MicroPort®

MicroPort Scientific Corporation

微創醫療科學有限公司*

(Incorporated in the Cayman Islands with limited liability)

(Stock code: 00853)

ANNOUNCEMENT OF UNAUDITED INTERIM RESULTS FOR THE SIX MONTHS ENDED 30 JUNE 2022

FINANCIAL HIGHLIGHTS

The board (the "**Board**") of directors (the "**Directors**") of MicroPort Scientific Corporation (the "**Company**" or "**MicroPort**") announces the unaudited consolidated interim results of the Company and its subsidiaries (hereinafter collectively referred to as the "**Group**") for the six months ended 30 June 2022 (the "**Reporting Period**"), which have been reviewed by the Company's audit committee (the "**Audit Committee**"). The financial highlights of the Group during the Reporting Period together with the comparative figures for the corresponding previous period are set out as follows:

	Six months ended 30 June		
	2022	2021	Change
	US$'000	*US$'000*	*%*
	(unaudited)	(unaudited)	
Revenue	**404,984**	384,611	10.1% (Excluding foreign exchange impact)
Gross profit	**247,702**	247,608	0.0%
Loss for the period	**(253,275)**	(114,676)	N/A
Loss attributable to equity shareholders of the Company	**(198,130)**	(90,266)	N/A
Loss per share			
Basic (in cents)	**(10.94)**	(5.00)	N/A
Diluted (in cents)	**(11.28)**	(5.62)	N/A

During the Reporting Period, the Group recorded revenue of US$405.0 million, increased by 5.3% in US$ or 10.1% excluding the foreign exchange impact compared to the six months ended 30 June 2021. Despite the reduction in elective surgeries at medical institutions due to the COVID-19 pandemic, the heart valve business, the endovascular and peripheral vascular devices business and the neurovascular devices business recorded increases of 44.8%, 26.6% and 22.9% in revenue excluding the foreign exchange impact respectively, mainly attributable to the rapid market penetration and the revenue contributed from new products. Meanwhile, the overseas business grew steadily, with the revenue from the overseas market for the Cardiac Rhythm Management ("CRM") business, orthopedics devices business, and cardiovascular devices business recording growth of 8.1%, 9.7% and 28.1% excluding the foreign exchange impact, respectively.

The Group recorded loss for the period of US$253.3 million (loss attributable to equity shareholders of the Company: US$198.1 million) for the six months ended 30 June 2022, compared to loss for the period of US$114.7 million (loss attributable to equity shareholders of the Company: US$90.3 million) for the six months ended 30 June 2021. This change was principally attributable to: (i) the increase in non-cash expenses, including the accrued interest on the convertible bonds issued by the Group and the preferred shares issued by its subsidiaries, the increase in costs recognized for the incentive shares and share options granted to certain employees under the Group's share incentive schemes, as well as the effect of expanding share of losses of equity-accounted investees during the Reporting Period; (ii) significant increases in expenses for the surgical robot business, the heart valve business, the surgical business and other business segments in their active promotion of research and development, registration and commercialization with the help of their own independent financing channels; and (iii) increase in investment in overseas market development and product promotion for orthopedics devices business, CRM business and cardiovascular devices business.

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

for the six months ended 30 June 2022 (unaudited)
(Expressed in United States dollars)

		Six months ended 30 June	
		2022	2021
	Note	***US$'000***	*US$'000*
Revenue	*3*	**404,984**	384,611
Cost of sales		**(157,282)**	(137,003)
Gross profit		**247,702**	247,608
Other net income	*4*	**41,356**	24,622
Research and development costs		**(186,430)**	(117,064)
Distribution costs		**(146,610)**	(130,689)
Administrative expenses		**(133,259)**	(102,987)
Other operating costs	*5(b)*	**(8,328)**	(5,466)
Loss from operations		**(185,569)**	(83,976)
Finance costs	*5(a)*	**(46,050)**	(21,905)
Gain on deemed disposal of a subsidiary		**–**	8,219
Gain on deemed disposal of interests in equity-accounted investees		**1,920**	523
Share of profits less losses of equity-accounted investees		**(18,141)**	(5,255)
Loss before taxation	*5*	**(247,840)**	(102,394)
Income tax	*6*	**(5,435)**	(12,282)
Loss for the period		**(253,275)**	(114,676)
Attributable to:			
Equity shareholders of the Company		**(198,130)**	(90,266)
Non-controlling interests		**(55,145)**	(24,410)
Loss for the period		**(253,275)**	(114,676)
Loss per share	*7*		
– Basic (in cents)		**(10.94)**	(5.00)
– Diluted (in cents)		**(11.28)**	(5.62)

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

for the six months ended 30 June 2022 (unaudited)
(Expressed in United States dollars)

	Six months ended 30 June	
	2022	2021
	US$'000	*US$'000*
Loss for the period	**(253,275)**	(114,676)
Other comprehensive income for the period, net of tax		
Items that will not be reclassified to profit or loss:		
Remeasurement of net defined benefit liabilities	**471**	418
Items that may be reclassified subsequently to profit or loss:		
Exchange differences on translation of financial statements, net of nil tax	**(120,958)**	(30,103)
Share of other comprehensive income of equity-accounted investees	**785**	–
Other comprehensive income for the period	**(119,702)**	(29,685)
Total comprehensive income for the period	**(372,977)**	(144,361)
Attributable to:		
Equity shareholders of the Company	**(285,248)**	(127,053)
Non-controlling interests	**(87,729)**	(17,308)
Total comprehensive income for the period	**(372,977)**	(144,361)

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

at 30 June 2022 (unaudited)
(Expressed in United States dollars)

	Note	At 30 June 2022		At 31 December 2021	
		US$'000	***US$'000***	*US$'000*	*US$'000*
Non-current assets					
Investment properties			**7,003**		7,407
Property, plant and equipment			**921,380**		922,874
			928,383		930,281
Intangible assets			**238,458**		256,609
Goodwill			**280,194**		290,565
Equity-accounted investees			**406,087**		363,103
Financial assets measured at fair value through profit or loss			**25,942**		25,221
Derivative financial instruments			**4,769**		4,963
Deferred tax assets			**21,305**		20,368
Other non-current assets			**89,996**		102,652
			1,995,134		1,993,762
Current assets					
Derivative financial instruments		**–**		1,406	
Inventories		**320,878**		289,931	
Trade and other receivables	*8*	**292,879**		308,126	
Pledged deposits and time deposits		**63,221**		32,890	
Cash and cash equivalents		**1,380,798**		1,754,414	
		2,057,776		2,386,767	
Current liabilities					
Trade and other payables	*9*	**336,843**		358,792	
Contract liabilities		**21,153**		23,590	
Interest-bearing borrowings	*10*	**112,890**		94,746	
Lease liabilities		**65,520**		50,505	
Income tax payable		**16,696**		19,124	
Derivative financial instruments		**871**		–	
		553,973		546,757	
Net current assets			**1,503,803**		1,840,010
Total assets less current liabilities			**3,498,937**		3,833,772

	Note	At 30 June 2022		At 31 December 2021	
		US$'000	***US$'000***	*US$'000*	*US$'000*
Non-current liabilities					
Interest-bearing borrowings	*10*	**308,720**		269,637	
Lease liabilities		**137,454**		168,437	
Deferred income		**32,885**		35,098	
Contract liabilities		**24,238**		26,243	
Convertible bonds		**668,380**		660,369	
Other payables	*9*	**434,361**		425,914	
Deferred tax liabilities		**24,720**		27,692	
Derivative financial instruments		**611**		2,890	
			1,631,369		1,616,280
NET ASSETS			**1,867,568**		2,217,492
CAPITAL AND RESERVE	*11*				
Share capital			**18**		18
Reserves			**1,234,675**		1,490,732
Total equity attributable to equity shareholders of the Company			**1,234,693**		1,490,750
Non-controlling interests			**632,875**		726,742
TOTAL EQUITY			**1,867,568**		2,217,492

NOTES

(Expressed in United States dollars unless otherwise indicated)

1 Basis of preparation

The interim financial report has been prepared in accordance with the applicable disclosure provisions of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, including compliance with Hong Kong Accounting Standard ("HKAS") 34, *Interim financial reporting*, issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA"). It has been reviewed by the audit committee of the Company and approved for issue on 30 August 2022.

The interim financial report has been prepared in accordance with the same accounting policies adopted in the 2021 annual financial statements, except for the accounting policy changes that are expected to be reflected in the 2022 annual financial statements. Details of any changes in accounting policies are set out in note 2.

The preparation of an interim financial report in conformity with HKAS 34 requires management to make judgments, estimates and assumptions that affect the application of policies and reported amounts of assets and liabilities, income and expenses on a year-to-date basis. Actual results may differ from these estimates.

The interim financial report contains condensed consolidated financial statements and selected explanatory notes. The notes include an explanation of events and transactions that are significant to an understanding of the changes in financial position and performance of MicroPort Scientific Corporation (the "Company") and its subsidiaries (together, the "Group") since the 2021 annual financial statements. The condensed consolidated interim financial statements and notes thereon do not include all of the information required for a full set of financial statements prepared in accordance with Hong Kong Financial Reporting Standards ("HKFRSs").

This interim financial report is unaudited, but has been reviewed by KPMG in accordance with Hong Kong Standard on Review Engagements 2410, *Review of interim financial information performed by the independent auditor of the entity*, issued by the HKICPA.

The financial information relating to the financial year ended 31 December 2021 that is included in the interim financial report as comparative information does not constitute the Company's annual consolidated financial statements for that financial year but is derived from those financial statements. The Company's annual consolidated financial statements for the year ended 31 December 2021 are available from the Company's registered office. The auditors have expressed an unqualified opinion on those financial statements in their report dated 30 March 2022.

2 Changes in accounting policies

The HKICPA has issued the following amendments to HKFRSs that are first effective for the current accounting period of the Group:

- Annual Improvements to HKFRS Standards 2018 – 2020
- Amendments to HKFRS 3, *Reference to the Conceptual Framework*
- Amendments to HKAS 16, *Property, plant and equipment: proceeds before intended use*
- Amendments to HKAS 37, *Onerous contracts – cost of fulfilling a contract*

None of these developments have had a material effect on how the Group's results and financial position for the current or prior periods have been or presented in this interim financial report. The Group has not applied any new standard or interpretation that is not yet effective for the current accounting period.

3 Revenue and segment reporting

The Group manages its businesses by divisions, which are organised by a mixture of both lines of business (products and services) 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. No operating segments have been aggregated to form the following reportable segments.

(a) Disaggregation of revenue

Disaggregation of revenue from contracts with customers by major products or service lines and geographical location of customers is as follows:

	Six months ended 30 June	
	2022	2021
	US$'000	*US$'000*
Revenue from contracts with customers within the scope of HKFRS 15		
Disaggregated by major products of service lines		
– Sales of medical devices	**399,521**	379,644
– Revenue from post-sales services	**2,054**	450
– Others	**1,578**	3,358
	403,153	383,452
Revenue from other sources		
– Gross rentals from operating leases	**1,831**	1,159
	404,984	384,611

	Six months ended 30 June	
	2022	2021
	US$'000	*US$'000*
Disaggregated by geographical location of external customers		
– the People's Republic of China (the "PRC") (country of domicile)	**188,660**	174,009
– North America	**48,936**	48,375
– Europe	**123,806**	123,502
– Asia (excluding the PRC)	**30,040**	33,571
– South America	**6,161**	2,327
– Others	**7,381**	2,827
	216,324	210,602
	404,984	384,611

The geographical analysis above includes property rental income from external customers in Mainland China and the United States for the six months ended 30 June 2022 of US$1,831,000 (six months ended 30 June 2021: US$1,159,000).

