UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-Q

(Mark One)

☑ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended: June 30, 2020

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission file number: 001-37599

LivaNova PLC

(Exact name of registrant as specified in its charter)

England and Wales	**98-1268150**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*

20 Eastbourne Terrace, London, United Kingdom, W2 6LG
(Address of principal executive offices) *(Zip Code)*

Registrant's telephone number, including area code: **(44) (0) 203 325-0660**

Securities registered pursuant to Section 12(b) of the Act

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Ordinary Shares - £1.00 par value per share	LIVN	NASDAQ Global Market

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☑	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☑

Class	Outstanding at July 27, 2020
Ordinary Shares - £1.00 par value per share	48,666,835

LIVANOVA PLC

TABLE OF CONTENTS

In this Quarterly Report on Form 10-Q, "LivaNova," "the Company," "we," "us" and "our" refer to LivaNova PLC and its consolidated subsidiaries.

This report may contain references to our proprietary intellectual property, including among others:

- Trademarks for our VNS therapy systems, the VNS Therapy® System, the VITARIA® System and our proprietary pulse generator products: Model 102 (Pulse®), Model 102R (Pulse Duo®), Model 103 (Demipulse®), Model 104 (Demipulse Duo®), Model 105 (AspireHC®), Model 106 (AspireSR®), Model 1000 (SenTiva®) and Model 8103 (Symmetry®).
- Trademarks for our Cardiopulmonary product systems: S5® heart-lung machine, S3® heart-lung machine, Inspire®, Heartlink®, XTRA® Autotransfusion System, 3T Heater-Cooler®, Connect™ and Revolution®.
- Trademarks for our line of surgical tissue and mechanical valve replacements and repair products: Mitroflow®, Crown PRT®, Solo Smart™, Perceval®, Miami Instruments™, Top Hat®, Reduced Series Aortic Valves™, Carbomedics Carbo-Seal®, Carbo-Seal Valsalva®, Carbomedics Standard®, Orbis™ and Optiform®, MEMO 4D®, AnnuloFlo®, AnnuloFlex®, Bicarbon Slimline™, Bicarbon Fitline™ and Bicarbon Overline®.
- Trademarks for our advanced circulatory support systems: TandemLife®, TandemHeart®, TandemLung®, ProtekDuo®, and LifeSPARC™.
- Trademarks for our obstructive sleep apnea system: ImThera® and Aura6000®.

These trademarks and trade names are the property of LivaNova or the property of our consolidated subsidiaries and are protected under applicable intellectual property laws. Solely for convenience, our trademarks and tradenames referred to in this Quarterly Report on Form 10-Q may appear without the ® or ™ symbols, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights to these trademarks and tradenames.

NOTE ABOUT FORWARD LOOKING STATEMENTS

Certain statements in this Quarterly Report on Form 10-Q, other than purely historical information, are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These statements include, but are not limited to, LivaNova's plans, objectives, strategies, financial performance and outlook, trends, the amount and timing of future cash distributions, prospects or future events and involve known and unknown risks that are difficult to predict. As a result, our actual financial results, performance, achievements or prospects may differ materially from those expressed or implied by these forward-looking statements. In some cases, you can identify forward-looking statements by the use of words such as "may," "could," "seek," "guidance," "predict," "potential," "likely," "believe," "will," "should," "expect," "anticipate," "estimate," "plan," "intend," "forecast," "foresee" or variations of these terms and similar expressions, or the negative of these terms or similar expressions. Such forward-looking statements are necessarily based on estimates and assumptions that, while considered reasonable by LivaNova and its management based on their knowledge and understanding of the business and industry, are inherently uncertain. These statements are not guarantees of future performance, and stockholders should not place undue reliance on forward-looking statements. There are a number of risks, uncertainties and other important factors, many of which are beyond our control, that could cause our actual results to differ materially from the forward-looking statements contained in this Quarterly Report on Form 10-Q, and include but are not limited to the risks and uncertainties summarized below:

- changes in our common stock price;
- changes in our profitability;
- regulatory activities and announcements, including the failure to obtain regulatory approvals for our new products;
- effectiveness of our internal controls over financial reporting;
- fluctuations in future quarterly operating results;
- failure to comply with, or changes in, laws, regulations or administrative practices affecting government regulation of our products, including, but not limited to, U.S. Food and Drug Administration ("FDA") laws and regulations;
- failure to establish, expand or maintain market acceptance of our products for the treatment of our approved indications;
- any legislative or administrative reform to the healthcare system, including the U.S. Medicare or Medicaid systems or international reimbursement systems, that significantly reduces reimbursement for our products or procedures or denies coverage for such products or procedures or enhances coverage for competitive products or procedures, as well as adverse decisions by administrators of such systems on coverage or reimbursement issues relating to our products;
- failure to maintain the current regulatory approvals for our products' approved indications;
- failure to obtain or maintain coverage and reimbursement for our products' approved indications;
- unfavorable results from clinical studies;
- variations in sales and operating expenses relative to estimates;
- our dependence on certain suppliers and manufacturers to provide certain materials, components and contract services necessary for the production of our products;
- product liability, intellectual property, shareholder-related, environmental-related, income tax and other litigation, disputes, losses and costs;
- protection, expiration and validity of our intellectual property;
- changes in technology, including the development of superior or alternative technology or devices by competitors;
- competition from providers of alternative medical therapies, such as pharmaceutical companies and providers of cannabis;
- cyber-attacks or other disruptions to our information technology systems;
- failure to comply with applicable U.S. laws and regulations, including federal and state privacy and security laws and regulations;
- failure to comply with applicable non-U.S. laws and regulations;
- non-U.S. operational and economic risks and concerns;

- failure to attract or retain key personnel;
- failure of new acquisitions to further our strategic objectives or strengthen our existing businesses;
- losses or costs from pending or future lawsuits and governmental investigations;
- changes in accounting rules that adversely affect the characterization of our consolidated financial position, results of operations or cash flows;
- changes in customer spending patterns;
- continued volatility in the global market and worldwide economic conditions, including volatility caused by the implementation of Brexit and/or changes to existing trade agreements and relationships between the U.S. and other countries;
- risks relating to the outbreak and spread of COVID-19 around the world;
- changes in tax laws, including changes related to Brexit, or exposure to additional income tax liabilities;
- harsh weather or natural disasters that interrupt our business operations or the business operations of our hospital-customers; and
- failure of the market to adopt new therapies or to adopt new therapies quickly.

Other factors that could cause our actual results to differ from our projected results are described in (1) “Part II, Item 1A. Risk Factors” and elsewhere in this Quarterly Report on Form 10-Q, (2) our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 (“2019 Form 10-K”), (3) our reports and registration statements filed and furnished from time to time with the Securities and Exchange Commission (“SEC”) and (4) other announcements we make from time to time.

Readers are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date hereof. We undertake no obligation to update or revise any forward-looking statements after the date they are made, whether as a result of new information, future events or otherwise. You should read the following discussion and analysis in conjunction with our unaudited condensed consolidated financial statements and related notes included elsewhere in this report. Operating results for the three and six months ended June 30, 2020 are not necessarily indicative of future results, including the full fiscal year. You should also refer to our “Annual Consolidated Financial Statements,” “Notes” thereto, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Risk Factors” contained in our 2019 Form 10-K and in our Quarterly Reports on Form 10-Q.

Financial Information and Currency of Financial Statements

All of the financial information included in this quarterly report has been prepared in accordance with generally accepted accounting principles in the United States of America (“U.S.” and such principles, “U.S. GAAP”). The reporting currency of our condensed consolidated financial statements is U.S. dollars.

PART I. FINANCIAL INFORMATION

Item 1. *Financial Statements*

LIVANOVA PLC AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF INCOME (LOSS)
(UNAUDITED)
(In thousands, except per share amounts)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Net sales	$ 182,206	$ 277,169	$ 424,603	$ 527,970
Costs and expenses:				
Cost of sales - exclusive of amortization	56,762	74,942	125,685	159,196
Product remediation	4,269	5,113	5,735	8,060
Selling, general and administrative	98,048	127,213	218,225	252,917
Research and development	25,152	34,544	61,054	78,119
Merger and integration expenses	2,048	4,378	5,522	7,629
Restructuring expenses	794	1,332	2,374	3,865
Impairment of intangible assets	—	50,295	—	50,295
Amortization of intangibles	9,394	9,228	19,661	18,544
Litigation provision, net	976	—	976	—
Operating loss from continuing operations	(15,237)	(29,876)	(14,629)	(50,655)
Interest income	287	224	435	473
Interest expense	(5,715)	(4,054)	(10,564)	(5,716)
Foreign exchange and other losses	(999)	(1,851)	(2,913)	(1,122)
Loss from continuing operations before tax	(21,664)	(35,557)	(27,671)	(57,020)
Income tax expense (benefit)	66,285	(6,164)	21,571	(12,778)
Losses from equity method investments	(44)	—	(173)	—
Net loss from continuing operations	(87,993)	(29,393)	(49,415)	(44,242)
Net income (loss) from discontinued operations, net of tax	—	178	(995)	178
Net loss	$ (87,993)	$ (29,215)	$ (50,410)	$ (44,064)
Basic (loss) income per share:				
Continuing operations	$ (1.81)	$ (0.61)	$ (1.02)	$ (0.92)
Discontinued operations	—	0.01	(0.02)	0.01
	$ (1.81)	$ (0.60)	$ (1.04)	$ (0.91)
Diluted (loss) income per share:				
Continuing operations	$ (1.81)	$ (0.61)	$ (1.02)	$ (0.92)
Discontinued operations	—	0.01	(0.02)	0.01
	$ (1.81)	$ (0.60)	$ (1.04)	$ (0.91)
Shares used in computing basic (loss) income per share	48,611	48,342	48,548	48,295
Shares used in computing diluted (loss) income per share	48,611	48,342	48,548	48,295

See accompanying notes to the condensed consolidated financial statements

LIVANOVA PLC AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(UNAUDITED)
(In thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
Net loss	$ (87,993)	$ (29,215)	$ (50,410)	$ (44,064)
Other comprehensive income (loss):				
Net change in unrealized loss on derivatives	1,029	215	(327)	205
Tax effect	(246)	(52)	79	(50)
Net of tax	783	163	(248)	155
Foreign currency translation adjustment	16,651	15,376	(15,449)	11,147
Total other comprehensive income (loss)	17,434	15,539	(15,697)	11,302
Total comprehensive loss	$ (70,559)	$ (13,676)	$ (66,107)	$ (32,762)

See accompanying notes to the condensed consolidated financial statements

LIVANOVA PLC AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(UNAUDITED)
(In thousands, except share amounts)

