is receivable from the France government after 3 years if there is no sufficient profits available to deduct such research and development costs. As at 31 December 2019, the France CIR are classified as current and non-current receivables amounting US$3,600,000 and US$13,095,000 (2018: US$4,500,000 and US$11,200,000), respectively.

24 INCOME TAX IN THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION (CONTINUED)

(b) Deferred tax (assets)/liabilities recognised:

The components of deferred tax (assets)/liabilities recognised in the consolidated statement of financial position and the movements during the year are as follows:

	Accrued expense US$'000	Withholding tax on retained profits of PRC subsidiaries US$'000	Fair value adjustments in respect of net assets acquired in business combinations US$'000	Unused tax losses and others US$'000	Total US$'000
Deferred tax arising from:					
At 1 January 2018	(4,976)	1,969	1,057	(99)	(2,049)
Exchange adjustments	298	136	(141)	15	308
Additions through acquisition	(971)	–	1,607	(4,168)	(3,532)
(Credited)/charged to profit or loss (note 6(a))	(1,244)	201	745	(1,945)	(2,243)
At 31 December 2018 and 1 January 2019	(6,893)	2,306	3,268	(6,197)	(7,516)
Exchange adjustments	168	(254)	(126)	(229)	(441)
(Credited)/charged to profit or loss (note 6(a))	(209)	82	(597)	(890)	(1,614)
At 31 December 2019	(6,934)	2,134	2,545	(7,316)	(9,571)

Reconciliation to the consolidated statement of financial position:

	2019 US$'000	2018 US$'000
Net deferred tax assets recognised in the consolidated statement of financial position	**(13,171)**	(15,291)
Net deferred tax liabilities recognised in the consolidated statement of financial position	**3,600**	7,775
	(9,571)	(7,516)

24 INCOME TAX IN THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION (CONTINUED)

(c) Deferred tax assets not recognised

In accordance with the accounting policy set out in note 1(w), the Group has not recognised deferred tax assets in respect of cumulative tax losses attributable to certain subsidiaries of US$520,555,000 at 31 December 2019 (2018: US$407,823,000), as the directors consider that it is not probable that future taxable profits against which the losses can be utilised will be available in the relevant tax jurisdictions and entities.

The tax losses incurred by PRC subsidiaries of US$7,736,000, US$13,951,000, US$35,244,000, US$37,891,000 and US$60,138,000 will expire in 2020, 2021, 2022, 2023 and 2024 respectively. The tax losses of US$365,595,000 are incurred by subsidiaries in other jurisdictions primarily in US and France, of which tax losses could be carried forward indefinitely.

(d) Deferred tax liabilities not recognised

At 31 December 2019, temporary differences relating to the undistributed profits of PRC subsidiaries amounted to US$252,689,000 (2018: US$87,789,000). Deferred tax liabilities of US$2,527,000 (2018: US$8,779,000) have not been recognised in respect of the tax that would be payable on the distribution of these retained profits as the Group controls the dividend policy of these subsidiaries and it has been determined that it is probable that these profits will not be distributed in the foreseeable future.

25 DEFERRED INCOME

	Note	**Government subsidies for research and development projects** US$'000
At 1 January 2018		24,291
Additions		3,270
Government grant recognised as other income	4	(2,465)
Exchange adjustments		(1,191)
At 31 December 2018 and 1 January 2019		23,905
Additions		4,841
Disposal of subsidiaries	29(a)	(2,175)
Government grant recognised as other income	4	(1,237)
Exchange adjustments		(439)
At 31 December 2019		24,895

26 CONVERTIBLE BONDS

As at 31 December 2018, the outstanding convertible bonds issued by the Company represented (i) the convertible bonds due in May 2019 (the "2014 Convertible Bonds") with a principal amount of US$85,891,474; and (ii) the convertible bonds due in January 2022 (the "2016 Convertible Bonds") with a principal amount of US$4,800,000. Based on the terms of the 2014 Convertible Bonds and the 2016 Convertible Bonds, these convertible bonds could be settled by exchange of a fixed amount of cash with a fixed number of the Company's equity instruments. In accordance with the Group's accounting policy set out in note 1(r)(i), these convertible bonds are accounted for as compound financial instruments which contain both a liability component and an equity component.

As at 31 December 2018, the 2014 Convertible Bonds were held by several bondholders, among which, approximately 98.28% were held by Starwick Investments Limited ("Starwick", which is beneficially owned by China Renaissance Holdings Limited), and the remaining 1.72% were held by employees of the Group.

On 10 May 2019, the Company and Starwick, as the majority bondholder, entered into a conditional agreement in relation to the proposed amendments to the terms of the 2014 Convertible Bonds, pursuant to which, the maturity date of the 2014 Convertible Bonds shall be extended to 12 May 2020 (the "Proposed Amendments"). Consequently, the Group revised the estimates of the timing and the amounts of the repayments of the 2014 Convertible Bonds in accordance with the Proposed Amendments and adjusted the carrying amount of the convertible bonds to reflect the Proposal Amendments with a corresponding gain of US$1,012,000 recognised in profit or loss.

In 2019, the Company received conversion notices from the holders of the convertible bonds issued by the Company in relation to the exercise of the conversion rights to fully convert the outstanding 2016 Convertible Bonds with a principal amount of US$4,800,000 at the conversion price of HK$3.85 per share and to convert the 2014 Convertible Bonds with a principal amount of US$1,481,000 at the conversion price of HK$6.84. A total of 11,345,790 new ordinary shares of the Company were allotted to these bond holders.

The movement of the liability component and the equity component of the convertible bonds is set out below:

	Liability component US$'000	**Equity component** US$'000	**Total** US$'000
As at 1 January 2019	90,405	10,373	100,778
Interest charged during the year (note 5(a))	2,902	–	2,902
Interest paid during the year	(3,219)	–	(3,219)
Effect of the Proposed Amendments (note 4)	(1,012)	–	(1,012)
Conversion of the convertible bonds	(5,969)	(1,447)	(7,416)
As at 31 December 2019	83,107	8,926	92,033

As at 31 December 2019, the outstanding convertible bonds issued by the Company represented 2014 Convertible Bonds with a principal amount of US$84,410,468.

The 2014 Convertible Bonds are subject to the fulfilment of covenants relating to certain specific performance requirements on the Group. If the Group were to breach the covenant, these convertible bonds would become payable on demand. The Group regularly monitors its compliance with the covenants. As at 31 December 2019, none of the covenants relating to the 2014 Convertible Bonds had been breached.

The 2014 Convertible Bonds were fully converted to 95,949,033 ordinary shares of the Company subsequently (see note 34(a)).

27 SHARE-BASED PAYMENT TRANSACTIONS

(a) The 2006 and 2010 share option plans (equity-settled)

On 26 August 2006 and 3 September 2010, the Company adopted a share incentive plan (the "2006 Option Plan") and a share option plan (the "2010 Option Plan") respectively, pursuant to which, the board of directors may authorise, at their discretion, the issuance of share options to the executives, employees, external consultants or business associates of the Group. Each option gives the holder the right to subscribe for one ordinary share of the Company.