Disaggregation of revenue from contracts with customers by the timing of revenue recognition is disclosed in note 3(b).

(b) Information about profit or loss, assets and liabilities

Disaggregation of revenue from contracts with customers by 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 period is set out below:

	Six months ended 30 June 2022									
	Cardiovascular devices business	Orthopedics devices business	Cardiac rhythm management business	Endovascular and peripheral vascular devices business	Neurovascular devices business	Heart valve business	Surgical robot business	Surgical devices business	Others[#]	Total
	US$'000	*US$'000*	*US$'000*	*US$'000*	*US$'000*	*US$'000*	*US$'000*	*US$'000*	*US$'000*	*US$'000*
Disaggregated by timing of revenue recognition										
Point in time – sales of medical devices	60,216	107,295	102,340	70,765	31,326	18,987	156	2,433	6,003	399,521
Over time – post-sales services	–	–	2,054	–	–	–	–	–	–	2,054
Over time – rental income	335	391	–	–	–	–	–	–	1,105	1,831
Others	133	25	–	–	–	–	–	–	1,420	1,578
Revenue from external customers	60,684	107,711	104,394	70,765	31,326	18,987	156	2,433	8,528	404,984
Inter-segment revenue	8,923	963	43	–	139	–	–	–	177	10,245
Reportable segment revenue	69,607	108,674	104,437	70,765	31,465	18,987	156	2,433	8,705	415,229
Reportable segment net (loss)/profit	(4,327)	(27,172)	(36,777)	32,793	(14,258)	(18,822)	(71,177)	(13,324)	(39,310)	(192,374)

	At 30 June 2022									
	Cardiovascular devices business	Orthopedics devices business	Cardiac rhythm management business	Endovascular and peripheral vascular devices business	Neurovascular devices business	Heart valve business	Surgical robot business	Surgical devices business	Others[#]	Total
	US$'000	*US$'000*	*US$'000*	*US$'000*	*US$'000*	*US$'000*	*US$'000*	*US$'000*	*US$'000*	*US$'000*
Reportable segment assets	629,646	496,126	374,171	294,301	210,668	480,101	378,232	224,581	613,507	3,701,333
Reportable segment liabilities	229,660	362,783	317,964	56,803	254,109	33,897	82,532	86,133	108,519	1,532,400

	Six months ended 30 June 2021									
	Cardiovascular devices business *US$'000*	Orthopedics devices business *US$'000*	Cardiac rhythm management business *US$'000*	Endovascular and peripheral vascular devices business *US$'000*	Neurovascular devices business *US$'000*	Heart valve business *US$'000*	Surgical robot business *US$'000*	Surgical devices business *US$'000*	Others[#] *US$'000*	Total *US$'000*
Disaggregated by timing of revenue recognition										
Point in time – sales of medical devices	64,500	109,932	107,808	55,843	24,986	13,385	–	2,288	902	379,644
Over time – post-sales services	–	–	450	–	–	–	–	–	–	450
Over time – rental income	130	149	–	–	74	–	–	–	806	1,159
Others	2,207	59	–	–	308	–	–	–	784	3,358
	66,837	110,140	108,258	55,843	25,368	13,385	–	2,288	2,492	384,611
Reportable segment net profit/(loss)	7,849	(16,799)	(35,050)	28,459	5,568	(10,835)	(47,179)	(1,868)	(13,279)	(83,134)

	At 31 December 2021									
	Cardiovascular devices business *US$'000*	Orthopedics devices business *US$'000*	Cardiac rhythm management business *US$'000*	Endovascular and peripheral vascular devices business *US$'000*	Neurovascular devices business *US$'000*	Heart valve business *US$'000*	Surgical robot business *US$'000*	Surgical devices business *US$'000*	Others[#] *US$'000*	Total *US$'000*
Reportable segment assets	678,287	490,510	435,891	275,451	210,226	524,108	436,895	210,071	601,020	3,862,459
Reportable segment liabilities	195,723	240,742	329,785	38,489	237,683	40,233	59,314	93,448	83,849	1,319,266

[#] Revenues and results from segments below the quantitative thresholds are mainly attributable to fermentation-based active pharmaceutical ingredients business, medical imaging business and electrophysiology devices, etc. None of those segments individually met any of the quantitative thresholds for reportable segments.

(c) Reconciliations of reportable segment profit or loss

	Six months ended 30 June	
	2022	2021
	US$'000	*US$'000*
Reportable segment net loss	**(153,064)**	(69,855)
Other segments net loss	**(39,310)**	(13,279)
Share awards scheme	**(8,144)**	(4,921)
Other equity-settled share-based payment expenses	**(18,957)**	(17,391)
Unallocated exchange gain/(loss)	**3,869**	(769)
Interest on convertible bonds issued by the Company	**(8,011)**	(733)
Gain on deemed disposal of subsidiaries	**–**	8,219
Unallocated expenses, net	**(29,658)**	(15,947)
Consolidated loss for the period	**(253,275)**	(114,676)

4 Other net income

	Six months ended 30 June	
	2022	2021
	US$'000	*US$'000*
Government grants	**6,125**	10,795
Interest income on financial assets carried at amortised cost	**10,275**	8,630
Net loss on disposal of property, plant and equipment	**(79)**	(163)
Net foreign exchange gain/(loss)	**6,044**	(2,193)
Net realised and unrealised gain on financial instruments carried at fair value through profit or loss	**6,272**	7,832
Others	**12,719**	(279)
	41,356	24,622

5 Loss before taxation

Loss before taxation is arrived at after charging/(crediting):

(a) Finance costs

	Six months ended 30 June	
	2022	2021
	US$'000	*US$'000*
Interest on the convertible bonds	**8,011**	2,726
Interest on other interest-bearing borrowings	**8,726**	2,351
Interest on preferred shares issued by subsidiaries	**23,224**	14,124
Interest on lease liabilities	**4,313**	1,427
Total interest expense on financial liabilities not at fair value through profit or loss	**44,274**	20,628
Less: interest expense capitalised into properties under development	**(194)**	–
	44,080	20,628
Others	**1,970**	1,277
	46,050	21,905

(b) Other operating costs

	Six months ended 30 June	
	2022	2021
	US$'000	*US$'000*
Legal and professional fee	**4,032**	5,234
Donations	**3,478**	38
Others	**818**	194
	8,328	5,466

(c) Other items

	Six months ended 30 June	
	2022	2021
	US$'000	*US$'000*
Amortisation of intangible assets	**9,586**	4,926
Depreciation charge		
– owned property, plant and equipment	**26,131**	25,043
– right-of-use assets	**27,818**	8,663
Less: Amounts capitalised as development costs	**(282)**	(198)
	63,253	38,434
Research and development costs	**195,051**	125,874
Less: Amortisation of capitalised development costs	**(3,092)**	(3,722)
Costs capitalised into intangible assets	**(8,621)**	(8,810)
	183,338	113,342
Provision of inventories write-down	**1,299**	3,580
Provision for impairment of:		
– trade and other receivables	**4,536**	595

6 Income tax

	Six months ended 30 June	
	2022	2021
	US$'000	*US$'000*
Current tax – the PRC corporate income tax ("CIT")	**6,696**	7,519
Current tax – other jurisdictions	**1,538**	1,617
	8,234	9,136
Deferred taxation	**(2,799)**	3,146
	5,435	12,282

Pursuant to the CIT Law of the PRC, during the six months ended 30 June 2022, all of the Company's PRC subsidiaries are liable to PRC CIT at a rate of 25% except for 13 entities entitled to a preferential income tax rate of 15% as they are certified as "High and New Technology Enterprise" ("HNTE"). According to Guoshuihan 2009 No. 203, if an entity is certified as an HNTE, it is entitled to a preferential income tax rate of 15% during the certified period.

Taxation for overseas subsidiaries is similarly calculated using the estimated annual effective rates of taxation that are expected to be applicable in the relevant countries.

7 Loss per share

(a) Basic loss per share

The calculation of basic loss per share is based on the loss attributable to ordinary equity shareholders of the Company of US$198,130,000 for the six months ended 30 June 2022 (six months ended 30 June 2021: US$90,266,000) and the weighted average of 1,811,000,000 ordinary shares in issue during the six months ended 30 June 2022 (six months ended 30 June 2021: 1,806,579,000 ordinary shares).

(b) Diluted loss per share

The calculation of diluted loss per share is based on the loss attributable to ordinary equity shareholders of the Company of US$204,794,000 for the six months ended 30 June 2022 (six months ended 30 June 2021: US$102,203,000) and the weighted average number of ordinary shares of 1,816,084,000 shares for the six months ended 30 June 2022 (six months ended 30 June 2021: 1,818,291,000 ordinary shares) after adjusting the effects of dilutive potential issuable ordinary shares under a put option granted to Sino Rhythm Limited ("SRL") that may be settled in ordinary shares of the Company.

8 Trade and other receivables

As of the end of the reporting period, the ageing analysis of trade receivables (which are included in trade and other receivables), based on the invoice date and net of allowance for doubtful debts, is as follows:

	At 30 June 2022	At 31 December 2021
	US$'000	*US$'000*
Within 1 month	**75,044**	121,960
1 to 3 months	**60,094**	31,253
3 to 12 months	**27,061**	30,878
More than 12 months	**2,135**	1,705
	164,334	185,796
Other debtors	**50,713**	41,780
Amounts due from investors in connection of the restructuring of neurovascular devices business	**–**	10,457
Amounts due from the holders of non-controlling interests in relation to the capital contributions	**4,635**	–
Lease receivables	**349**	–
Income tax recoverable	**5,752**	4,575
Deposits and prepayments	**67,096**	65,518
	292,879	308,126

Trade receivables are due within 30 to 360 days from the date of billing.

9 Trade and other payables

As of the end of the reporting period, the ageing analysis of trade payables (which are included in trade and other payables), based on the invoice date, is as follows:

	At 30 June 2022	At 31 December 2021
	US$'000	*US$'000*
Current		
Within 1 month	**102,676**	110,136
Over 1 month but within 3 months	**15,455**	8,662
Over 3 months but within 6 months	**6,046**	6,985
Over 6 months but within 1 year	**6,616**	1,241
Over 1 year	**3,195**	4,030
Trade payables	**133,988**	131,054
Dividends payables to ordinary shareholders (note 11(a))	**29**	62
Dividends payables to non-controlling shareholders	**12,085**	–
Consideration payables in connection with the acquisition of subsidiaries	**13,926**	16,081
Other payables and accrued charges	**176,815**	211,595
	336,843	358,792
Non-current		
Share repurchase obligation *(Note)*	**389,127**	365,903
Contingent consideration in connection with the acquisition of a subsidiary	**29,983**	32,179
Net defined benefit obligation	**8,336**	11,118
Other payables	**6,915**	16,714
	434,361	425,914

Note:

MicroPort Cardiac Rhythm Management Limited ("CRM Cayman") and MicroPort NeuroTech Limited ("MP NeuroTech") issued preferred shares to certain investors in connection with their separate financings. These preferred shares include liquidation preference right, redemption right and conversion right, etc., granted to the investors.

As these preferred shares can be converted into ordinary shares of respective subsidiary where the number of shares to be issued is fixed, the conversion right is recognised as equity component. The redemption obligations embedded in these preferred shares, which are settled by cash, give rise to financial liabilities, which are measured at the highest of those amounts that could be payable, and on a present value basis. The subsequent changes of liabilities under amortised costs are recognised in profit or loss.