	June 30, 2020	December 31, 2019
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 232,549	$ 61,137
Accounts receivable, net of allowance of $15,320 at June 30, 2020 and $13,105 at December 31, 2019	186,144	257,769
Inventories, net	177,246	164,154
Prepaid and refundable taxes	41,662	37,779
Prepaid expenses and other current assets	34,838	28,604
Total Current Assets	672,439	549,443
Property, plant and equipment, net	185,670	181,354
Goodwill	902,204	915,794
Intangible assets, net	583,490	607,546
Operating lease assets	51,114	54,372
Investments	30,245	27,256
Deferred tax assets	23,148	68,676
Other assets	54,353	7,356
Total Assets	$ 2,502,663	$ 2,411,797
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Current debt obligations	$ 7,449	$ 77,396
Accounts payable	69,065	85,892
Accrued liabilities and other	97,238	120,100
Current litigation provision liability	37,420	146,026
Taxes payable	8,365	12,719
Accrued employee compensation and related benefits	48,827	70,420
Total Current Liabilities	268,364	512,553
Long-term debt obligations	639,189	260,330
Contingent consideration	71,236	114,396
Litigation provision liability	11,611	24,378
Deferred tax liabilities	30,106	32,219
Long-term operating lease liabilities	42,388	46,027
Long-term employee compensation and related benefits	22,398	22,797
Long-term derivative liability	71,501	61
Other long-term liabilities	12,684	15,319
Total Liabilities	1,169,477	1,028,080
Commitments and contingencies (Note 10)		
Stockholders' Equity:		
Ordinary Shares, £1.00 par value: unlimited shares authorized; 49,476,223 shares issued and 48,667,203 shares outstanding at June 30, 2020; 49,411,016 shares issued and 48,443,830 shares outstanding at December 31, 2019	76,338	76,257
Additional paid-in capital	1,750,798	1,734,870
Accumulated other comprehensive loss	(35,089)	(19,392)
Accumulated deficit	(457,804)	(406,755)
Treasury stock at cost, 809,020 ordinary shares at June 30, 2020, 967,186 ordinary shares at December 31, 2019	(1,057)	(1,263)
Total Stockholders' Equity	1,333,186	1,383,717
Total Liabilities and Stockholders' Equity	$ 2,502,663	$ 2,411,797

See accompanying notes to the condensed consolidated financial statements

LIVANOVA PLC AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)
(In thousands)

	Six Months Ended June 30,	
	2020	**2019**
Operating Activities:		
Net loss	$ (50,410)	$ (44,064)
Non-cash items included in net loss:		
Deferred tax expense	46,171	15,897
Remeasurement of contingent consideration to fair value	(46,034)	(10,600)
Amortization	19,661	18,544
Stock-based compensation	19,034	15,596
Depreciation	13,596	15,287
Remeasurement of derivative instruments	(7,250)	(3,762)
Amortization of operating lease assets	6,297	6,334
Impairment of intangible assets	—	50,295
Other	5,433	5,932
Changes in operating assets and liabilities:		
Accounts receivable, net	66,256	(277)
Inventories, net	(16,210)	(14,284)
Other current and non-current assets	(10,263)	5,291
Accounts payable and accrued current and non-current liabilities	(47,084)	(29,129)
Taxes payable	(2,150)	(43,008)
Litigation provision liability	(121,194)	—
Restructuring reserve	(917)	(5,473)
Net cash used in operating activities	(125,064)	(17,421)
Investing Activities:		
Purchases of property, plant and equipment	(17,955)	(10,796)
Purchase of investments	(3,168)	(287)
Loans to investees	(2,250)	—
Acquisitions, net of cash acquired	—	(10,750)
Other	707	(621)
Net cash used in investing activities	(22,666)	(22,454)
Financing Activities:		
Proceeds from long-term debt obligations	886,899	53,777
Repayment of long-term debt obligations	(481,254)	(12,125)
Proceeds from short term borrowings (maturities greater than 90 days)	46,717	—
Repayments of short term borrowings (maturities greater than 90 days)	(44,838)	—
Purchase of capped call	(43,096)	—
Debt issuance costs	(19,970)	(3,688)
Closing adjustment payment for sale of CRM business	(14,891)	—
Payment of contingent consideration	(5,250)	(284)
Shares repurchased from employees for minimum tax withholding	(5,177)	(5,714)
Proceeds from share issuances under ESPP	2,064	2,574
Change in short-term borrowing, net	(1,532)	2,355
Other	25	162
Net cash provided by financing activities	319,697	37,057
Effect of exchange rate changes on cash and cash equivalents	(555)	125
Net increase (decrease) in cash and cash equivalents	171,412	(2,693)
Cash and cash equivalents at beginning of period	61,137	47,204
Cash and cash equivalents at end of period	$ 232,549	$ 44,511

See accompanying notes to the condensed consolidated financial statements

Note 1. Unaudited Condensed Consolidated Financial Statements

Basis of Presentation

The accompanying condensed consolidated financial statements of LivaNova as of, and for the three and six months ended June 30, 2020 and 2019, have been prepared in accordance with U.S. GAAP for interim financial information and the instructions to Form 10-Q and Article 10 of Regulation S-X. The accompanying condensed consolidated balance sheet of LivaNova at December 31, 2019 has been derived from audited financial statements contained in our 2019 Form 10-K, but does not include all of the information and footnotes required by U.S. GAAP for complete financial statements. In the opinion of management, the condensed consolidated financial statements reflect all adjustments (consisting of only normal recurring adjustments) considered necessary for a fair statement of the operating results of LivaNova and its subsidiaries, for the three and six months ended June 30, 2020, and are not necessarily indicative of the results that may be expected for the year ending December 31, 2020. The financial information presented herein should be read in conjunction with the audited consolidated financial statements and notes thereto accompanying our 2019 Form 10-K.

Recent Developments Regarding COVID-19

Due to the COVID-19 pandemic (COVID 19), we have experienced and may continue to experience significant and unpredictable reductions in the demand for our products as healthcare customers have diverted medical resources and priorities towards the treatment of COVID-19. In addition, public health bodies have delayed elective procedures during the COVID-19 pandemic, which has negatively impacted the usage of our products, including the number of Neuromodulation procedures. Further, some people are avoiding seeking treatment for non-COVID-19 emergency procedures, which has also negatively impacted the demand for our products.

We are beginning to see signs of stabilization in certain geographies as elective surgeries resume and expect this trend to continue on a global basis during the second half of 2020. We expect elective procedure recovery rates to vary by country, and to be impacted by COVID-19 case volumes, hospital occupancy and staffing levels, patient’s willingness to re-book previously deferred procedures, travel restrictions, transportation limitations, quarantine restrictions, economic uncertainty and potential COVID-19 resurgence.

Reclassifications

We have reclassified certain prior period amounts for comparative purposes. These reclassifications did not have a material effect on our financial condition, results of operations or cash flows.

Significant Accounting Policies

Our significant accounting policies are detailed in “Note 2. Basis of Presentation, Use of Accounting Estimates and Significant Accounting Policies” and “Note 3. Revenue Recognition” of our 2019 Form 10-K.

Note 2. Business Combinations

Miami Instruments

On June 12, 2019, we acquired the minimally invasive cardiac surgery instruments business from Miami Instruments, LLC (“Miami Instruments”) for cash consideration of up to $17.0 million. The related operations have been integrated into our Cardiovascular segment as a part of our Heart Valves business. Cash of $10.8 million was paid at closing with up to $6.0 million in contingent consideration based on achieving certain milestones. The purchase price allocation for the Miami Instruments acquisition was finalized during the second quarter of 2020 and resulted in no measurement period adjustments. In connection with this acquisition, we recognized $14.7 million in developed technology and in-process research and development (“IPR&D”) intangible assets and $1.5 million in goodwill.

Note 3. Discontinued Operations

On April 30, 2018, we completed the sale of our Cardiac Rhythm Management (“CRM”) business franchise to MicroPort Cardiac Rhythm B.V. and MicroPort Scientific Corporation (“MicroPort”) for total cash proceeds of $195.9 million, less cash transferred of $9.2 million, subject to a closing working capital adjustment. In March 2020, we finalized the working capital adjustment and as a result, made a $16.4 million payment to MicroPort during the first quarter of 2020 and incurred an additional $1.0 million loss on sale, net of a $0.1 million tax benefit.

Note 4. Restructuring

We initiate restructuring plans to leverage economies of scale, streamline distribution and logistics, and strengthen operational and administrative effectiveness in order to reduce overall costs. Costs associated with these plans were reported as restructuring expenses in the operating results of our condensed consolidated statements of income (loss).

The following table presents the accruals and other reserves recorded in connection with our restructuring plans (in thousands):

	Employee Severance and Other Termination Costs	Other	Total
Balance at December 31, 2019	$ 4,097	$ 1,400	$ 5,497
Charges	2,374	—	2,374
Cash payments and other	(5,327)	(736)	(6,063)
Balance at June 30, 2020	$ 1,144	$ 664	$ 1,808

The following table presents restructuring expense by reportable segment (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Cardiovascular	$ 570	$ 316	$ 1,256	$ 738
Neuromodulation	305	53	808	485
Other	(81)	963	310	2,642
Total	$ 794	$ 1,332	$ 2,374	$ 3,865

Note 5. Product Remediation Liability

On December 29, 2015, we received an FDA Warning Letter (the “Warning Letter”) alleging certain violations of FDA regulations applicable to medical device manufacturing at our Munich, Germany and Arvada, Colorado facilities. On October 13, 2016, the CDC and FDA separately released safety notifications regarding 3T Heater-Cooler devices in response to which we issued a Field Safety Notice Update for U.S. users of our 3T Heater-Cooler devices to proactively and voluntarily contact facilities to facilitate implementation of the CDC and FDA recommendations.

At December 31, 2016, we recognized a liability for a product remediation plan related to our 3T Heater-Cooler device (“3T device”). The remediation plan we developed consists primarily of a modification of the 3T device design to include internal sealing and the addition of a vacuum system to new and existing devices. These changes are intended to address regulatory actions and to reduce further the risk of possible dispersion of aerosols from 3T devices in the operating room. We concluded that it was probable that a liability had been incurred upon management’s approval of the plan and the commitments made by management to various regulatory authorities globally in November and December 2016, and furthermore, the cost associated with the plan was reasonably estimable. The deployment of this solution for commercially distributed devices has been dependent upon final validation and verification of the design changes and approval or clearance by regulatory authorities worldwide, including FDA clearance in the U.S. It is reasonably possible that our estimate of the remediation liability could materially change in future periods due to the various significant assumptions involved such as customer behavior, market reaction and the timing of approvals or clearance by regulatory authorities worldwide.

In April 2017, we obtained CE Mark in Europe for the design change of the 3T device, and in May 2017 we completed our first vacuum canister and internal sealing upgrade on a customer-owned device. We are currently implementing the vacuum canister and internal sealing upgrade program in as many countries as possible until all devices are upgraded. In October 2018, after review of information provided by us, the FDA concluded that we could commence the vacuum canister and internal sealing upgrade program in the U.S., and on February 25, 2020, LivaNova received clearance for K191402, a 510(k) for the 3T devices that addressed issues contained in the 2015 Warning Letter along with design changes that further mitigate the potential risk of aerosolization. Concurrent with this clearance, (1) 3T devices manufactured in accordance with K191402 will not be subjected to the import alert previously issued by the FDA and (2) LivaNova initiated a correction to distribute the updated Operating Instructions cleared under K191402.