(i) The terms, conditions and fair values at the grant date of the grants are as follows:

	Number of options	Fair value	Weighted average fair value per share option	Weighted average exercise price
		US$'000	US$	US$
Options granted to executives and directors on:				
9 July 2010	28,648,730	7,838	0.27	0.31
9 August 2010	5,000,000	1,608	0.32	0.31
7 September 2012	500,000	73	0.15	0.43
22 October 2012	500,000	84	0.17	0.54
2 January 2013	500,000	86	0.17	0.55
28 August 2013	250,000	55	0.22	0.64
9 December 2013	400,000	91	0.23	0.72
21 January 2014	650,000	184	0.28	0.69
28 August 2014	500,000	118	0.24	0.61
20 January 2015	29,400,000	4,459	0.15	0.41
30 June 2015	300,000	53	0.18	0.50
7 December 2015	2,000,000	306	0.15	0.39
30 March 2016	40,970,000	6,737	0.16	0.45
27 June 2016	700,000	122	0.17	0.50
23 January 2017	23,340,000	7,308	0.31	0.72
30 March 2017	3,277,472	950	0.29	0.74
25 August 2017	2,000,000	559	0.28	0.95
29 March 2018	2,451,474	1,100	0.45	1.08
24 December 2018	30,739,346	8,419	0.27	0.98
23 January 2019	4,570,994	292	0.06	0.99
1 April 2019	4,061,604	1,283	0.32	0.96
30 August 2019	500,000	131	0.26	0.89
	181,259,620	41,856		

27 SHARE-BASED PAYMENT TRANSACTIONS (CONTINUED)

(a) The 2006 and 2010 share option plans (equity-settled) (continued)

(i) The terms, conditions and fair values at the grant date of the grants are as follows: (continued)

	Number of options	Fair value US$'000	Weighted average fair value per share option US$	Weighted average exercise price US$
Options granted to employees on:				
8 July 2010	1,230,940	363	0.30	0.31
17 October 2011	500,000	136	0.27	0.62
1 November 2011	750,000	185	0.25	0.58
28 August 2012	10,000,000	1,354	0.14	0.43
10 December 2012	13,300,000	2,354	0.18	0.59
	25,780,940	4,392		

(ii) The number and weighted average exercise prices of share options are as follows:

	Number of options	Fair value US$'000	Weighted average fair value per share option US$	Weighted average exercise price US$
Options granted to consultants and business associates on:				
1 September 2016	750,000	199	0.27	0.64
8 October 2018	500,000	280	0.56	1.28
23 January 2019 (Note)	15,000,000	957	0.06	0.99
	16,250,000	1,436		

The above share options are vested in instalments over an explicit vesting period of one to five years. Each instalment is accounted for as a separate share-based compensation arrangement. The contractual life of options is ten years.

(Expressed in United States dollars unless otherwise indicated)

27 SHARE-BASED PAYMENT TRANSACTIONS (CONTINUED)

(a) The 2006 and 2010 share option plans (equity-settled) (continued)

(ii) The number and weighted average exercise prices of share options are as follows: (continued)

	2019 Weighted average exercise price US$	**2019** Number of options	2018 Weighted average exercise price US$	2018 Number of options
Outstanding at the beginning of the year	**0.65**	**135,911,869**	0.52	110,475,604
Granted during the year (Note)	**0.98**	**24,132,598**	0.99	33,690,820
Exercised during the year	**0.50**	**(5,210,600)**	0.41	(7,200,000)
Forfeited during the year	**0.51**	**(2,585,056)**	0.55	(1,054,555)
Cancellation during the year (Note)	**0.99**	**(15,000,000)**	–	–
Outstanding at the end of the year	**0.67**	**137,248,811**	0.64	135,911,869
Exercisable at the end of the year	**0.48**	**37,354,563**	0.43	18,071,000

Note: On 23 January 2019, 15,000,000 share options of the Company were granted under the Company's share option scheme to Real & Realistic Foundation Limited (the "Non-employee Grantee"). By granting the above share options, the Group expects the Non-employee Grantee would continue to invest in the relevant business segment of the Company for the purpose of incubating strategic projects of the Company.

In August 2019, the Non-employee Grantee has notified the Company that it could not confirm its future investment commitments to the Group. Accordingly, the Group and the Non-employee Grantee reached an agreement to cancel the above granted share options. The above 15,000,000 share options were cancelled.

All the share options granted are exercisable by the grantees upon vesting and will expire in a period from January 2020 through August 2029. As at 31 December 2019, the weighted average remaining contractual life for the share options granted under the 2006 and 2010 Share Option plans was 6.64 years (2018: 7.39 years).

(Expressed in United States dollars unless otherwise indicated)

27 SHARE-BASED PAYMENT TRANSACTIONS (CONTINUED)

(a) The 2006 and 2010 share option plans (equity-settled) (continued)

(ii) The number and weighted average exercise prices of share options are as follows: (continued)

The fair value of services received in return for share options is measured by reference to the fair value of share options granted. The estimate of the fair value of the share options granted is measured based on a binomial tree model. The contractual life of the share option is used as an input into this model. Expectations of early exercise are incorporated into the binomial tree model.

Fair value of share options and assumptions	2019	2018
Fair value at measurement dates	**HK$1.68 to HK$3.05**	HK$1.79 to HK$4.00
Share price	**HK$6.95 to HK$7.73**	HK$7.15 to HK$9.54
Exercise price	**HK$6.95 to HK$7.73**	HK$7.69 to HK$9.99
Expected volatility (expressed as a weighted average volatility used in the modelling under binomial tree model)	**38% to 38.54%**	37% to 40.73%
Option life	**10 years**	10 years
Suboptimal exercise factor	**1.29 to 1.5**	1.5 to 2.21
Expected dividend yield	**0.49%**	0.32% to 0.49%
Average risk-free interest rate	**1.104% to 1.949%**	1.91% to 2.49%
Forfeiture rate	**0% to 8.3%**	0% to 8.3%

The expected volatility is determined by reference to the average implied volatility of comparable companies that manufacture similar products as the Group. Changes in the subjective input assumptions could materially affect the fair value estimate. Expected dividend yield is based on historical dividends.

In respect of share options granted during 2019 and 2018, the service condition has been taken into account in the grant date fair value measurement of the services received. There was no market condition associated with these share options.

(b) Share award scheme (equity-settled)

Pursuant to a share award scheme approved by the Board in 2011, the Company may purchase its own shares and grant such shares to certain employees of the Group at nil consideration.

For the year ended 31 December 2019, the Company granted 10,780,877 shares (2018: 5,486,816) to the Group's executives with a fair value of US$10,578,000 (2018: US$5,820,000) and purchased 19,426,000 shares (2018: 6,191,000 shares) at cash consideration of US$17,632,000 (2018: US$6,237,000).

The consideration paid for the purchase of the Company's shares is reflected as a decrease in the capital reserve of the Company. The fair value of the employee services received in exchange for the grant of shares is recognised as staff costs in profit or loss with a corresponding increase in capital reserve, which is measured based on the grant date share price of the Company.

27 SHARE-BASED PAYMENT TRANSACTIONS (CONTINUED)

(c) Employee share purchase plans ("ESPP") (equity-settled)

Since 2014, the Group adopted several ESPPs, pursuant to which, the partnership firms, whose limited partners consisted of employees of the Group, invested in the Group's subsidiaries and equity-accounted investees (together, the "Target Companies") by way of subscribing newly issued equity interests of the Target Companies, or acquiring equity interests from the Group. All participants of above ESPPs have purchased equity interests in respective partnership firms at amounts specified in the respective partnership agreements.