Movement of the share repurchase obligations arising from these preferred shares are as follows:

	Preferred shares issued by CRM Cayman *US$'000*	**Preferred shares issued by MP NeuroTech** *US$'000*	**Total** *US$'000*
As at 1 January 2022	**171,730**	**194,173**	**365,903**
Charge to finance costs *(note 5(a))*	**9,846**	**13,378**	**23,224**
As at 30 June 2022	**181,576**	**207,551**	**389,127**
Representing			
Non-current portion	**181,576**	**207,551**	**389,127**

As at 30 June 2022, the balance of share repurchase obligations represented the redemption obligations arising from (i) series B preferred shares and series C preferred shares issued by CRM Cayman; and (ii) series A-1 and series A-2 preferred shares issued by MP NeuroTech.

10 Interest-bearing borrowings

As of the end of the reporting period, the interest-bearing borrowings were repayable as follows:

	At 30 June 2022 *US$'000*	At 31 December 2021 *US$'000*
Within 1 year or on demand	**112,890**	94,746
After 1 year but within 2 years	**45,097**	33,545
After 2 years but within 5 years	**190,591**	155,714
After 5 years	**73,032**	80,378
	308,720	269,637
	421,610	364,383

As of the end of the reporting period, the interest-bearing borrowings were secured as follows:

	At 30 June 2022	At 31 December 2021
	US$'000	*US$'000*
Bank loans		
– secured	**190,988**	131,176
– unsecured	**230,622**	233,207
	421,610	364,383

At 30 June 2022, the bank facilities drawn down by the Group of US$85,210,000 (31 December 2021: US$71,283,000) were secured by right-of-use assets and buildings held for own use with net book values of US$8,577,000 and US$118,951,000, respectively (31 December 2021: right-of-use assets of US$9,173,000 and buildings held for own use of US$91,984,000, respectively).

At 30 June 2022, the bank loans amounting to US$9,536,000, US$32,536,000, US$14,081,000 and US$49,625,000 were secured by the equity interest in Fujian Kerui Pharmaceutical Co., Ltd., Suzhou MicroPort Argus Medtech Co., Ltd., MicroPort Vision Power MedTech (Shanghai) Co., Ltd. and Hemovent GmbH held by the Group, respectively (31 December 2021: US$10,352,000, US$34,249,000, US$15,292,000 and nil, respectively).

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. As at 30 June 2022, none of the covenants relating to drawn down facilities had been breached.

11 Capital, reserves and dividends

(a) Dividends

The directors of the Company did not propose any payment of final dividend in respect of the previous year during the six months ended 30 June 2022 (six months ended 30 June 2021: HK$4.3 cents per share).

The directors of the Company did not propose any payment interim dividend during the six months ended 30 June 2022 (six months ended 30 June 2021: nil).

(b) Purchase of own shares

During the six months ended 30 June 2022, the Company purchased its own ordinary shares through the designated trustees under the share award scheme (note 11(c)(iii)) as follows:

Month/year	**No. of shares repurchased**	**Highest price paid per share**	**Lowest price paid per share**	**Aggregate considerations paid**
		US$	*US$*	*US$'000*
April 2022	2,755,400	2.33	2.31	6,390

Repurchased shares held at the end of reporting period under the share award scheme were classified as treasury shares and presented as a decrease in the capital reserve.

At 30 June 2022, the trustee under a long-term benefit plan held 172,000 ordinary shares of the Company (31 December 2021: 172,000 ordinary shares). These shares are treated as plan assets and carried at fair value with reference to the share price of ordinary shares of the Company, which are presented as a deduction of non-current defined benefit obligation.

(c) Equity-settled share-based payment transactions

(i) Share option plans adopted by the Company

The Company has adopted two share options plans (referred as the "2010 Option Plan" and "2020 Option Plan") 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.

The movements in the number and weighted-average exercise prices of share options are as follow:

	2022		2021	
	Weighted average exercise price	**Number of options**	Weighted average exercise price	Number of options
	HK$	***US$'000***	*HK$*	*US$'000*
Outstanding at 1 January	15.65	130,646,179	6.29	117,168,421
Granted during the period	17.18	34,514,242	56.51	18,568,109
Exercised during the period	6.07	(3,068,437)	5.39	(7,480,703)
Forfeited during the period	15.93	(1,376,441)	17.12	(502,894)
Outstanding at 30 June	16.16	160,715,543	13.60	127,752,933

The amount payable by each grantee on acceptance of the offer for the option granted is US$1.00. The share options granted during the six months ended 30 June 2022 are exercisable upon vesting and then expire in a period from February 2022 to June 2032.

(ii) Share option plans adopted by subsidiaries

Several subsidiaries of the Group have adopted their respective share option plans (the "Subsidiary Option Plans"), pursuant to which, the board of directors of each subsidiary may authorise, at their discretion, the issuance of share options to the eligible person as defined in each subsidiary option plan. Each option gives the holder the right to subscribe for one ordinary share or one registered capital unit of the respective subsidiary.

During the six months ended 30 June 2022, the number and weighted-average exercise prices of share options granted under the Subsidiary Option Plans are as follow:

Name of subsidiary	Month/year	Number of share options granted	Weight-average exercise price *US$*	Vesting period	Contractual life
MicroPort CardioFlow Medtech Corporation ("MP CardioFlow")	January 2022	15,576,616	0.47	From January 2022 to January 2027	10 years
MP CardioFlow	March 2022	997,237	0.34	From March 2022 to March 2027	10 years
MP CardioFlow	June 2022	3,745,000	0.36	From June 2022 to June 2027	10 years
Suzhou MicroPort Orthopedics Scientific (Group) Co., Ltd. ("Suzhou MP Orthopedics")	April 2022	1,946,403	1.58	From April 2022 to April 2027	10 years
Suzhou MP Orthopedics	June 2022	1,995,000	1.58	From June 2022 to June 2027	10 years

(iii) Share award scheme

Pursuant to the share award scheme (as amended) adopted by the Company approved by the Board in 2021, the Company may purchase its own shares and grant such shares to certain employees of the Group at nil consideration. For the six months ended 30 June 2022, the Company granted 1,578,325 shares (six months ended 30 June 2021: 5,004,150) with a fair value of US$3,559,000 (six months ended 30 June 2021: US$10,397,000) to the Group's executives and employees.

MP CardioFlow has also adopted its share award scheme and may purchase its own shares and grant such shares to certain employee of the eligible person. For the six months ended 30 June 2022, MP CardioFlow granted 1,030,424 shares (six months ended 30 June 2021: nil) at nil consideration with a fair value of US$343,000 (six months ended 30 June 2021: nil) to the executives of MP CardioFlow.

(iv) Bonus distribution plan

On 30 March 2020, the board of the Company approved a bonus distribution plan, pursuant to which, the Company may purchase the shares of the designated subsidiaries and grant such shares to the executive and the employee of the Group at nil consideration. During the six months ended 30 June 2022, 8,631,000 ordinary shares of MP CardioFlow and 624,500 Ordinary shares of Shanghai MicroPort MedBot (Group) Co., Ltd. ("MicroPort MedBot") were purchased with aggregated consideration of US$5,388,000 and 6,503,842 ordinary shares of MP CardioFlow and 154,546 ordinary shares of MicroPort MedBot were granted with a fair value of US$2,891,000.

(v) Employee share purchase plan ("ESPP")

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.

All ESPPs 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 equity-accounted investees 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 subscribed shall be spread over the vesting period and recognised as staff costs in the profit or loss.

12 Dilution of interests in subsidiaries

(a) Shenzhen MicroPort Surgical (Group) Co., Ltd.

In April 2022, Shenzhen MicroPort Surgical (Group) Co., Ltd. ("Shenzhen Surgical"), a subsidiary of the Group, entered into a capital increase agreement with several third-party investors and certain partnership firms whose limited partners consisted of employees of the Group (the "Surgical Series A Investors"), pursuant to which the Surgical Series A Investors agreed to subscribe for 7.50% of the enlarged registered capital of Shenzhen Surgical at an aggregate cash consideration of RMB150 million.

The Group's equity interest in Shenzhen Surgical was diluted from 61.29% as at 31 December 2021 to 56.70% upon the completion of the transaction and the Group retained its control over Shenzhen Surgical. Accordingly, the dilution of the equity interest in Shenzhen Surgical was treated as a transaction within its shareholders in their capacity as equity holders. Hence, the amount of US$11,071,000, being the difference between (i) the cash consideration of US$22,426,000 and (ii) the carrying amount of net assets in the proportion of the deemed disposed equity interests in Shenzhen Surgical as at the date of disposal was credited to capital reserve of the Group.

(b) Other subsidiaries

During the six months ended 30 June 2022, several ESPPs made contributions to certain subsidiaries of the Group in aggregate amount of US$3,381,000 in cash, including Shentu Medical Technology (Shanghai) Co., Ltd., Shanghai MicroPort Shield Medtech Co., Ltd., Shanghai MicroPort CardioPower Medtech Co., Ltd., Shanghai MicroPort Busuanzi Medtech Co., Ltd., and Shenzhen MicroPort Angiography Medical Equipment Co., Ltd.. The Group retained its control over the foresaid subsidiaries.

13 Non-adjusting events after the reporting period

On 15 July 2022, MP NeuroTech was listed on the Main Board of The Stock Exchange of Hong Kong Limited (the "NeuroTech Listing"). Upon the completion of the NeuroTech Listing, (i) all preferred shares issued by MP NeuroTech were converted into ordinary shares; and (ii) MP NeuroTech issued 13,700,000 ordinary shares at the price of HK$24.64 per share and received gross proceeds of HK$337.6 million. The Group's equity interest in MP NeuroTech was then diluted to 53% and the Group retained its control over MP NeuroTech.

BUSINESS REVIEW

Overview

Since the beginning of 2022, the international situation has become more tense and turbulent following the outbreak of the Russia-Ukraine conflict, which intensified the downward pressure on the global supply and demand sides and significantly slowed down the economic growth, with the inflation level rising comprehensively. In China, the COVID-19 pandemic continued to exert great impact on production and consumption, in particular, the outbreak of the pandemic in Shanghai has caused disruption to the national and even global industrial supply chain. With the easing of the pandemic in some areas and the resumption of production progressed steadily, there was a resurgence in health care services of medical institutions.

In the international market, the global medical industry market will continue to grow steadily in the long run, considering the economic development of various countries, the aging of their populations and people seeking better quality of life. Currently, the worldwide trade situation has become more complex and ever-changing under the impact of the pandemic and geopolitical risks, coupled with the continued strengthening in the overall supervision of the medical industry, the whole life cycle supervision of medical devices has become more stringent in terms of clinical evidence, specifications and parameters, as well as post-market supervision. Faced with the challenging trade and regulatory environment, as well as the increasingly fierce market competition, only those medical device enterprises with the focus on independent innovation, and equipped with strong technological development, industrial application and quality control capabilities are able to truly establish the core competitiveness and international influence of their brands.