As a second part of the remediation plan, we continue to offer a no-charge deep disinfection service (deep cleaning service) for 3T device users as we receive the required regulatory approvals. The deep disinfection service was rolled out in Europe in the second half of 2015, and in April 2018, the FDA agreed to allow us to move forward with the deep cleaning service in the U.S., thereby adding to the growing list of countries around the world in which we offer this service. Finally, we are continuing to offer the loaner program for 3T devices, initiated in the fourth quarter of 2016, to provide existing 3T device users with a new loaner 3T device at no charge pending regulatory approval and implementation of the vacuum system addition and deep disinfection service worldwide. This loaner program is available on a global basis.

The following table provides a reconciliation of the beginning and ending balance of the product remediation liability included within accrued liabilities and other on the condensed consolidated balance sheet (in thousands):

Balance at December 31, 2019	$	3,251
Adjustments		1,392
Remediation activity		(3,099)
Effect of changes in foreign currency exchange rates		(11)
Balance at June 30, 2020	$	1,533

We recognized product remediation expenses of $4.3 million and $5.1 million during the three months ended June 30, 2020 and 2019, respectively, and $5.7 million and $8.1 million during the six months ended June 30, 2020 and 2019, respectively. Product remediation expenses include internal labor costs, costs to remediate certain inspectional observations made by the FDA at our Munich facility and costs associated with the incorporation of the modification of the 3T device design into the next generation 3T device. These costs and related legal costs are expensed as incurred and are not included within the product remediation liability presented above. At June 30, 2020, our balance sheet includes a $49.0 million provision related to litigation involving our 3T device. For further information, please refer to “Note 10. Commitments and Contingencies.”

Note 6. Investments

The following table details the carrying value of our investments in equity securities of non-consolidated affiliates without readily determinable fair values for which we do not exert significant influence over the investee. These equity investments are reported at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or similar investment of the same issuer. The below equity investments are included in investments on the condensed consolidated balance sheets (in thousands):

Equity Investments Without Readily Determinable Fair Values	**June 30, 2020**	**December 31, 2019**
Respicardia Inc. [1]	$ 17,706	$ 17,706
ALung Technologies, Inc. [2]	3,000	—
Ceribell, Inc.	3,000	3,000
ShiraTronics, Inc.	2,045	2,045
Rainbow Medical Ltd.	1,097	1,099
MD Start II	1,121	1,121
Highlife S.A.S.	1,063	1,064
Other	770	770
	29,802	26,805
Equity method investment	443	451
	$ 30,245	$ 27,256

(1) Respicardia Inc. (“Respicardia”) is a privately funded U.S. company developing an implantable device designed to restore a more natural breathing pattern during sleep in patients with central sleep apnea by transvenously stimulating the phrenic nerve. We have a loan outstanding to Respicardia, with a carrying amount of $0.8 million and $0.6 million as of June 30, 2020 and December 31, 2019, respectively, which is included in prepaid expenses and other current assets on the condensed consolidated balance sheet.

(2) During the first quarter of 2020, we invested in ALung Technologies, Inc. (“ALung”). ALung is a privately held medical device company focused on creating advanced medical devices for treating respiratory failure. ALung’s Hemolung Respiratory Assist System is a dialysis-like alternative or supplement to mechanical ventilation which removes carbon dioxide directly from the blood in patients with acute respiratory failure. During the second quarter of 2020, we provided a loan to ALung for $2.0 million, due July 10, 2021. The loan may be converted, at LivaNova’s option, to either ALung’s Series C Senior Convertible Participating Preferred

Stock or ALung's Series D convertible participating preferred stock at $0.8069 per share. As of June 30, 2020, the carrying amount of the loan was $2.0 million, which is included in other assets on the condensed consolidated balance sheet.

Note 7. Fair Value Measurements

We review the fair value hierarchy classification on a quarterly basis. Changes in the ability to observe valuation inputs may result in a reclassification of levels for certain securities within the fair value hierarchy. There were no transfers between Level 1, Level 2, or Level 3 during the six months ended June 30, 2020 and 2019.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The following tables provide information by level for assets and liabilities that are measured at fair value on a recurring basis (in thousands):

	Fair Value as of June 30, 2020	Fair Value Measurements Using Inputs Considered as:		
		Level 1	Level 2	Level 3
Assets:				
Derivative assets - designated as cash flow hedges (foreign currency exchange rate "FX")	$ 383	$ —	$ 383	$ —
Derivative assets - freestanding instruments (FX)	20	—	20	—
Derivative assets - capped call derivatives	44,925	—	—	44,925
Convertible notes receivable	2,267	—	—	2,267
	$ 47,595	$ —	$ 403	$ 47,192
Liabilities:				
Derivative liabilities - designated as cash flow hedges (FX)	$ 78	$ —	$ 78	$ —
Derivative liabilities - freestanding instruments (interest rate swaps)	194	—	194	—
Derivative liabilities - freestanding instruments (FX)	1,601	—	1,601	—
Derivative liabilities - embedded exchange feature	71,501	—	—	71,501
Contingent consideration arrangements	85,120	—	—	85,120
	$ 158,494	$ —	$ 1,873	$ 156,621

	Fair Value as of December 31, 2019	Fair Value Measurements Using Inputs Considered as:		
		Level 1	Level 2	Level 3
Assets:				
Derivative assets - designated as cash flow hedges (FX)	$ 535	$ —	$ 535	$ —
Derivative assets - freestanding instruments (FX)	26	—	26	—
	$ 561	$ —	$ 561	$ —
Liabilities:				
Derivative liabilities - designated as cash flow hedges (FX)	$ 169	$ —	$ 169	$ —
Derivative liabilities - designated as cash flow hedges (interest rate swaps)	374	—	374	—
Derivative liabilities - freestanding instruments (FX)	3,137	—	3,137	—
Contingent consideration arrangements	137,349	—	—	137,349
	$ 141,029	$ —	$ 3,680	$ 137,349

The following table provides a reconciliation of the beginning and ending balances of our recurring fair value measurements, using significant unobservable inputs (Level 3) (in thousands):

	Capped Call Derivative Asset	Embedded Exchange Feature Liability	Contingent Consideration Liability Arrangements	Convertible Notes Receivable
As of December 31, 2019	$ —	$ —	$ 137,349	$ —
Additions	43,096	74,951	—	2,267
Payments [1]	—	—	(6,068)	—
Changes in fair value [2] [3] [4]	1,829	(3,450)	(46,034)	—
Effect of changes in foreign currency exchange rates	—	—	(127)	—
Total at June 30, 2020	44,925	71,501	85,120	2,267
Less current portion at June 30, 2020	—	—	13,884	—
Long-term portion at June 30, 2020	$ 44,925	$ 71,501	$ 71,236	$ 2,267

(1) During the six months ended June 30, 2020, we paid $5.0 million under the contingent consideration arrangement for the acquisition of CardiacAssist, Inc., doing business as TandemLife ("TandemLife"). Additionally, we made the final payments for the contingent consideration arrangements with the previous acquisitions of two distributors.

(2) The contingent consideration change in fair value during the six months ended June 30, 2020 is primarily due to a one-year delay in the projected achievement of a certain regulatory milestone and timing of sales-based earnout payments for ImThera Medical Inc. ("ImThera"), and the impact of an increase in discount rates utilized in the valuation of contingent consideration. Refer to the tables below for further information regarding the fair value measurements of contingent consideration.

(3) During the six months ended June 30, 2020, the contingent consideration change in fair value resulted in a decrease of $24.4 million and $21.6 million recorded to cost of sales - exclusive of amortization and research and development, respectively.

(4) Changes in the fair value of the embedded exchange feature derivative and capped call derivatives are recognized in foreign exchange and other losses in the condensed consolidated statements of income (loss).

Embedded Exchange Feature and Capped Call Derivatives

In June 2020, the Company issued $287.5 million in cash exchangeable senior notes and entered into related capped call transactions. The cash exchangeable senior notes include an embedded exchange option that is bifurcated from the cash exchangeable senior notes. Please refer to "Note 8. Financing Arrangements" for further details. The embedded exchange feature derivative is measured at fair value using a binomial lattice model and discounted cash flows that utilize observable and unobservable market data. The capped call derivative is measured at fair value using the Black-Scholes model utilizing observable and unobservable market data. These significant inputs include stock price, remaining contractual term, expected volatility, risk-free interest rate and expected dividend yield, as applicable.

The embedded exchange feature and capped call derivatives are classified as Level 3 as the Company uses stock price historical volatility and implied volatility from options traded to determine expected volatility which is an unobservable input that is significant to the valuation. In general, an increase in our stock price volatility would increase the fair value of the embedded exchange feature and capped call derivatives which would result in a net loss. An increase in our stock price would also increase the fair value of the derivatives and would result in a net loss. As time to expiration of the options decreases with passage of time, the fair value of the derivatives would decrease. The future impact on net income depends on how significant inputs such as stock price, stock price volatility and time to expiration of the options change in relation to other inputs.

The stock price volatility as of June 30, 2020 was 38%. As of June 30, 2020, a 10% lower volatility, holding other inputs constant, would result in approximate fair value for the embedded exchange feature derivative of $55.2 million and a 10% higher volatility, holding other inputs constant, would result in approximate fair value of $87.2 million. As of June 30, 2020, a 10% lower volatility, holding other inputs constant would result in approximate fair value for the capped call derivatives of $37.2 million and a 10% higher volatility, holding other inputs constant, would result in approximate fair value of $46.5 million.

Contingent Consideration Arrangements

The following table provides the fair value of our Level 3 contingent consideration arrangements by acquisition (in thousands):

	June 30, 2020	December 31, 2019
ImThera	$ 71,236	$ 113,503
TandemLife	9,136	17,311
Miami Instruments	4,748	5,338
Drilltex	—	294
Other	—	903
	$ 85,120	$ 137,349

The ImThera business combination involved contingent consideration arrangements composed of potential cash payments upon the achievement of a certain regulatory milestone and a sales-based earnout associated with sales of products. The sales-based earnout is valued using projected sales from our internal strategic plan. Both arrangements are Level 3 fair value measurements and include the following significant unobservable inputs as of June 30, 2020:

ImThera Acquisition	Valuation Technique	Unobservable Input	Ranges
Regulatory milestone-based payment	Discounted cash flow	Discount rate	10.0%
		Probability of payment	85%
		Projected payment year	2024
Sales-based earnout	Monte Carlo simulation	Risk-adjusted discount rate	12.3 % - 12.5%
		Credit risk discount rate	10.1 % - 10.8%
		Revenue volatility	32.5%
		Probability of payment	85%
		Projected years of earnout	2025 - 2028

The TandemLife business combination involved a contingent consideration arrangement composed of potential cash payments upon the achievement of certain regulatory milestones. The arrangement is a Level 3 fair value measurement and includes the following significant unobservable inputs as of June 30, 2020:

TandemLife Acquisition	Valuation Technique	Unobservable Input	Ranges
Regulatory milestone-based payments	Discounted cash flow	Discount rate	9.3%
		Probability of payments	70 % - 100%
		Projected payment years	2020 - 2021

The Miami Instruments business combination involved a contingent consideration arrangement composed of potential cash payments upon the achievement of certain regulatory milestones. The arrangement is a Level 3 fair value measurement and includes the following significant unobservable inputs as of June 30, 2020:

Miami Instruments	Valuation Technique	Unobservable Input	Ranges
Regulatory milestone-based payments	Discounted cash flow	Discount rate	9.3 % - 9.4%
		Probability of payments	80 % - 95%
		Projected payment years	2020 - 2021

Note 8. Financing Arrangements

The carrying amount of our long-term debt as of June 30, 2020 and December 31, 2019 was as follows (in thousands, except interest rates):

	June 30, 2020	December 31, 2019	Maturity	Interest Rate
2020 Senior Secured Term Loan	$ 421,941	$ —	June 2025	LIBOR (1% Floor) + 6.50%
2020 Cash Exchangeable Senior Notes	206,119	—	December 2025	3.00%
Bank of America Merrill Lynch Banco Múltiplo S.A.	6,182	8,422	July 2021	6.70%
Mediocredito Italiano	5,578	6,222	December 2023	0.50 % - 2.94%
Bank of America, U.S.	2,029	2,004	January 2021	3.48%
2019 Debt Facility	—	184,275		
2017 European Investment Bank	—	103,570		
2014 European Investment Bank	—	28,053		
Other	982	965		
Total long-term facilities	642,831	333,511		
Less current portion of long-term debt	3,642	73,181		
Total long-term debt	$ 639,189	$ 260,330		

Revolving Credit

The outstanding principal amount of our short-term unsecured revolving credit agreements and other agreements with various banks was $3.8 million and $4.2 million, at June 30, 2020 and December 31, 2019, respectively, with interest rates ranging from 3.21% to 7.70% and loan terms ranging from 1 day to 10 months, as of June 30, 2020.