The ESPPs all contain a service condition. Employees participating in the plan have to transfer out their equity interests if their employments with the Group or the Group's associates were terminated within the vesting period, to a person or a party nominated by the general partners of the partnership firms at a price no higher than the amounts specified in the respective partnership agreements. The fair value of the ESPP at the grant date, being the difference between the considerations and the fair value of the equity interests transferred shall be spread over the vesting period and recognised as staff costs in the profit or loss.

In 2019, partnership firms subscribed for newly issued share capital of Shanghai Shenyi Medtech Co., Ltd. ("Shenyi"), MicroPort MedBot (Shanghai) Co., Ltd. ("MedBot") and Shanghai Jingjie Medtech Co., Ltd. ("Jingjie") and held approximately 31.03%, 10.22% and 51% of equity interests in Shenyi, MedBot and Jingjie, respectively. No expenses were recognised for the year ended 31 December 2019 in relation to the foresaid ESPPs as the transfer considerations approximated to the fair value of the equity interests transferred.

(d) Equity-settled share-based payment expenses recognised in the consolidated statement of profit or loss during the current and prior years:

	2019	2018
	US$'000	US$'000
Research and development costs	**3,240**	1,890
Distribution costs	**8,329**	3,610
Administrative expenses	**6,957**	4,390
	18,526	9,890

The compensation expenses resulting from those schemes disclosed in notes 27(a) to (c) above were reflected as equity-settled share-based payment expenses in the consolidated statement of profit or loss with a corresponding increase primarily in the capital reserve within the equity of the Group, of which US$6,809,000 is recorded in the "equity-settled share-based payment transactions", and US$10,578,000 in the "shares granted under share award scheme" in the consolidated statement of changes in equity for the year ended 31 December 2019.

27 SHARE-BASED PAYMENT TRANSACTIONS (CONTINUED)

(e) Long-term incentive awards (cash-settled)

In 2014, the Board approved a long-term incentive (the "LTI") scheme. The Group may grant the LTI awards to certain overseas employees of the Group under the LTI scheme, pursuant to which the eligible employees will be entitled to receive payments in cash at the time that such awards vest. The LTI awards will vest 25% on each of the first four anniversaries of the grant date. The settlement shall be made in cash as promptly as practicable but in no event after the thirtieth day following the applicable vesting date. The settlement amount will be determined based on the share price of the Company's ordinary shares at the dates specified in the LTI awards agreement and the unit of awards that shall have vested on such dates.

During the year ended 31 December 2019, cash-settled share-based payments of US$541,000 (2018: US$3,917,000) were recognised in consolidated statement of profit or loss. During the year ended 31 December 2019, 2,921,261 (2018: 2,390,157) and 2,291,406 (2018: 3,226,628) LTI awards were granted and exercised, respectively, and 2,515,955 (2018: 2,581,492) LTI awards were forfeited prior to the vesting as a result of the resignation of employees.

As at 31 December 2019, the number of outstanding and exercisable LTI awards was 4,510,865 and nil, respectively (2018: 6,396,965 and nil). The liabilities arising from the LTI awards was US$541,000 (2018: US$2,797,000), which were included in the trade and other payables.

28 CAPITAL, RESERVES AND DIVIDENDS

(a) Movements in components of equity

The reconciliation between the opening and closing balances of each component of the Group's consolidated equity is set out in the consolidated statement of changes in equity. Details of the changes in the Company's individual components of equity between the beginning and the end of the year are set out below:

	Note	**Share capital** US$'000	**Share premium** US$'000	**Capital reserve** US$'000	**Retained earnings/ (accumulated losses)** US$'000	**Total** US$'000
Balance at 1 January 2018		14	258,482	26,004	205,218	489,718
Changes in equity for 2018:						
Total comprehensive income		–	–	–	32,583	32,583
Equity–settled share–based transactions		–	–	4,090	–	4,090
Shares issued under share option scheme	*28(c)(iii)*	1	4,445	(1,492)	–	2,954
Shares purchased under share award scheme	*27(b)*	–	–	(6,237)	–	(6,237)
Shares granted under share award scheme	*27(b)*	–	–	5,820	–	5,820
Dividends approved in respect of the previous year	*28(b)*	–	1,075	–	(4,657)	(3,582)
Conversion of convertible bonds		1	85,087	(17,686)	–	67,402
Balance at 31 December 2018 and 1 January 2019		16	349,089	10,499	233,144	592,748
Changes in equity for 2019:						
Total comprehensive income		**–**	**–**	**–**	**(293,981)**	**(293,981)**
Equity–settled share–based transactions		**–**	**–**	**5,825**	**–**	**5,825**
Shares issued under share option scheme	*28(c)(iii)*	**–**	**3,481**	**(874)**	**–**	**2,607**
Shares purchased under share award scheme	*27(b)*	**–**	**–**	**(17,632)**	**–**	**(17,632)**
Shares granted under share award scheme	*27(b)*	**–**	**–**	**10,578**	**–**	**10,578**
Dividends approved in respect of the previous year	*28(b)*	**–**	**2,521**	**–**	**(5,951)**	**(3,430)**
Conversion of convertible bonds	*26*	**–**	**7,416**	**(1,447)**	**–**	**5,969**
Balance at 31 December 2019		**16**	**362,507**	**6,949**	**(66,788)**	**302,684**

28 CAPITAL, RESERVES AND DIVIDENDS (CONTINUED)

(b) Dividends

At the meeting of the board of directors held on 27 March 2019, the board of directors recommended the payment of a final dividend of HK2.9 cents (2018: HK2.5 cents) per ordinary share of the Company for the year ended 31 December 2018 (the "2018 Final Dividend") by way of cash, with an option to elect to receive new fully paid shares of the Company in lieu of cash. The 2018 Final Dividend totalling US$5,951,000 was approved at the annual general meeting of the Company held on 13 June 2019 and is payable to shareholders of the Company whose names appeared on the register of members of the Company on 21 June 2019.

The Company paid cash dividends to shareholders of the Company totalling US$3,430,000 (2018: US$3,582,000) and issued 3,896,181 ordinary shares (2018: 843,571 ordinary shares) of the Company at an issue price of HK$5.047 per share (2018 HK$9.994) as the 2018 Final Dividend. Accordingly, US$2,521,000 (2018: US$1,075,000) was credited to share premium.

After the period end, the directors of the Company proposed a final dividend for the year ended 31 December 2019 of HK5.3 cents per ordinary share, which has not been recognised as a liability at 31 December 2019.

(c) Share capital

(i) Ordinary shares

	2019		2018	
	Number of shares '000	**Amount US$'000**	Number of shares '000	Amount US$'000
Authorised:				
Ordinary shares of US$0.00001 each	**5,000,000**	**50**	5,000,000	50
Ordinary shares, issued and fully paid:				
At 1 January	**1,602,326**	**16**	1,457,063	14
Shares issued under share option plans (note 27(a)(ii))	**5,210**	**–**	7,200	1
Shares issued in lieu of cash dividends (note 28(b))	**3,896**	**–**	844	–
Shares issued in respect of conversion of convertible notes (note 26)	**11,346**	**–**	137,219	1
At 31 December	**1,622,778**	**16**	1,602,326	16

The holders of ordinary shares are entitled to receive dividends as declared from time to time and are entitled to one vote per share at meetings of the Company. All ordinary shares rank equally with regard to the Company's residual assets.