In China, with the construction of "Healthy China" and the comprehensive implementation of the medical system reform, the government has issued a number of framework policies regarding the 14th Five-Year Plan: in May 2022, China put forward a five-year plan for the "bioeconomy" for the first time, which emphasised on following the new trend of shifting from "treatment-centred" to "health-centred" with a focus on advanced diagnostic and therapeutic technologies and equipment, precision medicine and bio-health, etc., enhancing the original innovation ability and strengthening the supply chain of high-end biomedical products and equipment. The *14th Five-Year National Health Plan* issued immediately afterwards also emphasises on improving and strengthening the healthcare industry, optimising the registration and assessment process for innovative medical equipment, developing original technology research and promoting the manufacturing and production of high-end medical equipment and healthcare products. In terms of optimising the distribution of medical resources, the General Office of the State Council successively issued the *14th Five-Year Plan on Construction of Urban and Rural Community Service System* and the *Key Tasks for Deepening the Reform of the Medical and Healthcare System in 2022*, with emphasis on speeding up the construction of hierarchical medical system, and giving full play to the leading role of national medical centers and national regional medical centers in order to improve the standards of primary healthcare services. At the same time, with DRG and DIP payment systems as the core, the reform of medical payment methods has progressed steadily, highlighting the value-based approach to healthcare industry. In July 2022, the *CHS-DRG Payment Management Measures for*

New Drugs and New Technology Exclusions (《CHS-DRG 付費新藥新技術除外支付管理辦法》) was implemented for the first time in Beijing, allowing the application for eligible drugs and medical devices to be included in the exclusive payment channel, aiming to fully stimulate the innovation of new drugs and technologies while guiding and standardizing medical practices. In addition, the *Notice on Further Improving the Price Management of Medical Service* (《關於進一步做好醫療服務價格管理工作的通知》) issued by the National Healthcare Security Administration pointed out that it is necessary to speed up the acceptance and review process of the pricing of new medical services, and strengthen the quality control of innovative projects in order to support the development of medical technology innovation. Generally speaking, the issuance of various policies aims to lead the high-quality development of the medical industry, and further enhance the efficiency of medical resources while encouraging enterprises to accelerate technological innovation and industrialization, and thus the medical device industry will embrace considerable development opportunities.

In terms of reportable segments based on financial reporting, the Group has eight major business segments: cardiovascular devices, orthopedics devices, CRM business, endovascular and peripheral vascular devices, neurovascular devices, heart valve, surgical robot and surgical devices. As at the end of the Reporting Period, the Group (also through its associated companies) held more than 7,580 patents (including applications) around the world, penetrated over 20,000 hospitals in more than 80 countries and regions. The Group also offered nearly 300 medical solutions to patients worldwide, covering the circulatory system, nervous system, exercise system, endocrine system, urinary system and reproductive system.

As a leading international innovative high-end medical device enterprise, the Group has made every effort to promote the steady development of its businesses, with multiple innovative products approved for marketing during the Reporting Period, delivering a steady stream of driving forces for the high-quality growth of the future businesses. During the Reporting Period, in the face of the sudden outbreak of the omicron variant of COVID-19 in Shanghai and other cities, the Group made full use of the platform advantages of globalized supply chain and full business coverage, ensuring the continuous operation of the production bases and the supply of core products, which demonstrated our commitment to social responsibility and caring for people's livelihood with the principle of "patients come first".

During the Reporting Period, despite the impact of COVID-19, the Group still achieved global business revenue of US$405.0 million, representing an increase of 10.1% excluding the foreign exchange impact as compared to the corresponding period of last year. Of which, the heart valve business, the endovascular and peripheral vascular devices business and the neurovascular devices business recorded increases of 44.8%, 26.6% and 22.9% in revenue excluding the foreign exchange impact respectively, mainly attributable to the rapid market penetration and the revenue contributed from new products. Meanwhile, the revenue growth in the overseas business of the CRM business, the orthopedics devices business and the cardiovascular devices business recorded steady overseas revenue growth excluding the foreign exchange impact of 8.1%, 9.7%,and 28.1% respectively.

On 15 July 2022, MicroPort NeuroTech Limited ("MicroPort NeuroTech"), a subsidiary of the Group, was successfully listed on the Main Board of the Stock Exchange of Hong Kong Limited (stock code: 02172.HK), becoming the fourth subsidiary of the Group to accomplish a public listing.

Shanghai MicroPort EP MedTech Co., Ltd. (上海微創電生理醫療科技股份有限公司) ("EP", an associated company of the Group) is seeking a proposed listing on the Sci-Tech Innovation Board of the Shanghai Stock Exchange. In July 2022, EP received the registration approval from the China Securities Regulatory Commission for its listing application, and became the first innovative medical device company approved for listing after the issuance of the *Guidelines No. 7 for the Application of the Regulations on Review of the Issuance and Listing on the STAR Market of the Shanghai Stock Exchange – Application of the Fifth Set of Listing Standards to Medical Device Enterprises* (《上海證券交易所科創板發行上市審核規則適用指引第7號－醫療器械企業適用第五套上市標準》).

Cardiovascular Devices Business

The cardiovascular devices business offers products and services for the treatment of coronary artery-related diseases, as well as developing, manufacturing and commercialising industry leading coronary stents and related delivery systems, along with balloon catheters and accessories, and is committed to providing integrated and precise cardiovascular solutions to doctors and patients around the world.

With the expansion of the global aging population, the incidence of cardiovascular disease is rising, and therefore the overall demand for coronary interventional therapy will maintain a steady growth. As for the treatment methods, the concept of percutaneous coronary intervention ("PCI") precision treatment, which is characterized by intracavity imaging technology, robot-assisted surgery and artificial intelligence, has become a development trend, driving the continued growth in the global market terminal of coronary intervention treatment. In terms of the number of surgeries, China is currently the world's largest market for PCI surgery. However, it still lags behind developed countries such as European countries, the United States and Japan in terms of PCI surgery penetration rate (number of surgeries per million population). Benefited from the continuous construction of Chinese hierarchical medical system, primary hospitals are seeking to improve their capability in medical technology and quality in surgical treatment, which will further facilitate the penetration of PCI surgeries in lower-tier regions.

As at the end of the Reporting Period, this business segment has four drug-eluting stents and four balloon products on sale, with operations in 38 countries and regions around the world, and has become the global leader in the area of coronary interventional precision treatment. During the Reporting Period, the Group's cardiovascular devices business recorded global revenue of US$60.7 million, representing a decrease of 7.2% excluding the foreign exchange impact as compared to the corresponding period of last year, mainly due to the repeated disruption caused by the pandemic in China.

During the Reporting Period, with the expiration of the first-year agreement of the national centralised volume-based procurement ("VBP") on coronary stents, the Chinese government organised the renewal of the second-year procurement contract. The cumulative renewed procurement volume of the Group's two bid-winning products, namely Firebird2® Rapamycin Eluting Coronary CoCr Stent System ("Firebird2®") and Firekingfisher™ Rapamycin Eluting Coronary CoCr Stent System ("Firekingfisher™"), increased significantly as compared to the first year's procurement volume. With the support of the large-scale digitalised production and supply chain capacity, the Group will continue to fulfill our commitment of product supply with both quality and quantity ensured. While fully undertaking our social responsibilities and satisfying patients' needs, we are expected to further expand our market share and penetration rate in the cardiovascular interventional treatment area. As at the end of the Reporting Period, our drug eluting stent products have covered over 3,000 hospitals nationwide, with the Firebird2® newly penetrating over 240 hospitals and the Firehawk® Rapamycin Target Eluting

Coronary Stent System ("Firehawk®") newly penetrating over 100 hospitals during the Reporting Period. Our balloon products have covered about 1,400 hospitals nationwide, newly entering around 150 hospitals during the Reporting Period. Since its launch in 2017, the "Swallow Program", which focuses on serving the unsatisfied healthcare needs in lower-tier regions, has penetrated over 1,100 county-level hospitals across the country and saved more than 170,000 patients' lives. By ways of medical education, internet system construction, patient management and referral capabilities establishment, the program is committed to helping county hospitals increase their ability in precision interventional treatment, enabling patients in lower-tier regions to enjoy quality and affordable high-end medical solutions.

In overseas regions, through the layout of diversified sales model, the Group continued to cultivate mature markets and explore emerging markets. During the Reporting Period, the segment recorded overseas revenue of approximately US$9.9 million, representing an increase of approximately 28.1% excluding the foreign exchange impact as compared to the corresponding period of last year. Regionally, revenue in Europe, the Middle East and Africa ("EMEA") and South America grew by approximately 62.7% and 48.7% excluding the foreign exchange impact as compared to the corresponding period of last year respectively.

During the Reporting Period, our coronary stent products obtained 5 new initial registrations in 4 countries or regions, and balloon products obtained 7 new initial registrations in 3 countries or regions, while realizing sales for the first time in several new markets, including Saudi Arabia, Cameroon and Azerbaijan. In the Indian market, which sees the third largest number of PCI operations in the world, the effect of multi-product portfolio strategy since the Group successfully launched Firehawk IN™ as its first locally manufactured coronary stent in overseas market, has gradually appeared with a significant increase in sales revenue. In Turkey, benefited from the successive winning of government and hospital tenders, MicroPort® products have already penetrated into more than half of the public and private hospitals, further expanding the brand influence and laying a solid foundation for the further penetration of our product profolio. In Europe, with the support of the abundant clinical data from the Firehawk® TARGET series, the Group's coronary stent products are successfully admitted into the government tender or medical insurance negotiation frameworks in France, Italy and Portugal, driving a steady grow in the market share.

Orthopedics Devices Business

The orthopedics devices business offers an extensive range of orthopedics products that include reconstructive joints, spine and trauma, and other professional implants and instruments.

Despite the impact of the national VBP policy of artificial joint products and the COVID-19 pandemic, the international business maintained a steady growth. During the Reporting Period, the Group's global orthopedics devices business recorded a revenue of US$107.7 million, representing an increase of 2.4% excluding the foreign exchange impact over the same period last year.

During the Reporting Period, the international (non-China) orthopedics business recorded a revenue of US$99.7 million, representing an increase of 9.7% excluding the foreign exchange impact as compared to the corresponding period of last year. In EMEA, one of our major direct sales markets, through continuous channel development and medical education promotion, the Group recorded a significant year-on-year increase of 32.3% in revenue excluding the foreign exchange impact during the Reporting Period, which is much higher than the average rate of the market average growth. The Group's self-developed MedialPivot Knee System has continued to increase the international market share with its advanced treatment concept and long-term proven clinical evidence. As for cost reduction and efficiency enhancement, the Group has fully integrated its global supply chain capabilities by strengthening cross-border collaboration, and launched a number of cost control projects.

During the Reporting Period, the orthopedics devices business in the PRC recorded a revenue of approximately US$8.0 million, representing a decrease of 43.9% excluding the foreign exchange impact as compared to the corresponding period of last year, mainly affected by the price reduction due to the VBP of artificial joints as well as the COVID-19 pandemic. For the joint business, as the Group's joint products won bids in the state-organised VBP, our market share and penetration rate have both significantly increased with a large number of new hospitals added to our procurement list, and thus the time for the selected products to be admitted to hospitals was significantly shortened. During the Reporting Period, our joint products newly entered over 140 hospitals nationwide, bringing the total coverage to approximately 1,540 hospitals across the country, and the domestically made joint products have realized a substantial growth in clinical implantation. In terms of spine and trauma business, the revenue recorded during the Reporting Period amounted to US$3.4 million, representing a significant increase of 34.9% excluding the foreign exchange impact as compared to the corresponding period of last year. As our spine and trauma products successfully won the bids in provincial and inter-provincial alliance VBPs, we have achieved a major breakthrough in channel expansion, newly entered approximately 200 hospitals with a cumulative penetration of more than 500 hospitals across the country. The self-developed Takin Spinal Posterior Fixation System and Arbores Balloon Dilatation System have been launched and realised the first batch of commercial sales in Argentina. Meanwhile, the Group has actively expanded its production capacity to meet the requirements of the VBP, and steadily reduced the cost of key products by means of upgrading the manufacturing process and improving production efficiency. We have fully realised the self-production for our domestic orthopedic tools, and our global supply capacity of orthopedic tools has been greatly improved.

In the future, the Group will continue to strengthen its market presence in the areas of revision products, unicondyle joints, small joints, intelligent auxiliary instruments and biologics to provide more accessible and whole-course medical solutions of precision diagnosis and treatment to patients with osteoarticular diseases in the world.