2020 Senior Secured Term Loan

On June 10, 2020, we entered into a $450.0 million five-year senior secured term loan (the “Term Loan”) through our wholly owned subsidiary LivaNova USA Inc., with funds managed by affiliates of Ares Management Corporation, as administrative agent and collateral agent, resulting in cash proceeds of approximately $421.7 million, net of discounts and issuance costs. The obligations under the Term Loan are guaranteed on a senior secured basis by each of LivaNova’s existing and future wholly owned material subsidiaries, and are secured by a perfected first priority security interest in substantially all tangible and intangible assets of LivaNova and certain U.S. and UK subsidiaries of LivaNova, subject in each case to certain exceptions contained in the Term Loan. Borrowings under the Term Loan bear interest at a variable annual rate equal to the three-month LIBOR rate (subject to a 1% floor), plus an applicable margin of 6.5% per annum. The Term Loan will mature on June 30, 2025 and includes certain affirmative, negative and financial covenants. The financial covenants under the Term Loan state (i) the net revenue of LivaNova PLC, LivaNova USA, Inc. and any restricted subsidiaries on a consolidated basis shall not be lower than $700 million for each trailing 12 month period, such threshold to decrease pro rata (not below $550 million) upon prepayments of the Term Loan made by LivaNova USA, Inc. out of the proceeds of certain asset sales, and (ii) the total secured leverage ratio (as defined in the debt agreement) for LivaNova PLC, LivaNova USA, Inc. and any restricted subsidiaries on a consolidated basis shall not be greater than the applicable ratio set forth below:

Test Period	Total Secured Leverage Ratio
4 Quarters ending June 30, 2020 through each fiscal quarter thereafter until (and including) the fiscal quarter ending June 30, 2021	5.625 : 1.00
4 Quarters ending September 30, 2021 and ending each fiscal quarter thereafter	4.5 : 1.00

Debt discounts and issuance costs related to the Term Loan were approximately $28.2 million and included various legal, bank and accounting fees. Amortization of debt discount and issuance costs was $0.1 million for the three months ended June 30, 2020 and was included as part of interest expense on the condensed consolidated statement of income (loss).

2020 Cash Exchangeable Senior Notes

On June 17, 2020, our wholly-owned subsidiary, LivaNova USA, Inc., issued $287.5 million aggregate principal amount of 3.00% cash exchangeable senior notes (the “Notes”) by private placement to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended. The sale of the Notes resulted in approximately $278.2 million in net proceeds to the Company after deducting issuance costs. The Notes bear interest at a rate of 3.00% per year and interest will be

payable semiannually in arrears on June 15 and December 15 of each year, beginning on December 15, 2020. The Notes mature on December 15, 2025 unless earlier exchanged, repurchased, or redeemed.

Debt discounts and issuance costs related to the Notes were approximately $81.8 million and included $75.0 million of discount attributable to the embedded exchange feature, discussed below, and $6.8 million of allocated issuance costs to the Notes related to legal, bank and accounting fees. Amortization of debt discount and issuance costs was $0.4 million for the three months ended June 30, 2020 and was included as part interest expense on the condensed consolidated statement of income (loss).

The Notes are exchangeable at the option of the holders only under certain circumstances and solely into cash in an amount based on the trading prices of LivaNova's ordinary shares during a related observation period. The Notes are not exchangeable into ordinary shares of LivaNova or any other security under any circumstances. The initial exchange rate for the Notes is 16.3980 ordinary shares per $1,000 principal amount of Notes (equivalent to an initial exchange price of approximately $60.98 per share. The exchange rate is subject to adjustment in certain circumstances, as set forth in the indenture governing the Notes.

The Company may redeem the Notes at its option, on or after June 20, 2023, in whole or in part, if the last reported sale price per ordinary share has been at least 130% of the exchange price then in effect for at least 20 trading days (whether or not consecutive), including the trading day immediately preceding the date on which the Company provides notice of redemption, during any 30 consecutive trading day period ending on, and including, the trading day immediately preceding the date on which the Company provides notice of redemption, at a redemption price equal to 100% of the principal amount of the Notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date. Additionally, the Company may redeem the Notes at its option, prior to December 15, 2025, in whole but not in part, in connection with certain tax-related events.

Embedded Exchange Feature

The embedded exchange feature of the Notes requires bifurcation from the Notes and is accounted for as a derivative liability. The fair value of the Notes' embedded exchange feature derivative at the time of issuance was $75.0 million and was recorded as debt discount on the Notes. This discount is amortized as interest expense using the effective interest method over the term of the Notes. The Notes' embedded exchange feature derivative is carried on the condensed consolidated balance sheets at its estimated fair value and is adjusted at the end of each reporting period, with unrealized gain or loss reflected in the consolidated statements of income (loss). The fair value of the embedded exchange feature derivative liability was $71.5 million as of June 30, 2020. See "Note 7. Fair Value Measurements."

Capped Call Transactions

In connection with the pricing of the Notes, the Company entered into privately negotiated capped call transactions with certain of the initial purchasers of the Notes or their respective affiliates. The capped call transactions cover, subject to anti-dilution adjustments substantially similar to those applicable to the Notes, the number of LivaNova's ordinary shares underlying the Notes and are expected generally to offset any cash payments the Company is required to make upon exchange of the Notes in excess of the principal amount thereof in the event that the market value per ordinary share, as measured under the capped call transactions, is greater than the strike price of the capped call transactions, with such offset being subject to an initial cap price of $100.00 per share. The aggregate cost of the capped calls derivative assets was $43.1 million. The capped call transactions expire on December 15, 2025 and must be settled in cash. The capped calls are carried on the condensed consolidated balance sheets as a derivative asset at their estimated fair value and are adjusted at the end of each reporting period, with unrealized gain or loss reflected in the condensed consolidated statement of income (loss). The fair value of capped call derivative assets was $44.9 million as of June 30, 2020.

The current and non-current classification is evaluated at each balance sheet date and may change depending on whether any exchange conditions are met. As of June 30, 2020, no exchange conditions have been met and the Notes, embedded exchange feature derivative liability, and the capped call derivative assets are classified as non-current. Please refer to "Note 7. Fair Value Measurements" for details on the valuation of the embedded exchange feature derivative liability and capped call derivative assets.

Extinguishment of Debt

The Company used the net proceeds from the Term Loan, together with a portion of the net proceeds of the Notes, after fees, discounts, commissions and other expenses, to repay outstanding indebtedness under the Company's 2017 European Investment Bank loan, 2014 European Investment Bank loan, Banca Nazionale del Lavoro S.p.A loan, and 2019 Debt Facility and related expenses. The Company repaid approximately $528.0 million in aggregate outstanding principal, accrued interest and associated fees, including breakage fees and legal fees. The Company recognized a loss on debt extinguishment of $1.4 million

during the three and six months ended June 30, 2020. The loss on debt extinguishment was recognized in foreign exchange and other losses in the condensed consolidated statements of income (loss).

The remainder of the proceeds from the concurrent financing transactions were used to pay the cost of capped call transactions and for general corporate purposes.

Note 9. Derivatives and Risk Management

Due to the global nature of our operations, we are exposed to foreign currency exchange rate fluctuations. In addition, due to certain loans with floating interest rates, we are also subject to the impact of changes in interest rates on our interest payments. We enter into FX derivative contracts to reduce the impact of foreign currency exchange rate fluctuations on earnings and cash flow. We are also exposed to equity price risk in connection with our Notes, including exchange and settlement provisions based on the price of our ordinary shares at exchange or maturity of the Notes. In addition, the capped call transactions associated with the Notes also include settlement provisions that are based on the price of our ordinary shares, subject to a capped price per share.

We measure all outstanding derivatives each period end at fair value and report the fair value as either financial assets or liabilities on the condensed consolidated balance sheets. We do not enter into derivative contracts for speculative purposes. At inception of the contract, the derivative is designated as either a freestanding derivative or a hedge. Derivatives that are not designated as hedging instruments are referred to as freestanding derivatives with changes in fair value included in earnings.

If the derivative qualifies for hedge accounting, changes in the fair value of the derivative will be recorded in accumulated other comprehensive income (“AOCI”) until the hedged item is recognized in earnings upon settlement/termination. FX derivative gains and losses in AOCI are reclassified to our condensed consolidated statements of income (loss) as shown in the tables below and interest rate swap gains and losses in AOCI are reclassified to interest expense on our condensed consolidated statements of income (loss). We evaluate hedge effectiveness at inception. Cash flows from derivative contracts are reported as operating activities on our condensed consolidated statements of cash flows.

Freestanding FX Derivative Contracts

The gross notional amount of FX derivative contracts not designated as hedging instruments outstanding at June 30, 2020 and December 31, 2019 was $372.1 million and $338.0 million, respectively. These derivative contracts are designed to offset the FX effects in earnings of various intercompany loans and trade receivables. We recorded net (losses) gains for these freestanding derivatives of $(1.2) million and $1.0 million for the three months ended June 30, 2020 and 2019, respectively, and $6.9 million and $4.7 million for the six months ended June 30, 2020 and 2019, respectively. These (losses) and gains are included in foreign exchange and other losses on our condensed consolidated statement of income (loss).

Counterparty Credit Risk

We are exposed to credit risk in the event of non-performance by the counterparties to our derivatives at maturity.

The two counterparties to the capped call transactions are financial institutions. To limit our credit risk, we selected financial institutions with a minimum long-term investment grade credit rating. Our exposure to the credit risk of the counterparties is not secured by any collateral. If a counterparty becomes subject to insolvency proceedings, we will become an unsecured creditor in those proceedings, with a claim equal to our exposure at that time under the capped call transactions with that counterparty.