28 CAPITAL, RESERVES AND DIVIDENDS (CONTINUED)

(c) Share capital (continued)

(ii) Purchase of own shares

During the year, the Company purchased its own ordinary shares on The Stock Exchange of Hong Kong Limited under the share award scheme (note 27(b)) as follows:

Month/year	No. of shares repurchased	Highest price paid per share US$	Lowest price paid per share US$	Aggregate considerations paid US$'000
January 2019	7,395,000	0.97	0.93	7,053
April 2019	500,000	0.94	0.94	470
May 2019	9,526,000	0.95	0.83	8,510
June 2019	2,005,000	0.82	0.80	1,599
	19,426,000			17,632

Repurchased shares held at the end of reporting period are classified as treasury shares and are presented as a decrease in the capital reserve.

28 CAPITAL, RESERVES AND DIVIDENDS (CONTINUED)

(c) Share capital (continued)

(iii) Shares issued under the share option plans

During the year ended 31 December 2019, 5,210,600 (2018: 7,200,000) share options were exercised to subscribe for 5,210,600 (2018: 7,200,000) ordinary shares in the Company at a total consideration of US$2,607,000 (2018: US$2,954,000), of which Nil (2018: US$1,000) and US$2,607,000 (2018: US$2,953,000) was credited to share capital and share premium, respectively. As at 31 December 2019, the Group received cash consideration of US$1,854,000. Remaining consideration of US$753,000 was fully received in January 2020. In addition, an amount of US$874,000 (2018: US$1,492,000) was transferred from the capital reserve to the share premium account in accordance with policies set out in note 1(v)(iii).

(d) Nature and purpose of reserves

(i) Share premium

The application of the share premium account is governed by the Companies Law of the Cayman Islands.

(ii) Exchange reserve

The exchange reserve comprises all foreign exchange differences arising from the translation of the financial statements of certain subsidiaries within the Group. The reserve is dealt with in accordance with the accounting policies set out in note 1(z).

28 CAPITAL, RESERVES AND DIVIDENDS (CONTINUED)

(d) Nature and purpose of reserves (continued)

(iii) Capital reserve

The capital reserve primarily comprises the following:

- the fair value of the actual or estimated number of unexercised share options granted to executives, employees and external consultants of the Group in accordance with the accounting policy adopted for share–based payments in note 1(v)(iii);
- the consideration paid for the purchase of the Company's shares net of the fair value of shares granted to the Group's executives under the share award scheme (note 27(b));
- the amount allocated to the unexercised equity component of convertible bonds (note 1(r)(i)).
- gain/loss on acquisition or dilution of interests in subsidiaries where the Group's interest in a subsidiary is increased/decreased without losing control (note 1(d));
- initial recognition on share repurchase obligations and changes in amortised costs of share repurchase obligations (note 20); and
- remeasurement gain/loss arising from defined benefit retirement plans.

(iv) Statutory general reserve

In accordance with the relevant PRC accounting rules and regulations, the PRC subsidiaries of the Company are required to make appropriation of its retained profits to statutory general reserve at the rate of 10% of its net profit each year, until the reserve balance reaches 50% of its paid up capital. The transfer to this reserve must be made before distribution of dividend to equity owners. The statutory reserve fund can be utilised to offset prior year's losses or converted into paid up capital.

(e) Capital management

The Group's objectives in the aspect of managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

The Group defines "capital" as including all components of equity, lease liabilities, convertible bonds, non–current interest–bearing borrowings (including the current portion) and other non–current liabilities, less unaccrued proposed dividends based on the number of ordinary shares as at 31 December 2019. On this basis, the amount of capital employed at 31 December 2019 was US$1,184,651,000 (2018: US$839,708,000).

28 CAPITAL, RESERVES AND DIVIDENDS (CONTINUED)

(e) Capital management (continued)

The Group actively and regularly reviews and manages its capital structure to maintain a balance between the higher shareholders returns that might be possible with higher levels of borrowings and the advantages and security afforded by a sound capital position, and makes adjustments to the capital structure in light of changes in economic conditions.

The Group is subject to covenants imposed by the lenders of the interest–bearing borrowings and convertible bonds based on the Group's financial ratios relating to capital requirements. The Group complied with the imposed loan covenants for the year ended 31 December 2019. Except for the above, neither the Company nor any its subsidiaries are subject to externally imposed capital requirements.

29 DISPOSALS

(a) MP EP

In February 2019, MP EP together with its original shareholders entered into a capital increase and share transfer agreement and a shareholder agreement with Jiaxing Huajie, pursuant to which, Jiaxing Huajie agreed to (i) subscribe for 16,477,942 newly issued shares of MP EP at a cash consideration of RMB200,000,000; and (ii) acquire 18,362,194 shares of MP EP from the Group at a cash consideration of RMB222,870,000 (the "EP Disposal").

Upon the completion of the EP Disposal, the Group's equity interest in MP EP was decreased from 81.93% as at 31 December 2018 to 45.10%.

29 DISPOSALS (CONTINUED)

(a) MP EP (continued)

The transaction was accounted for as a deemed disposal of MP EP with a gain of US$63,105,000 recognised in profit or loss for the year ended 31 December 2019 and the Group's remaining interests in MP EP recognised as an investment in equity–accounted investee. A reconciliation of such gain of disposal of MP EP is set out below:

	As at the date of the disposal US$'000
Cash consideration (i)	33,099
Fair value of remaining equity interests in MP EP	37,343
	70,442
Less: Net assets of MP EP	(8,955)
Add: Non–controlling interests	1,618
Gain on disposal of MP EP (ii)	63,105

Note

i Net proceeds from the EP Disposal, net of cash balance of MP EP was approximately US$31,028,000.

ii Gain on disposal of MP EP is subject to the PRC CIT amounting to approximately US$7,262,000 based on the consideration received by the Group and tax computation basis of the transferred equity interest of MP EP by the Group.

(b) MP Endo

In July 2019, MP Endo was separately listed on the science and technology innovation board of the Shanghai Stock Exchange (the "Separate Listing"). MP Endo issued a total of 18,000,000 A shares at an offer price of RMB46.23 per share.

As disclosed in note 2(a), the Group retained control over MP Endo after the completion of the Separate Listing as the Group continues to be the single major shareholder of MP Endo and holds relatively larger voting rights than other dispersed public shareholders in aggregate, despite the fact that the Group's equity interest in this entity was 46.34% as at 31 December 2019.

The amount of US$42,551,000, being the difference between the net proceeds received from the Separate Listing of US$105,992,000 and the carrying amount of net assets in the proportion of the deemed disposed equity interests in MP Endo as at the date of disposal, was credit to capital reserve of the Group.

29 DISPOSALS (CONTINUED)

(c) MP CardioFlow Cayman

In 2019, the Group completed a reorganisation of shareholding in the heart valve business (the "Reorganisation"). The Reorganisation primarily involved inserting certain investment holding companies with no substantive operations. MP CardioFlow Cayman became the holding company of the heart valve business and MP CardioFlow Shanghai became a wholly–owned subsidiary of MP CardioFlow Cayman. The Group and other original shareholders of MP CardioFlow Shanghai directly or indirectly held voting shares of MP CardioFlow Cayman in the same proportion of their shareholding in MP CardioFlow Shanghai before the Reorganisation. The Reorganisation did not have a material impact on the Group's profit or loss.