CRM BUSINESS

The CRM business principally engages in the development, manufacturing and marketing of products including pacemakers, defibrillators and cardiac resynchronisation therapy devices for the diagnosis, treatment and management of heart rhythm disorders and heart failure, and is committed to creating the world's leading comprehensive CRM solutions.

During the Reporting Period, the CRM business recorded a global revenue of approximately US$104.4 million, representing an increase of 7.2% excluding the foreign exchange impact as compared to the corresponding period of last year, which was mainly due to the rapid market penetration of newly launched products.

During the Reporting Period, the international (non-China) CRM business recorded a revenue of US$98.9 million, representing an increase of 8.1% excluding the foreign exchange impact as compared to the corresponding period of last year; among which, the United States, Japan and EMEA have recorded a year-on-year growth in revenue of 51.7%, 41.0% and 5.0% excluding the foreign exchange impact, respectively. In terms of product coverage, the new generation of pacemakers and home monitors, which are equipped with Bluetooth® technology, has been widely recognised by local clinicians and patients for its convenient remote monitoring functions since its launch in Europe and Japan, driving the rapid growth in sales of pacemakers. During the Reporting Period, the series of Bluetooth® pacemakers were also approved for launch in Australia, which will further expand our global market share of high-end heart rhythm management products. The Group's self-developed Invicta™ Defibrillation Lead, which is compatible to 1.5T and 3T magnetic resonance imaging ("MRI"), has obtained CE Marking during the Reporting Period and it can be used together with Ulys™ and Edis™ implantable cardioverter-defibrillators ("ICD"), Gali™ Cardiac Resynchronization Therapy and Defibrillation (CRT-Ds) and NAVIGO™ Left Ventricular Pacing Lead. Equipped with the advanced AutoMRI™ technology that allows them to automatically turn on or off the MRI examination mode, these series of products will fully unleash the potential of the Group's cardiac defibrillation product line and provide a strong growth momentum for our earnings in the future.

During the Reporting Period, the CRM business in the PRC recorded a revenue of US$5.5 million, representing a decrease of 6.6% excluding the foreign exchange impact as compared to the corresponding period of last year, mainly due to the reduction in elective surgeries and difficulties in order shipment as a result of the COVID-19 pandemic. However, despite the challenges brought on by the pandemic, our team overcame all the obstacles and successfully promoted the Rega®, the first and currently the only Chinese-developed MRI-conditional implantable pacemaker, to be approved by the National Medical Products Administration ("NMPA"). We have also completed the first batch of clinical implants in several medical centers, marking a major technological breakthrough for domestic products in this field. In addition, through the creation of a differentiated product portfolio, the Group's various types of dual-chamber pacemakers have successfully won the bids in the provincial and inter-provincial alliance VBPs, bringing in a significant increase in market share and penetration rate. Our pacemaker products newly entered approximately 50 hospitals across the country during the Reporting Period, and have already covered approximately 1,000 hospitals. With the full launch of MRI-compatible pacemakers, the competitiveness and influence of this business segment will continue to grow, substantially solidifying our leading position with the largest market share among domestic players.

Endovascular and Peripheral Vascular Devices Business

The endovascular and peripheral vascular 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.

During the Reporting Period, despite the impact of the COVID-19 pandemic in China, the endovascular and peripheral vascular devices business achieved a revenue of approximately US$70.8 million, representing an increase of 26.6% excluding the foreign exchange impact as compared to the corresponding period of last year, which was driven by the accelerated market penetration of innovative products approved and launched in recent years, especially the strengthening of the distribution channels in the primary market. As for the aortic products, the Castor® Branched Aortic Stent Graft System ("Castor®"), being the world's first branched aortic stent graft and delivery system, has achieved steady growth in sales, and has penetrated more than 750 hospitals across the country with over 12,000 implantations completed since its launch to the end of the Reporting Period. The revenue growth was also contributed by the significant increase in sales volume of our Minos® Abdominal Aortic Aneurysm and Delivery System ("Minos®"), which covered over 500 hospitals across the country as at the end of the Reporting Period. Since its launch in 2020, Reewarm® PTX Drug Balloon Dilation Catheter ("Reewarm®") has covered more than 500 hospitals in total as at the end of the Reporting Period, achieving a remarkable increase in market penetration. During the Reporting Period, the Group's self-developed innovative product, Talos® Thoracic Stent Graft System ("Talos®") was approved for launch in China and the first clinical implantation was completed in July 2022. The first clinical implantation of Fontus® Branched Surgical Stent Graft System ("Fontus®") was also completed during the Reporting Period, with the continuous implantations in many hospitals.

As for the international business, the Group continued to enrich its innovative product lines to bring our high-quality and affordable "Chinese medical solutions" to more patients around the world. During the Reporting Period, the Hyperflex® Balloon Dilation Catheter ("Hyperflex®") has been approved for launch in Japan, marking the debut in the Japanese market for this business segment and laid a solid foundation for the further exploration in the Asian and even the global market. In addition, the Reewarm® received registration approval in Brazil, and the first commercial implantation of the Hercules™ Low Profile Aneurysm and Delivery System was completed in India. In July 2022, the Castor® Branched Aortic Stent-Graft System was approved for customised distribution in Europe. As at the end of the Reporting Period, the sales scope of this business segment had covered 21 countries and regions across Europe, Latin America and Southeast Asia, and achieved significant breakthroughs in product implantation in the European markets such as Germany and Poland.

Neurovascular Devices Business

The neurovascular devices business specialises in R&D, production and commercialisation of neurovascular therapeutic and access devices for neurovascular diseases, including hemorrhagic stroke, cerebral atherosclerotic stenosis and acute ischemic stroke.

Although the business in the PRC continued to be affected by COVID-19, the Group has actively taken all kinds of countermeasures to maintain its production and operation, as well as putting efforts into the the development of the overseas markets, which partially offset the aforementioned negative impact. During the Reporting Period, the neurovascular devices business recorded a revenue of US$31.3 million, representing a significant increase of 22.9% excluding the foreign exchange impact as compared to the corresponding period of last year, of which, the international (non-China) business realised approximately US$1.8 million in revenue (which was zero for the same period last year).

During the Reporting Period, three products launched in recent years, namely the NUMEN® Coil Embolisation System ("NUMEN® Coil"), the Bridge® Vertebral Artery Drug-eluting Stent ("Bridge®") and the U-track™ Intracranial Support Catheter System("U-track™"), have gained a fast-growing market share in key areas, bringing new impetus to the continuous growth of the segment. By continuously expanding clinical applications and deepening market cultivation, the Tubridge® Flow-Diverting Stent("Tubridge®"), the first and currently the only Chinese-developed flow-diverting stent in China, achieved sustainable growth in clinical use. Benefited from the application of stenosis cases during emergency thrombectomy in lower-tier hospitals, the APOLLO™ Intracranial Arterial Stent System ("APOLLO™") has seen a steady growth in demand with its market share maintaining the No. 1 position for many consecutive years. In addition, during the Reporting Period, the VBP policy for coil products in Hebei Province was officially implemented, and the results of VBP of coils in Jiangsu Province and Fujian Province were both announced in July 2022. The Group's NUMEN® series of coil products won the bids in the above-mentioned regions, which will significantly shorten the time for hospital admission, expected to achieve a major breakthrough in the market share. As at the end of the Reporting Period, the Group's neurovascular devices had covered a total of approximately 2,400 hospitals across the country, with 250 hospitals newly penetrated during the Reporting Period. The Eagle & Swallows program, which focuses on serving stroke patients in the primary market, has covered about 130 lower-tier cities and counties, further solidifying the Group's leading position among all domestic neurointerventional medical device companies.

During the Reporting Period, significant progress was achieved in the globalization of the neurovascular devices business. NUMEN® Coil has completed multiple commercial implantations in Korea, the United States and several European countries and was approved for marketing in Brazil and Japan, while APOLLO™ has generated sales in Brazil for the first time. Moreover, the Group has established local sales teams in several countries including the United States, the United Kingdom, Brazil, Japan and Australia, and continued to initiate collaboration around the world to build an international innovative R&D and business platform. In the United States, with the abundant channel resources of Rapid Medical, our associate company, the Group has facilitated the commercial implantations of NUMEN® Coil, which has received a high recognition from the local clinicians for its advantages of both flexibility and excellent support. NUMEN® Coil can also be used together with the Comaneci® Embolization Assist Device (FDA Breakthrough Medical Device) of Rapid Medical, thereby providing product competitiveness of both parties in the field of coil embolization procedures. In the future, both parties will leverage each other's complementary advantages in sales channels and product coverage to drive the application of innovative neurovascular disease solutions in the global market.

Heart Valve Business

The Group's heart valve products include three self-developed and commercialized products: VitaFlow® Transcatheter Aortic Valve Implantation and Delivery System ("VitaFlow®"), VitaFlow Liberty™ Transcatheter Aortic Valve Implantation and Retrievable Delivery System (VitaFlow Liberty™) (including the procedural accessories as their offerings), Alwide® Plus Balloon Catheter, and various transcatheter aortic valve implantation ("TAVI") products, transcatheter mitral valve ("TMV") products, transcatheter tricuspid valve ("TTV") products, surgical valve products and procedural accessories at different development stage.

During the Reporting Period, despite the adverse impact brought by the COVID-19 pandemic, the heart valve business recorded a revenue of approximately US$19.0 million, representing an increase of 44.8% excluding the foreign exchange impact as compared to the corresponding period of last year, which was mainly due to the rapid growth in sales volume and implantations of VitaFlow® and VitaFlow Liberty™. Benefited from the constant improvement of localization rate of raw materials and operational efficiency, the gross profit margin of this business segment recorded a substantial year-on-year rise of 8.5 percentage points to 63.7%.

The Group has accelerated the integration of its advantageous resources in the pan-cardiac treatment field to further promote the penetration of the innovative transcatheter solutions for structural heart diseases to the lower-tier regions through medical education and marketing activities. As at the reporting date, the VitaFlow® and VitaFlow Liberty™ products have newly penetrated more than 80 hospitals across the country, with a cumulative penetration of over 390 hospitals and a leading market share in over 230 hospitals therein. As for market development, the TAVI business team continued to strengthen the collaboration with the team from the cardiovascular devices business as well as the "Swallow Program" and fully utilized the Group's nationwide channel network and clinical resources to jointly carry out screening, diagnosis and referral of patients, effectively breaking through geographic barriers and establishing a presence in lower-tier healthcare market.

For the international market, since the launch of the VitaFlow® product series in Argentina, multiple commercial implantations have been successfully completed in more than 20 local hospitals. At the same time, the Group is actively pursuing the registration approvals for the second generation TAVI product, VitaFlow Liberty™, in multiple regions including Europe, India, Brazil and Korea. In August 2022, the VitaFlow Liberty™ and the matching tip-preshaped super-stiff guidewire Angelguide® ("Angelguide®"), were successfully registered in Colombia, marking another important step forward in the exploration of the global market.

Surgical Robot Business

The surgical robot business is dedicated to designing, developing and commercialising innovative surgical robots. To meet the most cutting-edge development needs of minimally invasive surgery, we focus on the R&D of five foundation technologies in relation to surgical robots, including robot ontology, control algorithm, electrical engineering, image-based navigation and precision imaging, covering the whole life cycle of surgical robot development. Relying on our strong ability in product industrialization and operation, we innovatively provide robotic intelligent surgical total solutions that can prolong and reshape life.