To manage credit risk with respect to our other derivatives, the Company selects and periodically reviews counterparties based on credit ratings, limits its exposure with respect to each counterparty, and monitors the market positions. However, if one or more of these counterparties were in a liability position to the Company and were unable to meet their obligations, any transactions with the counterparty could be subject to early termination, which could result in substantial losses for the Company.

Cash Flow Hedges

The gross notional amounts of open derivative contracts designated as cash flow hedges at June 30, 2020 and December 31, 2019 were as follows (in thousands):

Description of Derivative Contract	June 30, 2020	December 31, 2019
FX derivative contracts to be exchanged for British Pounds	$ 8,369	$ 10,128
FX derivative contracts to be exchanged for Japanese Yen	17,177	25,342
FX derivative contracts to be exchanged for Euros	40,315	48,838
Interest rate swap contracts [1]	—	22,442
	$ 65,861	$ 106,750

(1) Interest rate swap contracts were de-designated upon the repayment of the 2014 European Investment Bank loan. Refer to “Note 8. Financing Arrangements.”

After-tax net loss associated with derivatives designated as cash flow hedges recorded in the ending balance of AOCI and the amount expected to be reclassified to earnings in the next twelve months are as follows (in thousands):

Description of Derivative Contract	After-Tax Net Gain in AOCI as of June 30, 2020	After-Tax Net Gain in AOCI as of Amount Expected to be Reclassified to Earnings in Next 12 Months
FX derivative contracts	$ 265	$ 265

Pre-tax gains (losses) for derivative contracts designated as cash flow hedges recognized in other comprehensive income (loss) (“OCI”) and the amount reclassified to earnings from AOCI were as follows (in thousands):

		Three Months Ended June 30,			
		2020		2019	
Description of Derivative Contract	Location in Earnings of Reclassified Gain or Loss	Gains Recognized in OCI	Gains (Losses) Reclassified from AOCI to Earnings	Gains Recognized in OCI	Gains (Losses) Reclassified from AOCI to Earnings
FX derivative contracts	Foreign exchange and other losses	$ 1,230	$ 520	$ 313	$ 489
FX derivative contracts	SG&A	—	(234)	—	(418)
Interest rate swap contracts	Interest expense	—	(85)	—	27
		$ 1,230	$ 201	$ 313	$ 98

		Six Months Ended June 30,			
		2020		2019	
Description of Derivative Contract	Location in Earnings of Reclassified Gain or Loss	Losses Recognized in OCI	Losses Reclassified from AOCI to Earnings	Gains Recognized in OCI	Gains (Losses) Reclassified from AOCI to Earnings
FX derivative contracts	Foreign exchange and other losses	$ (850)	$ (85)	$ 1,622	$ 2,131
FX derivative contracts	SG&A	—	(325)	—	(728)
Interest rate swap contracts	Interest expense	—	(113)	—	14
		$ (850)	$ (523)	$ 1,622	$ 1,417

We offset fair value amounts associated with our derivative instruments on our condensed consolidated balance sheets that are executed with the same counterparty under master netting arrangements. Our netting arrangements include a right to set off or net together purchases and sales of similar products in the settlement process.

The following tables present the fair value and the location of derivative contracts reported on the condensed consolidated balance sheets (in thousands):

June 30, 2020	Asset Derivatives		Liability Derivatives	
Derivatives Designated as Hedging Instruments	**Balance Sheet Location**	**Fair Value [1]**	**Balance Sheet Location**	**Fair Value [1]**
FX derivative contracts	Prepaid expenses and other current assets	$ 383	Accrued liabilities	$ 78
Total derivatives designated as hedging instruments		383		78
Derivatives Not Designated as Hedging Instruments				
Interest rate swap contracts			Accrued liabilities	194
FX derivative contracts	Prepaid expenses and other current assets	20	Accrued liabilities	1,601
Capped call derivatives	Other assets	44,925		
Embedded exchange feature			Long-term derivative liability	71,501
Total derivatives not designated as hedging instruments		44,945		73,296
Total derivatives		$ 45,328		$ 73,374

December 31, 2019	Asset Derivatives		Liability Derivatives	
Derivatives Designated as Hedging Instruments	**Balance Sheet Location**	**Fair Value [1]**	**Balance Sheet Location**	**Fair Value [1]**
Interest rate swap contracts			Accrued liabilities	$ 313
Interest rate swap contracts			Long-term derivative liability	61
FX derivative contracts	Prepaid expenses and other current assets	$ 148	Accrued liabilities	169
FX derivative contracts	Accrued liabilities	387		
Total derivatives designated as hedging instruments		535		543
Derivatives Not Designated as Hedging Instruments				
FX derivative contracts	Accrued liabilities	26	Accrued liabilities	3,104
FX derivative contracts			Prepaid expenses and other current assets	33
Total derivatives not designated as hedging instruments		26		3,137
Total derivatives		$ 561		$ 3,680

(1) For the classification of inputs used to evaluate the fair value of our derivatives, refer to “Note 7. Fair Value Measurements.”

Note 10. Commitments and Contingencies

FDA Warning Letter

On December 29, 2015, the FDA issued a Warning Letter alleging certain violations of FDA regulations applicable to medical device manufacturers at our Munich, Germany and Arvada, Colorado facilities.

The FDA inspected the Munich facility from August 24, 2015 to August 27, 2015 and the Arvada facility from August 24, 2015 to September 1, 2015. On August 27, 2015, the FDA issued a Form 483 identifying two observed non-conformities with certain regulatory requirements at the Munich facility. We did not receive a Form 483 in connection with the FDA’s inspection

of the Arvada facility. Following the receipt of the Form 483, we provided written responses to the FDA describing corrective and preventive actions that were underway or to be taken to address the FDA's observations at the Munich facility. The Warning Letter responded in part to our responses and identified other alleged violations related to the manufacture of our 3T Heater-Cooler device that were not previously included in the Form 483.

The Warning Letter further stated that our 3T devices and other devices we manufactured at our Munich facility were subject to refusal of admission into the U.S. until resolution of the issues set forth by the FDA in the Warning Letter. The FDA had informed us that the import alert was limited to the 3T devices, but that the agency reserved the right to expand the scope of the import alert if future circumstances warranted such action. The Warning Letter did not request that existing users cease using the 3T device, and manufacturing and shipment of all of our products other than the 3T device were unaffected by the import limitation. To help clarify these issues for current customers, we issued an informational Customer Letter in January 2016 and that same month agreed with the FDA on a process for shipping 3T devices to existing U.S. users pursuant to a certificate of medical necessity program.

Finally, the Warning Letter stated that premarket approval applications for Class III devices to which certain Quality System regulation deviations identified in the Warning Letter were reasonably related would not be approved until the violations had been corrected; however, this restriction applied only to the Munich and Arvada facilities, which do not manufacture or design devices subject to Class III premarket approval.

On February 25, 2020, LivaNova received clearance for K191402, a 510(k) for the 3T devices that addressed issues contained in the 2015 Warning Letter along with design changes that further mitigate the potential risk of aerosolization. Concurrent with this clearance, (1) 3T devices manufactured in accordance with K191402 will not be subjected to the import alert and (2) LivaNova initiated a correction to distribute the updated Operating Instructions cleared under K191402.

We continue to work diligently to remediate the FDA's inspectional observations for the Munich facility, as well as the additional issues identified in the Warning Letter. We take these matters seriously and intend to respond timely and fully to the FDA's requests.

CDC and FDA Safety Communications and Company Field Safety Notice

On October 13, 2016, the CDC and the FDA separately released safety notifications regarding the 3T devices. The CDC's Morbidity and Mortality Weekly Report ("MMWR") and Health Advisory Notice ("HAN") reported that tests conducted by CDC and its affiliates indicate that there appears to be genetic similarity between both patient and 3T device strains of the non-tuberculous mycobacterium ("NTM") bacteria M. chimaera isolated in hospitals in Iowa and Pennsylvania. Citing the geographic separation between the two hospitals referenced in the investigation, the report asserts that 3T devices manufactured prior to August 18, 2014 could have been contaminated during the manufacturing process. The CDC's HAN and FDA's Safety Communication, issued contemporaneously with the MMWR report, each assess certain risks associated with 3T devices and provide guidance for providers and patients. The CDC notification states that the decision to use the 3T device during a surgical operation is to be taken by the surgeon based on a risk approach and on patient need. Both the CDC's and FDA's communications confirm that 3T devices are critical medical devices and enable doctors to perform life-saving cardiac surgery procedures.

Also on October 13, 2016, concurrent with the CDC's HAN and FDA's Safety Communication, we issued a Field Safety Notice Update for U.S. users of 3T devices to proactively and voluntarily contact facilities to aid in implementation of the CDC and FDA recommendations. In the fourth quarter of 2016, we initiated a program to provide existing 3T device users with a new loaner 3T device at no charge pending regulatory approval and implementation of additional risk mitigation strategies worldwide, including a vacuum canister and internal sealing upgrade program and a deep disinfection service. This loaner program is available on a global basis. We anticipate that this program will continue until we are able to address customer needs through a broader solution that includes implementation of the risk mitigation strategies described above. We are currently implementing the vacuum and sealing upgrade program in as many countries as possible until all devices are upgraded. On October 11, 2018, after review of information provided by us, the FDA concluded that we could commence the vacuum and sealing upgrade program in the U.S., and on February 25, 2020, LivaNova received clearance for K191402, a 510(k) for the 3T devices that addressed issues contained in the 2015 Warning Letter along with design changes that further mitigate the potential risk of aerosolization. Furthermore, we continue to offer a no-charge deep disinfection service (deep cleaning service) for 3T device users as we receive the required regulatory approvals. The deep disinfection service was rolled out in Europe in the second half of 2015, and on April 12, 2018, the FDA agreed to allow us to move forward with the deep cleaning service in the U.S. thereby adding to the growing list of countries around the world in which we offer this service.

On December 31, 2016, we recognized a liability for our product remediation plan related to our 3T device. We concluded that it was probable that a liability had been incurred upon management's approval of the plan and the commitments made by

management to various regulatory authorities globally in November and December 2016, and furthermore, the cost associated with the plan was reasonably estimable. At June 30, 2020, the product remediation liability was $1.5 million. Refer to “Note 5. Product Remediation Liability” for additional information.

Litigation

Product Liability

The Company is currently involved in litigation involving our 3T device. The litigation includes a class action complaint in the U.S. District Court for the Middle District of Pennsylvania, federal multi-district litigation in the U.S. District Court for the Middle District of Pennsylvania, various U.S. state court cases and cases in jurisdictions outside the U.S. The class action, filed in February 2016, consists of all Pennsylvania residents who underwent open heart surgery at WellSpan York Hospital and Penn State Milton S. Hershey Medical Center between 2011 and 2015 and who currently are asymptomatic for NTM infection. Members of the class seek declaratory relief that the 3T devices are defective and unsafe for intended uses, medical monitoring, damages, and attorneys’ fees.