In 2019, the Series C Investor also invested in MP CardioFlow Cayman at a cash consideration of US$45,000,000.

As at 31 December 2019, MP CardioFlow Cayman issued a total of 98,750,000 voting shares, of which, 56,625,716 were ordinary shares held by the Group, 24,212,383 were Series B Preferred Shares held by the Series B Investors, 11,250,000 were Series C Preferred Shares held by the Series C Investors and remaining were ordinary shares beneficially held by the other original shareholders of MP CardioFlow Shanghai.

As at 31 December 2019, the Group's voting rights in MP CardioFlow Cayman and its subsidiaries was approximately 57.34% and retained control over MP CardioFlow Cayman.

As disclosed in note 20, the Series B Investors were non–controlling interests of MP CardioFlow Cayman. Whereas the Series C Preferred Shares were treated as liabilities of MP CardioFlow Cayman, thus the Series C Investor was not a holder of non–controlling interest in MP CardioFlow. As a result, as at 31 December 2019, the Group's effective interest when calculating the percentage of non–controlling interests of MP CardioFlow Cayman was approximately 64.72%.

(d) Other transactions

In 2019, Shenyi agreed to issue 48.28% of enlarged share capital to a partnership firm and an investor (the "Investor") at a consideration totalling RMB28,000,000; and MedBot agreed to issue 20% of enlarged share capital to another partnership firm and the Investor at a consideration totalling RMB120,000,000. These partnership firms are under the Group's ESPP (see note 27(c)). In 2019, the Group received cash injections totalling US$19,473,000 from the abovementioned shareholders and retained control over Shenyi and Medbot as at 31 December 2019. After completion of the transactions, the Group's equity interest in Shenyi and MedBot would be decreased to 51.72% and 68% separately.

30 FINANCIAL RISK MANAGEMENT AND FAIR VALUES

Exposure to credit, liquidity, interest rate and currency risks arises in the normal course of the Group's business. The Group's exposure to these risks and the financial risk management policies and practices used by the Group to manage these risks are described below.

(a) Credit risk

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in a financial loss to the Group. The Group's credit risk is primarily attributable to trade and other receivables. The Group's exposure to credit risk arising from cash and cash equivalents is limited because the counterparties are banks and financial institutions for which the Group considers to have low credit risk. Management has a credit policy in place and the exposure to credit risk is monitored on an ongoing basis.

Except for the guarantee issued by the Group as set out in note 20, the Group does not provide any other guarantees which would expose the Group to credit risk. The maximum exposure to credit risk in respect of the guarantee at the end of the reporting period is disclosed in note 30(b).

(i) Trade and other receivables

At the end of the reporting period, 14% (2018: 4%) and 31% (2018: 16%) of the total trade and other receivables was due from the Group's largest customer and the five largest customers respectively.

Individual credit evaluations are performed on all customers requiring credit over a certain amount. These evaluations focus on the customer's past history of making payments when due and current ability to pay, and take into account information specific to the customer as well as pertaining to the economic environment in which the customer operates. The Group requires certain customers to pay deposits upfront and the remaining trade receivables are due within 30 to 360 days from the date of billing. Debtors with balances past due are requested to settle all outstanding balances before any further credit is granted. Normally, the Group does not obtain collateral from customers.

The Group measures loss allowances for trade receivables at an amount equal to lifetime ECLs, which is calculated using a provision matrix. For the purpose of determining ECLs, the Group has analysed the trade receivables based on different segments and countries.

30 FINANCIAL RISK MANAGEMENT AND FAIR VALUES (CONTINUED)

(a) Credit risk (continued)

(i) Trade and other receivables (continued)

The following table provides information about the Group's exposure to credit risk and ECLs for trade receivables as at 31 December 2019:

	2019		
	Weighted average expected loss rate %	**Gross carrying amount US$'000**	**Loss allowance US$'000**
Current and less than 1 year past due	**1.7**	**210,751**	**3,597**
1– 3 years past due	**47.3**	**6,542**	**3,097**
More than 3 years past due	**98.1**	**3,045**	**2,986**
		220,338	**9,680**

	2018		
	Weighted average expected loss rate %	Gross carrying amount US$'000	Loss allowance US$'000
Current and less than 1 year past due	2.5	149,542	3,769
1– 3 years past due	14.8	26,787	3,957
More than 3 years past due	20.7	13,944	2,881
		190,273	10,607

Expected loss rates are based on actual loss experience over the past 3 years. These rates are adjusted to reflect differences between economic conditions during the period over which the historic data has been collected, current conditions and the Group's view of economic conditions over the expected lives of the receivables.

30 FINANCIAL RISK MANAGEMENT AND FAIR VALUES (CONTINUED)

(a) Credit risk (continued)

(i) Trade and other receivables (continued)

Movement in the loss allowance account in respect of trade receivables during the year is as follows:

	2019 US$'000	2018 US$'000
Balance at 1 January	**10,607**	10,420
Amounts written off during the year	**(434)**	(210)
(Reversal of)/provision for impairment during the year	**(172)**	1,389
Disposal of subsidiaries (note 29(a))	**(214)**	–
Exchange adjustments	**(107)**	(992)
Balance at 31 December	**9,680**	10,607

(b) Liquidity risk

The Group's policy is to regularly monitor its liquidity requirements and its compliance with lending covenants, 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 longer term.

The following tables show the remaining contractual maturities at the end of the reporting period of the Group's non–derivative financial liabilities, which are based on contractual undiscounted cash flows (including interest payments computed using contractual rates or, if floating, based on rates current at the end of the reporting period) and the earliest date the Group can be required to pay:

	2019 Contractual undiscounted cash outflow					
	Within 1 year or on demand US$'000	More than 1 year but less than 2 years US$'000	More than 2 years but less than 5 years US$'000	More than 5 years US$'000	Total US$'000	Carrying amount at 31 December US$'000
Interest–bearing borrowings	43,704	67,274	247,338	–	358,316	320,199
Convertible bonds	85,106	–	–	–	85,106	83,107
Lease liabilities	12,316	10,955	26,598	13,317	63,186	54,705
Trade and other payables	237,681	538	177,412	16,130	431,761	387,322
	378,807	78,767	451,348	29,447	938,369	845,333
Financial guarantee issued:						
Maximum amount guaranteed (note 20)	–	–	13,000	–	13,000	4,201

30 FINANCIAL RISK MANAGEMENT AND FAIR VALUES (CONTINUED)

(b) Liquidity risk (continued)

	2018 Contractual undiscounted cash outflow					
	Within 1 year or on demand US$'000	More than 1 year but less than 2 years US$'000	More than 2 years but less than 5 years US$'000	More than 5 years US$'000	Total US$'000	Carrying amount at 31 December US$'000
Interest–bearing borrowings	102,360	9,283	135,736	–	247,379	238,730
Convertible bonds	87,133	5,666	–	–	92,799	90,405
Trade and other payables	236,700	10,062	117,569	9,497	373,828	330,438
	426,193	25,011	253,305	9,497	714,006	659,573
Financial guarantee issued:						
Maximum amount guaranteed (note 20)	–	–	13,000	–	13,000	2,106

(c) Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's interest rate risk arises primarily from cash at banks, deposits with banks, interest–bearing borrowings and convertible bonds. Borrowings issued at variable rates and cash at banks expose the Group to cash flow interest rate risk. Deposits with banks and borrowings issued at fixed rates expose the Group to fair value interest rate risk. The Group's interest rate profile as monitored by management is set out in (i) below.