The Group is the only company in the global surgical robot industry with a product portfolio covering five major and fast-growing surgical specialties, namely laparoscopic, orthopedic, panvascular, natural orifice and percutaneous surgical procedures. One of the Group's flagship products, Toumai® Laparoscopic Surgical Robot ("Toumai®"), was approved by NMPA for marketing during the Reporting Period, and became the first four-arm laparoscopic robot developed by a Chinese company and approved for launch. The launch of Toumai® marks a major breakthrough in the field of Chinese laparoscopic surgical robots. During the Reporting Period, Toumai® has successfully completed the longest-distance 5G ultra-remote robotic surgery in the world to date, fully demonstrating the leading technical strength and advantages of Chinese-developed surgical robots in the field of 5G ultra-remote robotic surgery. Another flagship product, the Honghu Orthopedic Surgical Robot ("Honghu®"), obtained 510(k) clearance from the U.S. Food and Drug Administration ("FDA") in July 2022 following its approval for marketing in China, becoming the first and the only Chinese surgical robot cleared by the FDA to date. In addition, Honghu® has submitted its application for CE Marking during the Reporting Period. The registration approval of Honghu® in China and the United States will rapidly improve the clinical application of Chinese-developed surgical robots, further enhancing the competitiveness and influence of "intelligently made-in-China" high-end medical devices in the international market.

During the Reporting Period, the Group has newly established more than ten clinical application and training centers nationwide, providing one-stop and comprehensive services covering professional education, technical services and digital learning platforms, empowering primary medical institutions across the country and even the world, in order to benefit more patients with intelligent robot-assisted surgical technology.

Surgical Devices Business

The surgical devices business is committed to providing total solutions for cardiac surgery and emergency life support. Its main products include: extracorporeal circulation series consumable products such as oxygenation system (artificial lungs) and arterial and venous cannulas, extracorporeal membrane oxygenation ("ECMO") system for cardiopulmonary support, occlusion series products used in congenital heart disease treatment and hernia patch series products for hernia repair.

During the Reporting Period, the surgical devices business recorded a revenue of US$2.4 million, representing an increase of 5.4% excluding the foreign exchange impact as compared to the corresponding period of last year. The surgical intubation products and the occluder products have successfully entered the Egyptian and Mexican markets during the Reporting Period, and realised the first batch of commercial sales. As at the end of the Reporting Period, products of this business segment have entered 13 overseas markets. The study results for MOBYBOX® ECMO system, which is a core product of the Group's wholly-owned subsidiary, Hemovent GmbH, on the treatment of patients with COVID-19, have been published in the ASAIO Journal – a leading international medical journal. Confirmed by the research results, MOBYBOX® system, as the world's first ECMO system that uses the combination of a displacement pump with an artificial lung, fully shows its safety and efficacy in the treatment of ARDS. With its excellent clinical results, the MOBYBOX® system has already obtained the CE Marking. The Group is actively promoting the clinical registration, industrialisation and commercialisation of this innovative product in China and globally.

Emerging Business Segments

While actively promoting the steady development of its established business segments, the Group is also exploring emerging business fields including urology, respiration, digestion and gynecology, medical imaging, rehabilitation treatment, sports medicine, the management of blood glucose, tumor chemotherapy and pain, assisted reproduction, as well as ophthalmology and ENT through its subsidiaries or associates. By leveraging on the efficiency and synergies from group operation, we are committed to building a complete business portfolio from prevention and diagnosis to treatment and rehabilitation that covers the entire life cycle of human beings.

In the field of urology, respiration, digestion and gynecology, during the Reporting Period, the Group's two major products, namely the single-use flexible digital ureteroscope catheter and the single-use hemostatic clip device, were approved by the NMPA for launch in China, and five new products were approved for marketing in Brazil and Thailand. The "Green Path" product, the prostatic urethral lift system, has completed the first-in-man (FIM) clinical trial and is preparing for the registrational clinical trial. As for the field of medical imaging, the Group launched the MicroPort Argus™ intravascular optical coherence tomography ("OCT") system, the only purge-free disposable imaging catheter in China, which has achieved a rapid market introduction and realised the first batch of commercial sales by leveraging our existing channel resources. Besides, we have submitted the registration application to the NMPA for the second generation of high-speed OCT system, and the intravascular ultrasound system ("IVUS") has successfully completed the preliminary animal study, further complementing our integrated precision diagnosis and treatment solutions to pan-vascular diseases. For rehabilitation treatment, the Group mainly focuses on the fields of musculoskeletal rehabilitation, cardiopulmonary rehabilitation and neurological rehabilitation, owning a total of six commercialized products and over 100 patents. After receiving the registration certificate in China for the TherMotion® Cryo-Thermo Compression Device, we have also submitted the application for the FDA clearance during the Reporting Period; the lower-limb rehabilitation robot-assisted system, as the first rehabilitation robotic product, has submitted the registration application in China. As for the sports medicine, the multi-center registrational clinical trial for Archimedes®, the world's first long-term implantable balloon rotator cuff system self-developed by an associated company, is close to completion, with the accomplishment of its FDA pre-submission. The 4K high-resolution arthroscope system, suture anchor series and suspension device system are under registration process. In the field of the management of blood glucose, tumor chemotherapy and pain, the first chemotherapy injection pump, AutoEx®, was approved for marketing and the patient-controlled analgesia (PCA) pump has entered the NMPA registration stage. In the field of assisted reproduction, our associated company has a total of six commercialized products, with the separate vitrification freeze kit newly approved for marketing during the Reporting Period. In the field of ophthalmology and ENT, orthokeratology lenses for the treatment of ametropia have completed type validation.

Research and Development ("R&D")

During the Reporting Period, the R&D projects of the Group achieved fruitful results. From the beginning of 2022 to the date of this announcement, the Group and its associated companies have 14 products obtaining the Class III initial registration certificates from the NMPA, and have obtained the FDA clearances for 5 products and the CE Marking for 5 products. Meanwhile, our self-developed product, prostatic urethral lift system, was newly admitted in the Green Path. As at the date of this announcement, the Group and its associated companies had a total of 26 products being approved to enter the Green Path, ranking the first in the medical device industry for seven consecutive years.

As for the cardiovascular devices business, the Group has a variety of innovative and iterative products under R&D, including coronary stent and balloon catheter, active interventional treatment device and intravascular imaging equipment. During the Reporting Period, the two-year clinical follow-up results of the FUTURE II study on the second generation bioabsorbable vascular stent system, Firesorb® Bioresorbable Rapamycin Targeted Eluting Coronary Scaffold System ("Firesorb®"), released and further verified that it was comparable to a market-leading metal drug-eluting stent in terms of safety and reliability. Another large-scale clinical trial of Firesorb®, FUTURE III, is under the one-year clinical follow-up, and this series of studies will help promote the concept of "leave nothing behind" for bioabsorbable scaffolds to be widely applied in clinical practice. Meanwhile, the TARGET global clinical studies on Firehawk® have been steadily proceeded with plenty of strong clinical evidence, moving a solid step forward in obtaining future approvals in the United States, Canada and Japan. During the Reporting Period, the results of the OCT clinical study of Firehawk® applied in high-risk populations were first announced at the Euro-PCR, further verifying its safety and effectiveness as the world's lowest drug-loaded coronary stent in high-risk complex patients. In terms of special coronary balloon products, the registration application of self-developed anchor balloon has been submitted to the NMPA, and we have completed the first patient enrollment in the pre-marketing clinical trial of the coronary rapamycin drug-coated balloon catheter ("PROMISE-BIF Study") on the treatment of primary coronary bifurcation lesions. In terms of active interventional products, the pre-marketing clinical trial of the rotational atherectomy system ("CORECT Study") on the treatment of coronary artery calcification have completed the first patient enrollment, signifying that the first Chinese-developed rotational atherectomy system has officially entered the clinical stage, providing a new option for clinical interventional treatment of coronary artery calcification lesions, especially for moderate to severe calcification.

As for the orthopedics devices business, the Group has promoted a variety of products in an orderly manner to obtain certifications in both domestic and overseas markets. In view of the wide recognition of the Procotyl® P-Series acetabular system since its launch in Europe in 2020, the Group plans to promote the product globally and the type testing has begun during the Reporting Period for a FDA submission. In the future, we will also move forward with a Dual-Mobility Cup option and Revision Cup option. The self-developed hinge knee joint system and the fixed platform unicondylar system of the Group are both in the type testing stage for a FDA submission. In addition, the classic Profemur® Cemented XM® Femoral Stem is under the type testing stage prior to the submission for CE marking. In the PRC market, the new generation of China-made Medial-Pivot Knee System, total knee prosthesis and joint bone guides have been approved for launch by the NMPA, while the registration applications of six products have been submitted to NMPA, including the "Green Path" products Zirconium-Niobium Alloy Femoral Head, the second generation knee joint revision system, the fixed platform unicondylar system, VenusOne Eco Bio-Acetabular System, VenusOne Ceramic Acetabular Liner and Knee Joint Image Processing Software. The Group has also explored new business areas such as small joints to meet diversified clinical needs, and its self-developed "personalised and precise" wrist joint prosthesis has been used in a number of wrist joint replacement surgeries. In the area of spine and trauma, three products, including the spinal plate fixation system kit, were approved for marketing in the PRC during the Reporting Period, while five products, including the Kyphoplastic Balloon Catheter, were in the design validation stage. In Colombia, the Group has submitted applications for the registration of a whole series of trauma products.

As for the CRM business, the Invicta™ Defibrillation Lead compatible to 1.5T and 3T magnetic resonance imaging ("MRI") obtained the CE Marking ahead of schedule and became a major breakthrough in our brand new product series of implantable defibrillation system. In addition, the Group is developing a new generation of Implantable Cardioverter Defibrillator ("ICD") and Cardiac Resynchronisation Therapy and Defibrillation ("CRT-D") equipped with Bluetooth® technology. In the PRC market, during the Reporting Period, the Group actively promoted the R&D progress of MRI-compatible products: Rega®, the first made-in-China out-of-chest MRI-compatible pacemaker, and the matching Beflex™ pacing lead have been both approved for marketing; the next-generation 3T whole-body MRI-compatible pacemaker ENO™ and its matching Vega pacing lead have completed safety verification and pilot production, with their registration applications both submitted to the NMPA in August 2022. Moreover, the BonaFire® whole-body MRI-compatible passive pacing lead, a self-designed "Green Path" product, has completed the enrollment of all patients for the registrational clinical trial, and is in the late stage of clinical follow-up.

As for the endovascular and peripheral vascular devices business, all pipeline products are under rapid R&D progress. For the aortic products, Cratos® Thoracic Endovascular Stent Graft System and the new generation Aegis® Abdominal Aortic Stent Graft System are preparing for the launch of registrational clinical trials. For the peripheral vascular products, the iliac vein stent system ("Green Path" product), has completed all patients enrollment for the registrational clinical trial, the Fishhawk® mechanical thrombectomy catheter has successfully carried out the pre-market clinical trial, and the vena cava filter has obtained the type verification report and the animal experiment report. In the field of interventional oncology, the TIPS Stent Graft System, one of our core products, has received the type verification report and the ethical approval from the main PI unit.