On March 29, 2019, we announced a settlement framework that provides for a comprehensive resolution of the personal injury cases pending in the multi-district litigation in U.S. federal court, the related class action pending in federal court, as well as certain cases in state courts across the United States. The agreement, which makes no admission of liability, is subject to certain conditions, including acceptance of the settlement by individual claimants and provides for a total payment of up to $225 million to resolve the claims covered by the settlement. Per the agreed-upon terms, the first payment of $135 million was paid into a qualified settlement fund in July 2019 and the second payment of $90 million was paid in January 2020. Cases covered by the settlement are being dismissed as amounts are disbursed to individual plaintiffs from the qualified settlement fund.

Cases in state courts in the U.S. and in jurisdictions outside the U.S. continue to progress. As of July 29, 2020, including the cases encompassed in the settlement framework described above that have not yet been dismissed, we are aware of approximately 85 filed and unfiled claims worldwide, with the majority of the claims in various federal or state courts throughout the United States. This includes cases that have settled but have not yet been dismissed. The complaints generally seek damages and other relief based on theories of strict liability, negligence, breach of express and implied warranties, failure to warn, design and manufacturing defect, fraudulent and negligent misrepresentation or concealment, unjust enrichment, and violations of various state consumer protection statutes.

At June 30, 2020, the provision for these matters was $49.0 million. While the amount accrued represents our best estimate, the actual liability for resolution of these matters may vary from our estimate.

The changes in the litigation provision liability during the six months ended June 30, 2020 are as follows (in thousands):

	Litigation Provision Liability
Total litigation provision liability at December 31, 2019	$ 170,404
Payments	(122,170)
Adjustments	976
FX and other	(179)
Total litigation provision liability at June 30, 2020	49,031
Less current portion of litigation liability at June 30, 2020	37,420
Long-term portion of litigation provision liability at June 30, 2020	$ 11,611

Environmental Liability

Our subsidiary, Sorin S.p.A. (“Sorin”) was created as a result of a spin-off (the “Sorin spin-off”) from SNIA S.p.A. (“SNIA”) in January 2004. SNIA subsequently became insolvent and the Italian Ministry of the Environment and the Protection of Land and Sea (the “Italian Ministry of the Environment”), sought compensation from SNIA for remediation costs relating to the environmental damage at chemical sites previously operated by SNIA’s other subsidiaries.

In September 2011 and July 2014, the Bankruptcy Court of Udine and the Bankruptcy Court of Milan, respectively, held (in proceedings to which we are not parties) that the Italian Ministry of the Environment and other Italian government agencies (the “Public Administrations”) were not creditors of either SNIA or its subsidiaries in connection with their claims in the Italian insolvency proceedings. The Public Administrations appealed and in January 2016, the Court of Udine rejected the appeal. The

Public Administrations has appealed that decision to the Supreme Court. Meanwhile, the Bankruptcy Court of Milan's decision has been appealed.

In January 2012, SNIA filed a civil action against Sorin in the Civil Court of Milan asserting joint liability of a parent and a spun-off company. The Public Administrations intervened in the proceeding, with a claim for environmental damages of approximately $4 billion. On April 1, 2016, the Court of Milan dismissed all legal actions of SNIA and of the Public Administrations further requiring the Public Administrations to pay Sorin approximately €292,000 (approximately $327,318 as of June 30, 2020) for legal fees. The Public Administrations appealed the 2016 Decision to the Court of Appeal of Milan, and on March 5, 2019, the Court of Appeal issued a partial decision on the merits declaring Sorin/LivaNova jointly liable with SNIA for SNIA's environmental liabilities in an amount up to the fair value of the net worth received by Sorin because of the Sorin spin-off, an estimated €572.1 million (approximately $641.3 million as of June 30, 2020). Additionally the Court issued a separate order, staying the proceeding until a panel of three experts can assess the environmental damages, the costs of clean-up, and the costs that the Public Administrations has already borne for the clean-up of the sites to allow the Court to decide on the second claim of the Public Administration against LivaNova, (i.e., to refund the Public Administrations for the SNIA environmental liabilities). Both LivaNova and the Public Administrations have appealed the decision to the Italian Supreme Court (Corte di Cassazione).

We have not recognized an expense in connection with this matter because any potential loss is not currently probable or reasonably estimable. In addition, we cannot reasonably estimate a range of potential loss, if any, that may result from this matter.

Patent Litigation

On May 11, 2018, Neuro and Cardiac Technologies LLC ("NCT"), a non-practicing entity, filed a complaint in the United States District Court for the Southern District of Texas asserting that the VNS Therapy System, when used with the SenTiva Model 1000 generator, infringes the claims of U.S. Patent No. 7,076,307 owned by NCT. The complaint requests damages that include a royalty, costs, interest, and attorneys' fees. On September 13, 2018, we petitioned the Patent Trial and Appeal Board of the U.S. Patent and Trademark Office (the "Patent Office") for an *inter partes* review ("IPR") of the validity of the '307 patent, and on May 18, 2020, the Patent Office issued a Final Written Decision determining that all challenged claims are unpatentable. NCT is appealing the Final Written Decision. On March 24, 2020, we were granted our request for an *ex parte* reexamination of the '307 patent, which is currently pending. The Court has stayed the litigation pending the outcome of the IPR appeal proceeding. We have not recognized an expense in connection with this matter because any potential loss is not currently probable or reasonably estimable. In addition, we cannot reasonably estimate a range of potential loss, if any, that may result from this matter.

Contract Litigation

On November 25, 2019, LivaNova received notice of a lawsuit initiated by former members of Caisson Interventional, LLC ("Caisson"), a subsidiary of the Company acquired in 2017. The lawsuit, Todd J. Mortier, as Member Representative of the former Members of Caisson Interventional, LLC v. LivaNova USA, Inc., is currently pending in the United States District Court for the District of Minnesota. The complaint alleges (i) breach of contract, (ii) breach of the covenant of good faith and fair dealing and (iii) unjust enrichment in connection with the Company's operation of Caisson's Transcatheter Mitral Valve Replacement ("TMVR") program and the Company's November 20, 2019 announcement that it was ending the TMVR program at the end of 2019. The lawsuit seeks damages arising out of the 2017 acquisition agreement, including various regulatory milestone payments. We intend to vigorously defend this claim. The Company has not recognized an expense related to this matter because any potential loss is not currently probable or reasonably estimable. In addition, we cannot reasonably estimate a range of potential loss, if any, that may result from this matter.

Tax Litigation

In a tax audit report received on October 30, 2009, the Regional Internal Revenue Office of Lombardy (the "Internal Revenue Office") informed Sorin Group Italia S.r.l. that, among several issues, it was disallowing in part (for a total of €102.6 million (approximately $115.0 million as of June 30, 2020), related to tax years 2002 through 2006) a tax-deductible write down of the investment in the U.S. company, Cobe Cardiovascular Inc., which Sorin Group Italia S.r.l. recognized in 2002 and deducted in five equal installments, beginning in 2002. In December 2009, the Internal Revenue Office issued notices of assessment for 2004. In December 2010 and October 2011, the Internal Revenue Office issued notices of assessment for 2005 and 2006, respectively. We challenged all three notices of assessment (for 2004, 2005 and 2006) before the relevant Provincial Tax Courts.

The preliminary challenges filed for 2004, 2005 and 2006 were denied at the first jurisdictional level. We appealed these decisions. The appeal submitted against the first-level decision for 2004 was successful. The Internal Revenue Office appealed

this second-level decision to the Italian Supreme Court (Corte di Cassazione) on February 3, 2017. The Italian Supreme Court's decision is pending.

The appeals submitted against the first-level decisions for 2005 and 2006 were rejected. We appealed these adverse decisions to the Italian Supreme Court. On November 16, 2018, the Supreme Court returned the decisions for years 2005 and 2006 to the previous-level Court (Regional Tax Court) due to lack of substance of the motivation given in the 2nd level judgments that were appealed.

In November 2012, the Internal Revenue Office served a notice of assessment for 2007, and in July 2013, served a notice of assessment for 2008. In these matters the Internal Revenue Office claims an increase in taxable income due to a reduction (similar to the previous notices of assessment for 2004, 2005 and 2006) of the losses reported by Sorin Group Italia S.r.l. for the 2002, 2003 and 2004 tax periods, and subsequently utilized in 2007 and 2008. We challenged both notices of assessment. The Provincial Tax Court of Milan has stayed its decision for years 2007 and 2008 pending resolution of the litigation regarding years 2004, 2005, and 2006.

The total amount of losses in dispute is €62.6 million (approximately $70.2 million as of June 30, 2020). We have continuously reassessed our potential exposure in these matters, taking into account the recent, and generally adverse, trend to Italian taxpayers in this type of litigation. Although we believe that our defensive arguments are strong, noting the adverse trend in some of the court decisions, we have recognized a reserve for an uncertain tax position for the full amount of the potential liability. On May 31, 2019, we filed an application to settle the litigation according to law N. 136/2018 and paid the required settlement balance of €1.9 million (approximately $2.1 million as of June 30, 2020). As per law N. 136/2018, the Italian Revenue Agency will review the settlement and decide to approve or reject the application by July 31, 2020. Until the settlement is approved by the Italian Revenue Agency, we will continue to reserve for the full amount of the potential liability, by recognizing a €15.5 million reserve for uncertain tax position (approximately $17.4 million as of June 30, 2020), net of the settlement payment.

Other Matters

Additionally, we are the subject of various pending or threatened legal actions and proceedings that arise in the ordinary course of our business. These matters are subject to many uncertainties and outcomes that are not predictable and that may not be known for extended periods of time. Since the outcome of these matters cannot be predicted with certainty, the costs associated with them could have a material adverse effect on our consolidated net income, financial position or liquidity.