30 FINANCIAL RISK MANAGEMENT AND FAIR VALUES (CONTINUED)

(c) Interest rate risk (continued)

(i) Interest rate profile

The following table details the interest rate profile of the Group's total borrowings, cash at banks and deposits with banks at the end of the reporting period:

	2019		2018	
	Effective interest rate '000	**Amount US$'000**	Effective interest rate '000	Amount US$'000
Net fixed rate instruments:				
Deposits with banks	**0.001%**	**1,558**	0.30%	410
Interest–bearing borrowings	**3.92%**	**(5,805)**	4.39% – 4.79%	(8,597)
Convertible preferred shares issued by a subsidiary	**9.09% – 15%**	**(135,800)**	9.09% – 9.29%	(73,449)
Lease liabilities	**4.13%–9.5%**	**(54,705)**	–	–
Other payables	**–**	**–**	2.13% – 9.90%	(3,868)
		(194,752)		(85,504)
Net variable rate instruments:				
Cash at banks	**0% – 2.75%**	**278,519**	0% – 2.00%	129,644
Deposits with banks	**0.30% – 1.75%**	**1,767**	0.30% – 1.75%	3,537
Interest–bearing borrowings	**1.79% – 5.95%**	**(314,394)**	2.58% – 6.18%	(230,133)
Convertible bonds	**5.24%**	**(83,107)**	5.24% – 9.52%	(90,405)
		(117,215)		(187,357)
		(311,967)		(272,861)

30 FINANCIAL RISK MANAGEMENT AND FAIR VALUES (CONTINUED)

(c) Interest rate risk (continued)

(ii) Sensitivity analysis

At 31 December 2019, it is estimated that a general increase/decrease of 100 basis points in interest rates, with all other variables held constant, would have decreased/increased the Group's profit for the year and retained profits by approximately US$1,251,000 and US$1,889,000, respectively (2018: decreased/increased the Group's profit for the year and retained profits by approximately US$2,200,000 and US$2,200,000, respectively).

The sensitivity analysis above indicates the instantaneous change in the Group's profit after tax (and retained profits) that would arise assuming that the change in interest rates had occurred at the end of the reporting period and had been applied to re–measure those financial instruments held by the Group which expose the Group to fair value interest rate risk at the end of the reporting period. In respect of the exposure to cash flow interest rate risk arising from floating rate non–derivative instruments held by the Group at the end of the reporting period, the impact on the Group's profit after tax (and retained profits) is estimated as an annualised impact on interest expense or income of such a change in interest rates. The analysis has been performed on the same basis as 2018.

(d) Currency risk

The Group is exposed to currency risk primarily from (i) sales and purchases which give rise to receivables, payables that are denominated in a foreign currency, i.e. a currency other than the functional currency of the operations to which the transactions relate. The currencies giving rise to this risk are primarily Euros and US$ and (ii) intra–group borrowings that are denominated in RMB, between the PRC subsidiaries, whose functional currency is RMB and overseas subsidiaries, whose functional currency is Hong Kong dollars or US$.

30 FINANCIAL RISK MANAGEMENT AND FAIR VALUES (CONTINUED)

(d) Currency risk (continued)

(i) Exposure to currency risk

The following table details the Group's exposure at the end of the reporting period to currency risk arising from recognised assets or liabilities denominated in a currency other than the functional currency of the entity to which they relate. For presentation purposes, the amounts of the exposure are shown in US$, translated using the spot rate at the year end date. Differences resulting from the translation of the financial statements of the entities into the Group's presentation currency are excluded.

	Exposure to foreign currencies (expressed in US$)					
	2019			2018		
	Euros US$'000	**US$ US$'000**	**RMB US$'000**	Euros US$'000	US$ US$'000	RMB US$'000
Trade and other receivables	**2,587**	**5,766**	**9,362**	8,471	5,780	–
Cash and cash equivalents	**2,524**	**14,729**	**261**	1,362	2,761	356
Trade and other payables	**(3,178)**	**(3,590)**	**(2)**	(2,070)	(4,634)	–
Amounts due (to)/from group companies	**(7,808)**	**2,395**	**(14,551)**	(2,907)	(3,045)	(4,385)
Amounts due from/(to) related parties	**–**	**5,495**	**317**	–	3,287	360
Net exposure arising from recognised assets and liabilities	**(5,875)**	**24,795**	**(4,613)**	4,856	4,149	(3,669)

30 FINANCIAL RISK MANAGEMENT AND FAIR VALUES (CONTINUED)

(d) Currency risk (continued)

(ii) Sensitivity analysis

The following table indicates the instantaneous change in the Group's profit after tax (and retained profits) that would arise if foreign exchange rates to which the Group has significant exposure at the end of the reporting period had changed at that date, assuming all other risk variables remained constant.

	2019		2018	
	Increase/ (decrease) in foreign exchange rates	**Effect on profit after tax and retained profits US$'000**	Increase/ (decrease) in foreign exchange rates	Effect on profit after tax and retained profits US$'000
RMB (against US$)	**3%**	**(768)**	3%	(225)
	(3)%	**768**	(3)%	225
Euros (against US$)	**3%**	**(139)**	3%	146
	(3)%	**139**	(3)%	(146)

Results of the analysis as presented in the above table represent an aggregation of the instantaneous effects on each of the Group entities' profit after tax and equity measured in the respective functional currencies, translated into US$ at the exchange rate ruling at the end of the reporting period for presentation purposes.

The sensitivity analysis assumes that the change in foreign exchange rates had been applied to re–measure those financial instruments held by the Group which expose the Group to foreign currency risk at the end of the reporting period, including inter–company payables and receivables within the Group which are denominated in a currency other than the functional currencies of the lender or the borrower. The analysis excludes differences that would result from the translation of the financial statements of the entities into the Group's presentation currency. The analysis has been performed on the same basis for 2018.

30 FINANCIAL RISK MANAGEMENT AND FAIR VALUES (CONTINUED)

(e) Fair value measurement

(i) Financial assets and liabilities measured at fair value

Fair value hierarchy

The following table presents the fair value of the Group's financial instruments measured at the end of the reporting period on a recurring basis, categorised into the three–level fair value hierarchy as defined in HKFRS 13, Fair value measurement. The level into which a fair value measurement is classified is determined with reference to the observability and significance of the inputs used in the valuation technique as follows:

– Level 1 valuations: Fair value measured using only Level 1 inputs i.e. unadjusted quoted prices in active markets for identical assets or liabilities at the measurement date

– Level 2 valuations: Fair value measured using Level 2 inputs i.e. observable inputs which fail to meet Level 1, and not using significant unobservable inputs. Unobservable inputs are inputs for which market data are not available

– Level 3 valuations: Fair value measured using significant unobservable inputs

The Group has a team with assistance of external valuers, performing valuations for the financial instruments, including unlisted equity securities and put options which are categorised into Level 3 of the fair value hierarchy. The team reports directly to the chief financial officer. A valuation report with analysis of changes in fair value measurement is prepared by the team at each interim and annual reporting date, and is reviewed and approved by the Group's management.