As for the neurovascular devices business, a total of four self-developed products were approved by the NMPA during the Reporting Period, and the commercialised product portfolio has covered three major areas of neurovascular diseases. In the treatment of hemorrhagic stroke, the new generation NUMEN Silk® 3D Electronically Detachable Coil ("NUMEN Silk® Coil") was approved for launch during the Reporting Period. With its ultra-soft design, NUMEN Silk® Coil could reduce the pressure on the aneurysm wall, and lower the risk of aneurysm rupture during surgery. In the treatment of cerebral atherosclerotic stenosis, Diveer® Intracranial Balloon Dilatation Catheter("Diveer® Ballon Catheter") was approved for marketing by NMPA, further enriching the product line in this segment. In acute ischemic stroke treatment, the Group's self-developed and fully visualised Neurohawk® Intracranial Thrombectomy Stent ("Neurohawk®") and the X-track™ Intracranial Distal Access Catheter ("X-track™ Distal Access Catheter") were both approved for marketing by NMPA. The world's first adjustable fully visualised Thrombectomy Stent Tigertriever® ("Tigertriever®"), for which we act as the exclusive distributor in Greater China of Rapid Medical, is at the NMPA registration stage. In addition, another flagship product of Rapid Medical, the Tigertriever®13 Distal Access Thrombectomy Device ("Tigertriever®13"), for which we have exclusive distribution right in Greater China, received FDA clearance in July 2022. Tigertriever®13 is compatible with smaller microcatheters for safe access to remote lesion locations, making it the world's smallest thrombectomy stent to date. Through the planning of "multi-stent" portfolio of Neurohawk®, Tigertriever® and Tigertriever®13, the Group has become the only Chinese company owning the stent retrievers that are compatible with procedures in varying sizes of blood vessels.

As for the heart valve business, during the Reporting Period, the Group released the result of the five-year follow-up data for the clinical study of VitaFlow®, the post-operation five year survival rate is 81.8%, with a significant improvement in quality of life after surgery. The excellent clinical data will establish a solid evidence base for the global expansion of the VitaFlow® series of products. During the Reporting Period, the application for CE Marking of VitaFlow Liberty™ made progress to the next stage, and we have submitted the application for the NMPA Green Path regarding the VitaGuardian™ Embolic Protection Device. The Group also has several transcatheter mitral valve ("TMV") and transcatheter tricuspid valve ("TTV") treatment products under development, which strategically cover all mainstream and feasible therapies for mitral valve and tricuspid valve regurgitation. For TMV repair replacement products, our self-developed TMV product has completed first-in-man(FIM) trial in July 2022, with excellent 30 days' follow-up results after surgery. The system is the first of its kind to use a self-developed unique anti-calcification and dry valve treatment technique to further improve the durability of prosthetic valves, making it the world's first dry-tissue transcatheter mitral valve replacement system with clinical application. The jointly-developed AltaValve™ transcatheter mitral valve replacement system ("AltaValve™") has successfully completed a number of clinical procedures and the clinical results from its Early Feasibility Study (EFS) were released, demonstrating a significant improvement in mitral regurgitation symptoms after surgery, fully proving its safety and efficacy. For the TMV repair products, the Group's self-developed product is at the design stage. The Amend™ Transcatheter Mitral Valve Repair Product ("Amend™"), a jointly-developed TMV repair product, has completed several transseptal implantations. For the TTV treatment products, the self-developed edge-to-edge TTV repair product, the jointly-developed TTV repair product and the TTV replacement product are all in the design stage.

As for the surgical robot business, the Group continued to build an all-around fundamental technology system and to accelerate the innovation and development of domestic surgical robot technology. As at the date of this announcement, Toumai® Laparoscopic Surgical Robot has completed all enrolled surgeries in the multidisciplinary and multicenter registrational clinical trials, and the application for registration has been submitted to NMPA for the expansion of its multi-disciplinary application, making Toumai® the second laparoscopic surgical robot in the world, and the first of its kind in China that can cover important and complex procedures in the thoracic, abdominal and pelvic cavities (urology and gynecology). Toumai® Single-arm Laparoscopic Surgical Robot ("Toumai® Single-arm") has completed tens of exploratory clinical trials and we are proceeding steadily with the preparations for its registrational clinical trial. With the support of the National key technologies R&D program, the Group will make every effort to fill the gap in the area of single-arm laparoscopic surgical robot in China. In addition, the Trans-bronchial Surgical Robot has completed the first-in-man (FIM) trial of transbronchial robotic lung biopsy, which is also a breakthrough achieved by a Chinese-developed surgical robot in the field of non-invasive natural cavity surgery. As as the date of this announcement, the Mona Lisa Robotic Transperined Prostate Biopsy System, developed through international cooperation, has completed the registrational clinical trial and its application for registration has been submitted to the NMPA; the R-ONE Vascular Interventional Surgical Robot has also completed all patients enrollment for the registrational clinical trial.

As for the surgical devices business, the Group strives to improve the overall extracorporeal life support solutions, including membrane oxygenators and premium cannulas, through continuous technological innovation. The VitaSprings® Spiral Diversion Integrated Membrane Oxygenator ("VitaSprings®"), being the first highly integrated membrane oxygenator developed in China, has submitted the application for the NMPA approval during the Reporting Period. The self-developed ECMO System is at the design validation stage and the accumulation of the above technology will promote the localisation of ECMO high-end medical rescue equipment with membrane oxygenator as the core. During the Reporting period, the Hemovent WATCHA blood oxygen saturation monitoring sensor has been awarded with CE Marking and the new generation of disposable intravenous cannulae has been submitted for type testing.

FINANCIAL REVIEW

Overview

Despite facing an increasingly fierce competition from the rapidly growing medical device industry in China and abroad as well as the impact of the COVID-19 pandemic, the revenue of the Group increased by 5.3% (in US$) for the six months ended 30 June 2022 as compared to the six months ended 30 June 2021. The Group persisted in providing a diversified product portfolio and pursued the Group's globalization strategy with non-China sales contributing 53.4% of the total revenue. The Group aims to continuously bring its innovations, technologies and services to millions of global patients and become a patient oriented global leading enterprise in high technology medical segments represented by minimal invasive and other emerging medical markets.

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

Revenue

	Six months ended 30 June		**Percent change**	
US$'000	**2022**	2021	In US$	Excluding the foreign exchange impact
Cardiovascular devices business	**60,684**	66,837	(9.2%)	(7.2%)
Orthopedics devices business	**107,711**	110,140	(2.2%)	2.4%
CRM business	**104,394**	108,258	(3.6%)	7.2%
Endovascular and peripheral vascular devices business	**70,765**	55,843	26.7%	26.6%
Neurovascular devices business	**31,326**	25,368	23.5%	22.9%
Heart valve business	**18,987**	13,385	41.9%	44.8%
Surgical robot business	**156**	–	N/A	N/A
Surgical devices business	**2,433**	2,288	6.3%	5.4%
Other business *(Note)*	**8,528**	2,492	242.2%	230.1%
Total	**404,984**	384,611	5.3%	10.1%

Note:

Other business did not meet the quantitative thresholds for determining reportable segments.

The Group's revenue for the six months ended 30 June 2022 was US$405.0 million, increasing by 5.3% compared to US$384.6 million for the six months ended 30 June 2021. The Group's reported revenue was impacted by translation from functional currencies of the Group's subsidiaries to US$, the presentation currency of the Group, due to the appreciation or depreciation of US$ against functional currencies. Excluding the foreign exchange impact, the Group's revenue increased by 10.1%. Such growth was principally attributable to the rapid market penetration and new product revenue contribution. The following discussion is based on the Group's major business segments.

— *Cardiovascular Devices Business*

The Group's cardiovascular devices business recorded a revenue of US$60.7 million for the six months ended 30 June 2022, representing a decrease of 7.2% excluding the foreign exchange impact or a decrease of 9.2% in US$ compared to the six months ended 30 June 2021. Such decrease was mainly attributable to (i) the negative impact of the COVID-19 pandemic, resulting in disruptions to the manufacturing and logistics network of the Group's cardiovascular devices business, as well as (ii) the reduction in elective surgeries at medical institutions in certain regions.

— *Orthopedics Devices Business*

	Six months ended 30 June		Percent change	
US$'000	**2022**	2021	In US$	Excluding the foreign exchange impact
Orthopedics Devices Business	**107,711**	110,140	(2.2%)	2.4%
– US	**43,707**	42,323	3.3%	3.3%
– Europe, Middle East and Africa	**30,380**	24,688	23.1%	32.3%
– Japan	**16,585**	19,529	(15.1%)	(3.4%)
– the PRC	**7,990**	15,104	(47.1%)	(43.9%)
– Others	**9,049**	8,496	6.5%	7.0%

The Group's orthopedics devices business recorded a revenue of US$107.7 million for the six months ended 30 June 2022, representing an increase of 2.4% excluding the foreign exchange impact or a decrease of 2.2% in US$ compared to the six months ended 30 June 2021. This change was mainly due to the increase in overseas revenue brought about by investments in market development and product promotion, which was offset by the price reduction due to the VBP of joints products as well as the Covid-19 pandemic in the PRC.

— *CRM Business*

US$'000	**Six months ended 30 June** **2022**	2021	Percent change In US$	Excluding the foreign exchange impact
CRM business	**104,394**	108,258	(3.6%)	7.2%
–US	**1,256**	828	51.7%	51.7%
–Europe, Middle East and Africa	**89,181**	95,186	(6.3%)	5.0%
–Japan	**6,135**	4,916	24.8%	41.0%
–the PRC	**5,485**	5,992	(8.5%)	(6.6%)
–Others	**2,337**	1,336	74.9%	66.5%

CRM business recorded a revenue of US$104.4 million for the six months ended 30 June 2022, representing an increase of 7.2% excluding the foreign exchange impact or a decrease of 3.6% in US$ compared to the six months ended 30 June 2021, which was mainly attributable to the rapid penetration of the new generation of pacemakers and home monitors equipped with Bluetooth® technology, that has been widely recognised by local clinicians and patients for its convenient remote monitoring functions since its launch in Europe and Japan.

— *Endovascular and Peripheral Vascular Devices Business*

The Group's endovascular and peripheral vascular devices business achieved a revenue of US$ 70.8 million for the six months ended 30 June 2022, representing a growth of 26.6% excluding the foreign exchange impact or a growth of 26.7% in US$ compared to the six months ended 30 June 2021. Such growth was mainly attributable to: (i) the further enhanced competitiveness of the Group's endovascular and peripheral vascular devices benefited from the recent approvals obtained for the Castor® Branched Aortic Stent-Graft System, Minos® Abdominal Aortic Aneurysm and Delivery System, Reewarm® PTX Drug Coated Balloon, all of which maintained rapid growth during the Reporting Period; and (ii) an increase in market share in second and third tier cities as a result of effective marketing.

— *Neurovascular Devices Business*

The Group's neurovascular devices business recorded a revenue of US$31.3 million for the six months ended 30 June 2022, representing a growth of 22.9% excluding the foreign exchange impact or a growth of 23.5% in US$ compared to the six months ended 30 June 2021. Such increase was mainly attributable to: (i) the innovative products approved in recent years were rapidly ramping up including NUMEN® Coil Embolisation System, the Bridge® Rapamycin Target Eluting Vertebral Artery Stent System and U-track™ Intracranial Support Catheter System; (ii) the market-leading products, Tubridge® Flow-diverting stent continued to grow in clinical usage; and (iii) the export sales revenue generated by some existing products that have obtained overseas registration, primarily in the US, Korea and Europe.

— *Heart Valve Business*

The Group's heart valve business recorded a revenue of US$19.0 million for the six months ended 30 June 2022, representing a growth of 44.8% excluding the foreign exchange impact or a growth of 41.9% in US$ compared to the six months ended 30 June 2021, primarily attributable to positive market recognition and rapid growth in sales volume and implantation of VitaFlow® and VitaFlow Liberty™.

— *Surgical Robot Business*

The Group's surgical robot business recorded a revenue of US$0.2 million for the six months ended 30 June 2022, mainly contributed by the first commercialized product DFVision® 3D Electronic Laparoscope ("DFVision®").

— *Surgical Devices Business*

The Group's surgical devices business recorded a revenue of US$2.4 million for the six months ended 30 June 2022, representing an increase of 5.4% excluding the foreign exchange impact or an increase of 6.3% in US$ compared to the six months ended 30 June 2021.