Note 11. Stockholders' Equity

The tables below present the condensed consolidated statement of stockholders' equity as of and for the three and six months ended June 30, 2020 and 2019 (in thousands):

	Ordinary Shares	Ordinary Shares - Amount	Additional Paid-In Capital	Treasury Stock	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
March 31, 2020	49,414	$ 76,259	$ 1,739,873	$ (1,090)	$ (52,523)	$ (369,811)	$ 1,392,708
Stock-based compensation plans	62	79	10,925	33	—	—	11,037
Net loss	—	—	—	—	—	(87,993)	(87,993)
Other comprehensive income	—	—	—	—	17,434	—	17,434
June 30, 2020	49,476	$ 76,338	$ 1,750,798	$ (1,057)	$ (35,089)	$ (457,804)	$ 1,333,186
March 31, 2019	49,329	$ 76,151	$ 1,707,117	$ (1,321)	$ (28,713)	$ (266,428)	$ 1,486,806
Stock-based compensation plans	51	66	10,103	29	—	—	10,198
Net loss	—	—	—	—	—	(29,215)	(29,215)
Other comprehensive income	—	—	—	—	15,539	—	15,539
June 30, 2019	49,380	$ 76,217	$ 1,717,220	$ (1,292)	$ (13,174)	$ (295,643)	$ 1,483,328

	Ordinary Shares	Ordinary Shares - Amount	Additional Paid-In Capital	Treasury Stock	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
December 31, 2019	49,411	$ 76,257	$ 1,734,870	$ (1,263)	$ (19,392)	$ (406,755)	$ 1,383,717
Adoption of ASU No. 2016-13 [1]	—	—	—	—	—	(639)	(639)
Stock-based compensation plans	65	81	15,928	206	—	—	16,215
Net loss	—	—	—	—	—	(50,410)	(50,410)
Other comprehensive loss	—	—	—	—	(15,697)	—	(15,697)
June 30, 2020	49,476	$ 76,338	$ 1,750,798	$ (1,057)	$ (35,089)	$ (457,804)	$ 1,333,186
December 31, 2018	49,323	$ 76,144	$ 1,705,111	$ (1,462)	$ (24,476)	$ (251,579)	$ 1,503,738
Stock-based compensation plans	57	73	12,109	170	—	—	12,352
Net loss	—	—	—	—	—	(44,064)	(44,064)
Other comprehensive income	—	—	—	—	11,302	—	11,302
June 30, 2019	49,380	$ 76,217	$ 1,717,220	$ (1,292)	$ (13,174)	$ (295,643)	$ 1,483,328

(1) Refer to “Note 17. New Accounting Pronouncements”

The table below presents the change in each component of AOCI, net of tax, and the reclassifications out of AOCI into net income for the six months ended June 30, 2020 and 2019 (in thousands):

	Change in Unrealized Gain (Loss) on Derivatives	Foreign Currency Translation Adjustments Gain (Loss) [1]	Total
December 31, 2019	$ 513	$ (19,905)	$ (19,392)
Other comprehensive loss before reclassifications, before tax	(850)	(15,449)	(16,299)
Tax benefit	204	—	204
Other comprehensive loss before reclassifications, net of tax	(646)	(15,449)	(16,095)
Reclassification of loss from accumulated other comprehensive loss, before tax	523	—	523
Reclassification of tax benefit	(125)	—	(125)
Reclassification of loss from accumulated other comprehensive loss, after tax	398	—	398
Net current-period other comprehensive loss, net of tax	(248)	(15,449)	(15,697)
June 30, 2020	$ 265	$ (35,354)	$ (35,089)
December 31, 2018	$ (944)	$ (23,532)	$ (24,476)
Other comprehensive income before reclassifications, before tax	1,622	11,147	12,769
Tax expense	(390)	—	(390)
Other comprehensive income before reclassifications, net of tax	1,232	11,147	12,379
Reclassification of gain from accumulated other comprehensive loss, before tax	(1,417)	—	(1,417)
Reclassification of tax expense	340	—	340
Reclassification of gain from accumulated other comprehensive loss, after tax	(1,077)	—	(1,077)
Net current-period other comprehensive income, net of tax	155	11,147	11,302
June 30, 2019	$ (789)	$ (12,385)	$ (13,174)

(1) Taxes are not provided for foreign currency translation adjustments as translation adjustments are related to earnings that are intended to be reinvested in the countries where earned.

Note 12. Stock-Based Incentive Plans

Stock-based incentive plans compensation expense is as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Service-based restricted stock units ("RSUs")	$ 4,250	$ 3,875	$ 8,728	$ 6,845
Service-based stock appreciation rights ("SARs")	3,290	2,900	5,974	4,908
Market performance-based restricted stock units	1,035	838	1,931	1,389
Operating performance-based restricted stock units	1,149	798	1,844	1,769
Employee share purchase plan	267	313	557	685
Total stock-based compensation expense	$ 9,991	$ 8,724	$ 19,034	$ 15,596

During the six months ended June 30, 2020, we issued stock-based compensatory awards with terms approved by the Compensation Committee of our Board of Directors. The awards with service conditions generally vest ratably over four years, subject to forfeiture unless service conditions are met. Market performance-based awards cliff vest after three years subject to the rank of our total shareholder return for the three-year period ending December 31, 2022 relative to the total shareholder returns for a peer group of companies. Operating performance-based awards cliff vest after three years subject to the achievement of certain thresholds of cumulative adjusted free cash flow for the three year period ending December 31, 2022. Compensation expense related to awards granted during 2020 for the three and six months ended June 30, 2020 was $2.8 million and $3.2 million, respectively.

Stock-based compensation agreements issued during the six months ended June 30, 2020, representing potential shares and their weighted average grant date fair values by type follows (shares in thousands, fair value in dollars):

	Six Months Ended June 30, 2020	
	Shares	Weighted Average Grant Date Fair Value
Service-based SARs	1,133	$ 15.73
Service-based RSUs	576	$ 44.36
Market performance-based RSUs	93	$ 39.83
Operating performance-based RSUs	93	$ 43.57

Note 13. Income Taxes

Our effective income tax rate from continuing operations for the three and six months ended June 30, 2020 was (306.0)% and (78.0)% compared with 17.3% and 22.4% for the three and six months ended June 30, 2019, respectively. Our effective income tax rate fluctuates based on, among other factors, changes in pretax income in countries with varying statutory tax rates, changes in valuation allowances, changes in tax credits and incentives, and changes in unrecognized tax benefits associated with uncertain tax positions.

Compared with the three months ended June 30, 2019, the change in the effective tax rate for the three months ended June 30, 2020 was primarily attributable to a $70.0 million valuation allowance for the U.K. net operating losses and attributes, as compared to the establishment of a valuation allowance for a portion of the U.S. federal and state net operating losses during the three months ended June 30, 2019. These valuation allowances are a result of cumulative losses and the current forecast, including the extended impact of COVID-19, that it is more likely than not that we will be unable to realize the related historical deferred tax assets.

Compared with the six months ended June 30, 2019, the change in the effective tax rate for the six months ended June 30, 2020 was primarily attributable to a $42.9 million realized discrete tax benefit related to the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") offset by the establishment of a $70.0 million valuation allowance for the U.K. net operating losses and attributes, as compared to a release of uncertain tax positions and other discrete tax items offset by the establishment of a valuation allowance for a portion of the U.S. federal and state net operating losses during the six months ended June 30, 2019.

We operate in multiple jurisdictions throughout the world, and our tax returns are periodically audited or subjected to review by tax authorities. As a result, there is an uncertainty in income taxes recognized in our financial statements. Tax benefits totaling $12.9 million were unrecognized as of June 30, 2020 and December 31, 2019. It is reasonably possible that, within the next twelve months, due to the settlement of uncertain tax positions with various tax authorities and the expiration of statutes of limitations, unrecognized tax benefits could decrease by up to approximately $12.0 million.

We monitor income tax developments in countries where we conduct business. On March 27, 2020, the U.S. enacted the CARES Act which provided for a 5-year loss carryback for losses incurred in 2018-2020. We recorded a discrete tax benefit of $42.9 million to account for the effect of the CARES Act during the six months ended June 30, 2020. Further regulations and notices as well as state legislative changes addressing conformity to the CARES Act are still pending.

Note 14. Earnings Per Share

Reconciliation of the shares used in the basic and diluted earnings per share computations for the three and six months ended June 30, 2020 and 2019 are as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Basic and diluted weighted average shares outstanding [(1)]	48,611	48,342	48,548	48,295

(1) Excluded from the computation of diluted earnings per share were stock options, SARs and restricted share units totaling 4.2 million and 3.1 million for the three months ended June 30, 2020 and 2019, respectively, and 4.2 million and 3.2 million for the six months ended June 30, 2020 and 2019, respectively, because to include them would have been anti-dilutive under the treasury stock method.

Note 15. Geographic and Segment Information

We identify operating segments based on the way we manage, evaluate and internally report our business activities for purposes of allocating resources, developing and executing our strategy, and assessing performance. We have two reportable segments: Cardiovascular and Neuromodulation.

The Cardiovascular segment generates its revenue from the development, production and sale of cardiopulmonary products, heart valves and related products and advanced circulatory support. Cardiopulmonary products include oxygenators, heart-lung machines, autotransfusion systems, perfusion tubing systems, cannulae and other related accessories. Heart valves include mechanical heart valves, tissue heart valves, related repair products and minimally invasive surgical instruments. Advanced circulatory support includes temporary life support controllers and product kits that can include a combination of pumps, oxygenators, and cannulae.

Our Neuromodulation segment generates its revenue from the design, development and marketing of neuromodulation therapy systems for the treatment of drug-resistant epilepsy, difficult-to-treat depression (“DTD”) and obstructive sleep apnea. Neuromodulation products include the VNS Therapy System, which consists of an implantable pulse generator, a lead that connects the generator to the vagus nerve, and other accessories.

“Other” includes corporate shared service expenses for finance, legal, human resources, information technology and corporate business development.

Net sales of our reportable segments include revenues from the sale of products they each develop and manufacture or distribute. We define segment income as operating income before merger and integration, restructuring and amortization of intangibles.

We operate under three geographic regions: U.S., Europe, and Rest of World. The table below presents net sales by operating segment and geographic region (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Cardiopulmonary				
United States	$ 25,816	$ 41,403	$ 62,674	$ 80,526
Europe	23,294	34,320	57,528	69,881
Rest of World	51,946	54,856	97,221	101,742
	101,056	130,579	217,423	252,149
Heart Valves				
United States	2,488	4,678	5,861	9,034
Europe	5,348	10,672	14,877	21,185
Rest of World	9,630	18,001	21,939	28,805
	17,466	33,351	42,677	59,024
Advanced Circulatory Support				
United States	5,668	7,944	15,744	15,977
Europe	303	192	673	311
Rest of World	42	178	87	274
	6,013	8,314	16,504	16,562
Cardiovascular				
United States	33,972	54,025	84,279	105,537
Europe	28,945	45,184	73,078	91,377
Rest of World	61,618	73,035	119,247	130,821
	124,535	172,244	276,604	327,735
Neuromodulation				
United States	44,215	80,551	117,491	157,437
Europe	6,416	12,996	16,999	23,655
Rest of World	6,581	10,722	12,379	17,826
	57,212	104,269	146,869	198,918
Other	459	656	1,130	1,317
Totals				
United States	78,187	134,576	201,770	262,974
Europe [1]	35,361	58,180	90,077	115,032
Rest of World	68,658	84,413	132,756	149,964
Total [2]	$ 182,206	$ 277,169	$ 424,603	$ 527,970

(1) Europe sales include those countries in which we have a direct sales presence, whereas European countries in which we sell through distributors are included in Rest of World.

(2) No single customer represented over 10% of our consolidated net sales. No country's net sales exceeded 10% of our consolidated sales except for the U.S.