		Fair value measurements as at 31 December 2019 categorised into		
	Fair value at 31 December 2019 US$'000	Level 1 US$'000	Level 2 US$'000	Level 3 US$'000
Recurring fair value measurement				
Financial assets:				
Unlisted debt and equity securities (note 15)	**20,125**	–	–	**20,125**
Financial liabilities:				
– Put option granted to Sino Rhythm Limited (the "SRL Put Option") (note i)	**(11,162)**	–	–	**(11,162)**
– Put option granted to Witney ("Witney Put Option") (note ii)	**(1,642)**	–	–	**(1,642)**

30 FINANCIAL RISK MANAGEMENT AND FAIR VALUES (CONTINUED)

(e) Fair value measurement (continued)

(i) Financial assets and liabilities measured at fair value (continued)

	Fair value at 31 December 2018 US$'000	Fair value measurements as at 31 December 2018 categorised into Level 1 US$'000	Level 2 US$'000	Level 3 US$'000
Recurring fair value measurement				
Financial assets:				
Unlisted equity security (note 15)	11,910	–	–	11,910
Financial liabilities:				
– SRL Put Option	(10,640)	–	–	(10,640)

Notes:

i In connection with the financing of the acquisition of the CRM business, the Group granted a put option to SRL in 2018, pursuant to which, in the event that an initial public offering or a trade sale of the CRM business has not occurred on or prior to the fifth anniversary of the closing of the acquisition of the CRM business, SRL has the right to require the Company to purchase any or all of the equity interests in the CRM business held by SRL at a price equal to the original investment plus an annual internal return of 8%.

Upon receipt of SRL's notice of exercising the SRL Put Option, the Company shall have the right to decide whether to pay its consideration in cash or by issuing to SRL new shares of the Company, or with a combination of cash and shares of the Company. The SRL Put Option is considered to be a derivative financial liability which was measured at fair value on initial recognition.

ii In January 2019, the Group granted a put option to Witney, who is a co–investor of certain investees in which the Group also invested. Pursuant to the terms of the Witney Put Option, in the event of these investees' failure to submit a feasibility study protocol or clinical trial protocol to the relevant authorities in overseas markets or a qualified exit not occurring before the fifth anniversary of the investments made by Witney, Witney has the right to require the Group to purchase any of all of the interests in above investees held by Witney at a price equal to the original investment plus an annual internal return of LIBOR+1%.

During the years ended 31 December 2019 and 2018, there were no transfers between Level 1 and Level 2, or transfers into or out of Level 3. The Group's policy is to recognise transfers between levels of fair value hierarchy as at the end of the reporting period in which they occur.

(Expressed in United States dollars unless otherwise indicated)

30 FINANCIAL RISK MANAGEMENT AND FAIR VALUES (CONTINUED)

(e) Fair value measurement (continued)

(i) Financial assets and liabilities measured at fair value (continued)

Information about Level 3 fair value measurements

	Valuation techniques	Significant unobservable inputs
Unlisted equity securities	Recent transaction price	N/A
	Equity allocation model	Expected volatility of 25.32% to 31.86% and expected probability of event of 50% (Note a)
SRL Put Option	Black–Scholes option pricing model	Expected probability of event of 50% Expected volatility of 22.11%, taking into account the historical volatility of the comparable companies (Note b)
Witney Put Option	Black–Scholes option pricing model	Expected probability of event of 50% Expected volatility of 28.89%, taking into account the historical volatility of the comparable companies (Note b)

Note a As at 31 December 2019, it is estimated that with all other variables held constant, an increase/decrease in the expected probability of event by 10% would have increased/decreased the Group's profit by US$199,000/US$315,000 and an increase/decrease in the expected volatility by 5% would have decreased/increased the Group's profit by US$257,000/US$255,000.

Note b As at 31 December 2019, it is estimated that with all other variables held constant, an increase/decrease in the expected probability of event by 5% would have increased/decreased the Group's profit by US$1,280,000/US$1,280,000 and an increase/decrease in the expected volatility by 5% would have decreased/increased the Group's profit by US$1,029,000/US$921,000.

30 FINANCIAL RISK MANAGEMENT AND FAIR VALUES (CONTINUED)

(e) Fair value measurement (continued)

(i) Financial assets and liabilities measured at fair value (continued)

The movements during the period in the balance of these Level 3 fair value measurements are as follows:

	Financial assets US$'000	**Financial liabilities** US$'000
At 1 January 2019	11,910	(10,640)
Additional investments	8,044	–
Changes in fair value recognised in profit or loss during the period	159	(2,164)
Exchange adjustments	12	–
At 31 December 2019	20,125	(12,804)

(ii) Fair value of financial assets and liabilities carried at other than fair value

The carrying amounts of the Group's financial instruments carried at cost or amortised cost were not materially different from their fair values as at 31 December 2019 and 2018.

31 COMMITMENTS

(a) Capital commitments in respect of property, plant and equipment and intangible assets outstanding at 31 December 2019 not provided for in the financial statements were as follows:

	2019 **US$'000**	2018 US$'000
Contracted for	**12,876**	18,041
Authorised but not contracted for	**174,170**	136,904
	187,046	154,945

(b) At 31 December 2018, the total future minimum lease payments in respect of property, plant and equipment under non–cancellable operating leases are payable as follows:

	US$'000
Within 1 year	11,348
After 1 year but within 5 years	25,734
After 5 years	18,376
	55,458

The Group is the lessee in respect of a number of properties and items of plant and machinery and office equipment held under leases which were previously classified as operating leases under HKAS 17. The Group has initially applied HKFRS 16 using the modified retrospective approach. Under this approach, the Group adjusted the opening balances at 1 January 2019 to recognise lease liabilities relating to these leases (see note 1(c)). From 1 January 2019 onwards, future lease payments are recognised as lease liabilities in the statement of financial position in accordance with the policies set out in note 1(l), and the details regarding the Group's future lease payments are disclosed in note 23.

32 MATERIAL RELATED PARTY TRANSACTIONS

(a) Key management personnel remuneration

Remuneration for key management personnel of the Group, including amounts paid to the Company's directors as disclosed in note 7 and certain of the highest paid individuals as disclosed in note 8, is as follows:

	2019 US$'000	2018 US$'000
Salaries and other benefits	**2,780**	2,879
Discretionary bonuses	**1,542**	2,325
Retirement scheme contributions	**67**	73
Equity–settled share–based payment expenses	**5,400**	3,093
Cash–settled share–based payment expenses	**597**	1,107
	10,386	9,477

Total remuneration was included in staff costs (note 5(b)).

(b) Financing arrangements

	2019 US$'000	2018 US$'000
Loans to equity-accounted investees (Note 1)	**3,905**	3,060
Loans repaid by equity–accounted investees	**1,485**	–
Loans from Jingjie	**2,038**	–
Loans to MicroPort Sorin CRM (Shanghai) Co., Ltd. ("MicroPort Sorin CRM") (Note 2)	**–**	4,736
Loans repaid by MicroPort Sorin CRM	**–**	9,315

Note 1: As at 31 December 2019, loans to equity–accounted investees of the Group of US$6,965,000 bore an interest rate at 4.75% or LIBOR+2.5% p.a..