— *Other Business*

The Group's other business recorded a revenue of US$8.5 million for the six months ended 30 June 2022, representing an increase of 230.1% excluding the foreign exchange impact or an increase of 242.2% in US$ compared to the six months ended 30 June 2021, which was mainly due to the sales revenue contribution of Fujian Kerui Pharmaceutical Co., Ltd ("Kerui Pharma") and Suzhou MicroPort Argus Medtech Co., Ltd. ("Suzhou Argus"), the newly acquired subsidiaries of the Group in the second half of 2021. The revenue of other business did not meet the quantitative thresholds for determining reportable segments.

Cost of Sales

For the six months ended 30 June 2022, the Group's cost of sales was US$157.3 million, representing a 14.8% increase compared to US$137.0 million for the six months ended 30 June 2021. Such increase was primarily attributable to the increased sales volume of the major businesses.

Gross Profit and Gross Profit Margin

As a result of the foregoing factors, the Group's gross profit amounted to US$247.7 million for the six months ended 30 June 2022, which is generally at the same level with US$247.6 million for the six months ended 30 June 2021. Gross profit margin is calculated as gross profit divided by revenue. The Group's gross profit margin decreased to 61.2% for the six months ended 30 June 2022 as compared to 64.4% for the six months ended 30 June 2021, which was mainly attributable to unfavorable sales mix and cost increase from COVID-19 lockdowns, new manufacturing plants and inflation.

Other Net Income

Other net income increased by 68.0% from US$24.6 million for the six months ended 30 June 2021 to US$41.4 million for the six months ended 30 June 2022. Such increase was mainly due to the reversal of loss provisions recognised in previous years, an increase on net foreign exchange gains, etc.

Research and Development Costs

Research and development costs increased by 59.3% from US$117.1 million for the six months ended 30 June 2021 to US$186.4 million for the six months ended 30 June 2022. Such increase was primarily due to the increased investments in the on-going and newly kicked off research and development projects.

Distribution Costs

Distribution costs increased by 12.2% from US$130.7 million for the six months ended 30 June 2021 to US$146.6 million for the six months ended 30 June 2022. Such increase was primarily attributable to the market development and an increase in product promotion of the surgical robots and heart valve businesses.

Administrative Expenses

Administrative expenses increased by 29.4% from US$103.0 million for the six months ended 30 June 2021 to US$133.3 million for the six months ended 30 June 2022. Such increase was mainly attributable to: (i) the increase in costs related to new office premises and facilities; (ii) additional administrative expenses of subsidiaries newly acquired in the second half of 2021.

Other Operating Costs

Other operating costs increased by 52.4% from US$5.5 million for the six months ended 30 June 2021 to US$8.3 million for the six months ended 30 June 2022. Such increase was mainly attributable to an increase in donation expenses during the Reporting Period.

Finance Costs

Finance costs increased by 110.2% from US$21.9 million for the six months ended 30 June 2021 to US$46.1 million for the six months ended 30 June 2022. Such increase was mainly due to the accrued interest of convertible bonds issued by the Company and preferred shares issued by the subsidiaries of the Group.

Income Tax

Income tax decreased from US$12.3 million for the six months ended 30 June 2021 to US$5.4 million for the six months ended 30 June 2022, primarily due to the decrease in profit before tax earned by the subsidiaries in the PRC.

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 the 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 30 June 2022, the Group had US$1,380.8 million of cash and cash equivalents on hand, as compared to US$1,754.4 million as at 31 December 2021. Such decrease was mainly attributable to (i) operating expenditure on research and development, registration, and commercialisation of businesses such as surgical robots, heart valves and surgical devices through independent financing channels; (ii) capitalised expenditure of the Group; (iii) investments in associates; (iv) share repurchases. The Board's approach to managing liquidity of the Group is to ensure sufficient liquidity at any time to meet its matured liabilities in order to avoid any unacceptable losses or damage to the Group's reputation.

Borrowings and Gearing Ratio

Total borrowings of the Group, including interest-bearing borrowings and convertible bonds, as at 30 June 2022 were US$1,090.0 million, representing an increase of US$65.2 million as compared to US$1,024.8 million as at 31 December 2021. During the Reporting Period, the gearing ratio (calculated as total bank borrowings and convertible bonds divided by total equity) of the Group increased from 46.2% as at 31 December 2021 to 58.4% as at 30 June 2022.

Net Current Assets

The Group's net current assets as at 30 June 2022 were US$1,503.8 million, as compared to US$1,840.0 million as at 31 December 2021.

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 six months ended 30 June 2022, the Group recorded a net exchange gain of US$6.0 million, as compared to a net foreign exchange loss of US$2.2 million for the six months ended 30 June 2021. 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 six months ended 30 June 2022, the Group's total capital expenditure amounted to approximately US$109.0 million, which was used in (i) construction and renovation of buildings; (ii) acquiring equipment and machinery; and (iii) expenditures for R&D projects in development stage.

Charge on Assets

As at 30 June 2022, the Group had mortgaged its buildings held for own use and right-of-use assets for the purpose of securing bank loans with a carrying value of US$85.2 million, and pledged the equity interest held by the Group in Kerui Pharma, Suzhou Argus and MicroPort Vision Power MedTech (Shanghai) Co., Ltd. and Hemovent GmbH for the purpose of securing bank loans for acquisitions and capital injections with a carrying value of US$105.8 million.

HUMAN RESOURCES AND TRAINING

As at 30 June 2022, the Group had a total of 9,186 employees around the world, of which 1,746 or 19% were overseas employees in the Asia Pacific region, Europe, the Middle East, Africa, North America and Australia.

Adhering to the principle of "maturity, usage, cultivation, remuneration and care" regarding human resources, the Group has built a comprehensive talent development platform through the construction mechanism of organisational competence. Focus is placed on the enhancement and development of the intellectual, emotional, reactive and instrumental quotient of staff and the organisation. We emphasise on recruiting the world's top technical leaders, and accurately cultivating core technicians and future leaders. The Group takes the lead to design an employee career path of "2 ways, 3 levels, 6 paths, 18 steps and 108 posts", providing employees with a development path in combined directions horizontally and vertically, and accompanying employees to grow together by building a learning organisation. Within the Group, we have set up four internal learning institutions, namely the "Jixia Leadership Academy", "Basic Knowledge, Skills and Innovation School", "Emerging Medical Science and Technology Knowledge and Practice Workshop", and "Culture Lecture Hall". Through the extraction of internal knowledge and experience and the transmission of the spirit of "passing on the knowledge to others", and with an aim of comprehensively cultivating "professional, excellent, special and uncommon" technical talents and future enterprise leaders, we will work together to achieve our mission of "breaking barriers to support billions of people thrive beyond the age of 115 years old".

PROSPECTS

With the expanding ageing population in the world, the improved living standards of the people and the economic growth of the developing countries, the global market demand for medical devices has steadily increased. As for the PRC market, thanks to the economic and social development, the health awareness among its people has been raised significantly, and reform of the medical system has also brought policy bonus. The medical device market in China has huge development opportunities, while at the same time attracting more and more multinational medical enterprises. In order to seize the development opportunities and enhance the Group's core competitiveness in the increasingly fierce market competition, the Group will continue to actively implement its business strategies, including but not limited to the following:

1. Consolidating its leading position in the medical device market in the PRC. With its strong brand recognition, extensive distribution network, and the economies of scale achieved by the deployment of multiple channels, the Group will further increase its market share in the PRC and continue to play to the advantages of being a leading enterprise in the industry and make breakthroughs in every aspect of the domestic high-end medical device industry, thereby maximising value for the shareholders, customers, employees and society.

2. Expediting the global penetration to realise integration of our brand and global operations. The Group will continuously deepen the globalised branding and operation strategy based on local language families by consistently implementing the operation model of "globalisation in operational strategy, localised implementation, deployment with diversification, and unified positioning", thereby realising global deployment through effective integration of resources and markets around the world, which in turn will bring the products of MicroPort® to more countries or regions and benefit patients and doctors around the world.

3. Constantly improving its existing products and actively promoting the development of innovative products to create a diversified product portfolio. While continuously improving the performance and manufacturing processes of existing products and carrying out a vast variety of R&D activities, the Group will expedite the R&D and commercialisation of innovative products which align with its corporate strategy, with an aim to provide patients and doctors with quality integrated medical solutions at affordable charges.

4. Deepening the reform of its management system. In order to further enhance its competitiveness and risk prevention capability, the Group will constantly improve the system development and enhance the efficiency of internal governance by integrating resources and streamlining processes, thereby maintaining the unique entrepreneurial vitality, flexibility and efficiency of MicroPort® to the greatest extent while expanding its business scale more rapidly.

SUPPLEMENTAL INFORMATION

Purchase, Sale or Redemption of Listed Securities of the Company

Save for the 2,755,400 Shares of the Company purchased by the trustee of the share award scheme at cash consideration of approximately US$6,390,000 on The Stock Exchange of Hong Kong Limited for the share award scheme, neither the Company nor any of its subsidiaries has purchased, sold or redeemed any of the Company's listed securities during the six months ended 30 June 2022.

Code of Conduct Regarding Securities Transactions by Directors

The Company has adopted the "Model Code for Securities Transactions by Directors of Listed Issuers" (the "Model Code") as set out in Appendix 10 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "Listing Rules") as the code of conduct regarding securities transactions by Directors. Having made specific enquiry with all the Directors, the Company confirmed that all the Directors have complied with the requirements as set out in the Model Code throughout the period of the six months ended 30 June 2022.

Compliance with the Code on Corporate Governance Practices

Throughout the period of the six months ended 30 June 2022, except for the deviation as noted below, the Company had complied with all the applicable code provisions (the "Code Provisions") as set out in the Corporate Governance Code (the "CG Code") contained in Appendix 14 to the Listing Rules.

Pursuant to the Code Provision C.2.1, the roles of chairman and chief executive officer should be separated 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. Dr. Zhaohua Chang ("Dr. Chang") has assumed the responsibility of the executive Director and the chairman of the Board and is responsible for managing the Board and the Group's business. As the Board considers that Dr. Chang has in-depth knowledge in the Group's business and can make appropriate decisions promptly and efficiently, he has also 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.

Independent Review of Auditor

The interim financial report for the six months ended 30 June 2022 is unaudited, but has been reviewed by KPMG, in accordance with Hong Kong Standard on Review Engagements No. 2410 "Review of interim financial information performed by the independent auditor of the entity" issued by the Hong Kong Institute of Certified Public Accountants.

Audit Committee and Review of Financial Statements

The Company has established the Audit Committee with written terms of reference in compliance with the CG Code. As at the date of this announcement, the Audit Committee comprises three members: Mr. Jonathan H. Chou (Chairman), Mr. Norihiro Ashida and Mr. Chunyang Shao.

The Audit Committee has reviewed and discussed the interim results and interim report for the six months ended 30 June 2022.

Disclosure of Information

The interim report of the Group for the six months ended 30 June 2022 containing all the relevant information required by the Listing Rules will be published on the websites of Hong Kong Exchanges and Clearing Limited (http://www.hkexnews.hk) and the Company (http://www.microport.com), in accordance with the Listing Rules in due course.

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

Shanghai, the PRC, 30 August 2022

As at the date of this announcement, the executive Director is Dr. Zhaohua Chang; the non-executive Directors are Mr. Norihiro Ashida, Dr. Yasuhisa Kurogi and Mr. Hongliang Yu; and the independent non-executive Directors are Mr. Jonathan H. Chou, Dr. Guoen Liu, and Mr. Chunyang Shao.

* *for identification purpose only*