Note 2: MicroPort Sorin CRM become a subsidiary of the Group since 30 April 2018 in connection with the acquisition of the CRM devices business. The transactions with MicroPort Sorin CRM during the period from 1 January 2018 to 30 April 2018 were still disclosed as related party transactions.

32 MATERIAL RELATED PARTY TRANSACTIONS (CONTINUED)

(c) Sales to related parties

For the year ended 31 December 2019 and 2018, the Group entered into sales transactions with the following related parties:

Name of party	**Relationship**
Thai Otsuka Pharmaceutical Co., Ltd. ("Thai Otsuka")	Subsidiary of Otsuka Holdings Co., Ltd. ("Otsuka Holdings"), the controlling party of substantial shareholder of the Company
Otsuka (Philippines) Pharmaceutical, Inc. ("Otsuka Philippines")	Subsidiary of Otsuka Holdings
P.T. Otsuka Indonesia ("Otsuka Indonesia")	Subsidiary of Otsuka Holdings
Otsuka Pakistan Ltd. ("Otsuka Pakistan")	Subsidiary of Otsuka Holdings
JIMRO Co., Ltd.	Subsidiary of Otsuka Holdings
KISCO Co., Ltd.	Subsidiary of Otsuka Holdings
MP EP (Note)	Equity–accounted investee of the Group
Jingjie	Equity–accounted investee of the Group

Note: Upon the completion of the EP Disposal, MP EP become an equity–accounted investee of the Group (note 29(a)).The transactions with MP EP since the date of the disposal were disclosed as related party transactions.

Particulars of the Group's sales transactions with these parties are as follows:

	2019 **US$'000**	2018 US$'000
Sale of goods to:		
Thai Otsuka	**3,841**	875
Otsuka Philippines	**698**	894
Otsuka Indonesia	**992**	773
Otsuka Pakistan	**556**	804
JIMRO Co., Ltd.	**34**	122
KISCO Co., Ltd.	**579**	553
MP EP	**379**	–
	7,079	4,021

Amounts due from related parties are unsecured, interest–free and expected to be recovered within one year.

32 MATERIAL RELATED PARTY TRANSACTIONS (CONTINUED)

(d) Other transactions with related parties

Particulars of the Group's other transactions with related parties are as follows:

Name of party	**Relationship**
Maxwell Maxcare Science Foundation Limited ("Maxwell Maxcare")	Controlling party of a substantial shareholder of the Company
Shanghai Weichuang Investment Management Co., Ltd. ("Shanghai Weichuang Investment")	Legal representative and chairman of the board of directors of Shanghai Weichuang Investment was a director of the Company in 2018

	2019 **US$'000**	2018 US$'000
Purchase from MP EP	**1,669**	–
Service fee charged by Maxwell Maxcare	**–**	565
Placement of the Security Deposit to Shanghai Weichuang Investment (note 16)	**–**	17,733
Fee income from the Security Deposit	**–**	763

As disclosed in note 26, the Company and Starwick, the majority bondholder, agreed to extend the maturity date of the 2014 Convertible Bonds to 12 May 2020. The Proposed Amendments applied to all outstanding 2014 Convertible Bonds and their holders, which included connected person of the Company.

(e) Applicability of the Listing Rules relating to connected transactions

The related party transactions with subsidiaries of Otsuka Holding and Maxwell Maxcare constitute connected transactions or continuing connected transactions as defined in Chapter 14A of the Listing Rules. The disclosures required by Chapter 14A of the Listing Rules are provided under the paragraph "Connected transactions" in the reports of the directors.

33 COMPANY–LEVEL STATEMENT OF FINANCIAL POSITION

	31 December 2019 US$'000	31 December 2018 US$'000
Non–current assets		
Investments in subsidiaries	**509,427**	760,632
Interest in equity–accounted investees	**4,881**	4,805
Other financial assets	**5,500**	–
	519,808	765,437
Current assets		
Other receivables	**44,859**	66,321
Cash and cash equivalents	**17,704**	12,197
	62,563	78,518
Current liabilities		
Amounts due to subsidiaries	**6,554**	4,600
Other payables	**5,521**	4,819
Interest–bearing borrowings	**15,679**	14,735
Convertible bonds (note 26)	**83,107**	86,834
	110,861	110,988
Net current liabilities	**(48,298)**	(32,470)
Total assets less current liabilities	**471,510**	732,967
Non–current liabilities		
Interest–bearing borrowings	**153,463**	123,902
Convertible bonds	**–**	3,571
Other payables	**4,201**	2,106
Derivative financial liabilities	**11,162**	10,640
	168,826	140,219
NET ASSETS	**302,684**	592,748
CAPITAL AND RESERVES (note 28(a))		
Share capital	**16**	16
Reserves	**302,668**	592,732
TOTAL EQUITY	**302,684**	592,748

(Expressed in United States dollars unless otherwise indicated)

34 NON–ADJUSTING EVENTS AFTER THE REPORTING PERIOD

(a) In February 2020, the 2014 Convertible Bonds in the aggregate outstanding amount of US$84,410,468 were fully converted to 95,949,033 ordinary shares of the Company at a conversion price of HK$6.84 per share. As at the date of this report, the Group has no outstanding convertible bonds.

(b) Under the term of a stock and asset purchase agreement dated 8 March 2018 in relation to the acquisition of the CRM business from LivaNova PLC ("LivaNova"), the purchase price consideration is subject to an adjustment after the initial closing (the "Adjustment Amount"). As at 31 December 2019, the Group and LivaNova were still in the process of finalising the Adjustment Amount.

In March 2020, the arbitrator appointed by the Group and LivaNova determined that LivaNova shall refund a total of US$16.4 million as the Adjustment Amount to the Group. As at the date of this report, the Adjustment Amount has been fully paid by LivaNova.

(c) The outbreak of the Covid-19 since the beginning of 2020 is a challenging situation faced by the society. The Group has been in the process of assessing the overall impact of the situation on the operation of the Group and endeavoured all the effort to manage the impact. The Group will keep alert of the change of the situation and make timely responses and adjustments as they arise.

35 COMPARATIVE FIGURES

The Group has initially applied HKFRS 16 at 1 January 2019 using the modified retrospective approach. Under the transition methods chosen, comparative information is not restated. Further details of the changes in accounting policies are disclosed in note 1(c).

36 POSSIBLE IMPACT OF AMENDMENTS, NEW STANDARDS AND INTERPRETATIONS ISSUED BUT NOT YET EFFECTIVE FOR THE YEAR ENDED 31 DECEMBER 2019

Up to the date of issue of these financial statements, the HKICPA has issued a number of amendments and a new standard, HKFRS 17, Insurance contracts, which are not yet effective for the year ended 31 December 2019 and which have not been adopted in these financial statements. These developments include the following which may be relevant to the Group.

	Effective for accounting periods beginning on or after
Amendments to HKFRS 3, Definition of a business	1 January 2020
Amendments to HKAS 1 and HKAS 8, Definition of material	1 January 2020

The Group is in the process of making an assessment of what the impact of these developments is expected to be in the period of initial application. So far it has concluded that the adoption of them is unlikely to have a significant impact on the consolidated financial statements.

MicroPort®
一个属于患者和医生的品牌
微创医疗