The table below presents a reconciliation of segment (loss) income from continuing operations to consolidated loss from continuing operations before tax (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Cardiovascular	$ (9,407)	$ 10,120	$ (726)	$ 11,109
Neuromodulation	27,282	619	61,140	22,250
Other	(20,876)	(25,677)	(47,486)	(53,976)
Total reportable segment (loss) income from continuing operations	(3,001)	(14,938)	12,928	(20,617)
Merger and integration expenses	2,048	4,378	5,522	7,629
Restructuring expenses	794	1,332	2,374	3,865
Amortization of intangibles	9,394	9,228	19,661	18,544
Operating loss from continuing operations	(15,237)	(29,876)	(14,629)	(50,655)
Interest income	287	224	435	473
Interest expense	(5,715)	(4,054)	(10,564)	(5,716)
Foreign exchange and other losses	(999)	(1,851)	(2,913)	(1,122)
Loss from continuing operations before tax	$ (21,664)	$ (35,557)	$ (27,671)	$ (57,020)

Assets by segment are as follows (in thousands):

	June 30, 2020	December 31, 2019
Cardiovascular	$ 1,428,992	$ 1,546,520
Neuromodulation	655,611	749,069
Other	418,060	116,208
Total assets	$ 2,502,663	$ 2,411,797

Capital expenditures by segment are as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Cardiovascular	$ 5,445	$ 4,835	$ 10,737	$ 8,386
Neuromodulation	836	127	6,075	530
Other	364	951	2,207	1,880
Total	$ 6,645	$ 5,913	$ 19,019	$ 10,796

The changes in the carrying amount of goodwill by segment for the six months ended June 30, 2020 were as follows (in thousands):

	Neuromodulation	Cardiovascular	Total
December 31, 2019	$ 398,754	$ 517,040	$ 915,794
Foreign currency adjustments	—	(13,590)	(13,590)
June 30, 2020	$ 398,754	$ 503,450	$ 902,204

Property, plant and equipment, net by geography are as follows (in thousands):

	June 30, 2020	December 31, 2019
United States	$ 64,628	$ 61,410
Europe	112,103	110,270
Rest of World	8,939	9,674
Total	$ 185,670	$ 181,354

Note 16. Supplemental Financial Information

Inventories, net consisted of the following (in thousands):

	June 30, 2020	December 31, 2019
Raw materials	$ 47,384	$ 45,225
Work-in-process	17,810	14,581
Finished goods	112,052	104,348
	$ 177,246	$ 164,154

Inventories are reported net of the provision for obsolescence. This provision, which reflects normal obsolescence and includes components that are phased out or expired, totaled $13.6 million and $12.7 million at June 30, 2020 and December 31, 2019, respectively.

Accrued liabilities and other consisted of the following (in thousands):

	June 30, 2020	December 31, 2019
Legal and administrative costs	$ 14,069	$ 11,066
Contingent consideration [1]	13,884	22,953
Operating lease liabilities	11,135	11,110
Contract liabilities	9,432	6,728
Research and development costs	5,401	5,160
Provisions for agents, returns and other	3,729	3,922
Derivative contract liabilities [2]	1,873	3,173
Restructuring related liabilities [3]	1,808	4,315
Product remediation [4]	1,533	3,251
CRM purchase price adjustment payable to MicroPort Scientific Corporation	—	14,891
Other accrued expenses	34,374	33,531
	$ 97,238	$ 120,100

(1) Refer to “Note 7. Fair Value Measurements”
(2) Refer to “ Note 9. Derivatives and Risk Management”
(3) Refer to “Note 4. Restructuring”
(4) Refer to “Note 5. Product Remediation Liability”

As of June 30, 2020 and December 31, 2019, contract liabilities of $11.2 million and $8.6 million, respectively, are included within accrued liabilities and other long-term liabilities on the condensed consolidated balance sheets.

Note 17. New Accounting Pronouncements

Adoption of New Accounting Pronouncements

The following table provides a description of our adoption of new Accounting Standards Updates ("ASUs") issued by the FASB and the impact of the adoption on our condensed financial statements:

Issue Date & Standard	Description	Date of Adoption	Effect on Financial Statements or Other Significant Matters
June 2016 ASU No. 2016-13, Financial Instruments—Credit Losses (Topic 326)	The amendments in this update require a financial asset (or a group of financial assets) measured at amortized cost basis to be presented at the net amount expected to be collected. We adopted the update effective January 1, 2020, applying this standard to our accounts receivable by use of a provision matrix approach. This approach utilizes historical loss rates based on the number of days past due, adjusted to reflect current economic conditions and forecasts of future economic conditions.	January 1, 2020	We recognized the following cumulative-effect adjustments, including to retained earnings, upon adoption at January 1, 2020: Accounts receivable, net decreased $0.6 million and accumulated deficit increased $0.6 million.
January 2017 ASU No. 2017-04, Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment	This update removes step 2 of the goodwill impairment test that compares the implied fair value of goodwill with its carrying amount. Instead, an impairment test is performed by comparing the fair value of a reporting unit with its carrying amount. An impairment charge will be recorded by the amount a reporting unit's carrying amount exceeds its fair value.	January 1, 2020	There was no material impact to our consolidated financial statements as a result of adopting this ASU.
August 2018 ASU No. 2018-13, Fair Value Measurement (Topic 820): Changes to the Disclosure Requirements for Fair Value Measurement	This update removes, modifies and adds certain disclosure requirements related to fair value measurements.	January 1, 2020	There was no material impact to our consolidated financial statements as a result of adopting this ASU.
August 2018 ASU No. 2018-15, Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract	This update clarifies and aligns the accounting for implementation costs for hosting arrangements with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software.	January 1, 2020	There was no material impact to our consolidated financial statements as a result of adopting this ASU.

Future Adoption of New Accounting Pronouncements

The following table provides a description of future adoptions of new accounting standards that may have an impact on our financial statements when adopted:

Issue Date & Standard	Description	Projected Date of Adoption	Effect on Financial Statements or Other Significant Matters
August 2018 ASU No. 2018-14, Compensation—Retirement Benefits—Defined Benefit Plans—General (Subtopic 715-20): *Changes to the Disclosure Requirements for Defined Benefit Plans*	This update adds and removes certain disclosure requirements related to defined benefit plans. This ASU is to be implemented on a retrospective basis for all periods presented with early adoption permitted.	January 1, 2021	We do not expect the adoption of this update to have a material effect on our condensed consolidated financial statement disclosures.

Item 2. *Management's Discussion and Analysis of Financial Condition and Results of Operations*

The following discussion and analysis should be read in conjunction with our condensed consolidated financial statements and related notes which appear elsewhere in this document and with our 2019 Form 10-K. Our discussion and analysis may contain forward-looking statements that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of certain factors, including those set forth under "Risk Factors" in Item 1A of our 2019 Form 10-K, as updated and supplemented by our Quarterly Reports on Form 10-Q, including in Part 2, Item 1A and elsewhere in this Quarterly Report on Form 10-Q.

The capitalized terms used below have been defined in the notes to our condensed consolidated financial statements. In the following text, the terms "LivaNova," "the Company," "we," "us" and "our" refer to LivaNova PLC and its consolidated subsidiaries.

COVID-19

Due to the COVID-19 pandemic, we have experienced and may continue to experience significant and unpredictable reductions in the demand for our products as healthcare customers have diverted medical resources and priorities towards the treatment of COVID-19. In addition, public health bodies have delayed elective procedures during the COVID-19 pandemic, which has negatively impacted the usage of our products, including the number of Neuromodulation procedures. Further, some people are avoiding seeking treatment for non-COVID-19 emergency procedures, which has also negatively impacted the demand for our products.

While the ultimate health and economic impact of the COVID-19 pandemic is highly uncertain, our sales and operating results for the second quarter of 2020 were materially adversely impacted. We are beginning to see signs of stabilization in certain geographies as elective surgeries resume and expect this trend to continue on a global basis during the second half of 2020. We expect elective procedure recovery rates to vary by country, and to be impacted by COVID-19 case volumes, hospital occupancy and staffing levels, patient's willingness to re-book previously deferred procedures, travel restrictions, transportation limitations, quarantine restrictions, economic uncertainty and potential COVID-19 resurgence. Further cancellations or delays could materially adversely impact our business, results of operations and overall financial performance.

Our business operations have been affected by a range of external factors related to the COVID-19 pandemic that are not within our control. For example, many jurisdictions have imposed a wide range of restrictions on the physical movement of our employees and vendors to limit the spread of COVID-19. If the COVID-19 pandemic has a substantial impact on our employees or vendors attendance or productivity, our operations may suffer, and in turn our results of operations and overall financial performance may be harmed.

Further as a result of the impact of COVID-19, during the second quarter of 2020 the majority of our RECOVER clinical study sites and their corresponding surgical centers were completely closed. As a result of this, there were few new implants in our RECOVER clinical study during the quarter. Implants are expected to slowly return during the third quarter of 2020 as study sites and surgical centers reopen and resume more fully in the fourth quarter of 2020. We believe that new implants will continue to increase into 2021. In the current COVID-19 environment, we are remotely collaborating with study sites to continue certain activities that maintain engagement, including activating more sites for enrollment and also, identifying and consenting patients at existing sites. Additionally, we continue to perform follow-up visits for all patients who have been enrolled and implanted to date.

Additionally, our ANTHEM-HFrEF U.S. pivotal trial was temporarily paused in March due to COVID-19 after enrolling just over 200 patients. During the quarter, the team was able to re-initiate enrollment in more than half of the sites. We continue to focus on remote engagement to support patients, physicians, and sites.

We have taken numerous steps, and will continue to take further actions, in our approach to addressing the COVID-19 pandemic. We have successfully implemented our business continuity plans, and our management team is responding to changes in our environment quickly and effectively. We have not closed any of our manufacturing plants. Additionally, the supply of raw materials and the distribution of finished products remain operational with no known or foreseen constraints. As a result of the COVID-19 pandemic, we instructed employees at many of our facilities across the globe to work from home on a temporary basis and have implemented travel restrictions. We have incurred additional expenses in connection with our response to the COVID-19 pandemic, including manufacturing inefficiencies and costs related to enabling our employees to support our customers while working remotely.

We believe that implementing cost reduction efforts will help us mitigate the impact that reduced revenues may have on our fiscal 2020 operating income. We are reducing expenses by evaluating projects and initiatives critical to meet the current needs

of the Company, protecting strategic priorities for future growth, reducing discretionary spending and tightening management of personnel costs.

Given the dynamic nature of these circumstances, the full impact of the COVID-19 pandemic on our ongoing business, results of operations and overall financial performance cannot be reasonably estimated at this time.

For further discussion on COVID-19, refer to “Part II, Item 1A. Risk Factors” in this Quarterly Report on Form 10-Q.

Business Overview

We are a public limited company organized under the laws of England and Wales, headquartered in London, England. We are a global medical device company focused on the development and delivery of important therapeutic solutions for the benefit of patients, healthcare professionals and healthcare systems throughout the world. Working closely with medical professionals in the fields of Cardiovascular and Neuromodulation, we design, develop, manufacture and sell innovative therapeutic solutions that are consistent with our mission to improve our patients’ quality of life, increase the skills and capabilities of healthcare professionals and minimize healthcare costs.

LivaNova is comprised of two reportable segments: Cardiovascular and Neuromodulation, corresponding to our primary therapeutic areas. Other corporate activities include corporate shared service expenses for finance, legal, human resources, information technology and corporate business development.

For further information regarding our business segments, historical financial information and our methodology for the presentation of financial results, please refer to the condensed consolidated financial statements and accompanying notes of this Quarterly Report on Form 10-Q.

Cardiovascular

Our Cardiovascular segment is engaged in the development, production and sale of cardiopulmonary products, heart valves and advanced circulatory support products. Cardiopulmonary products include oxygenators, heart-lung machines, autotransfusion systems, perfusion tubing systems, cannulae and other related accessories. Heart valves include mechanical heart valves, tissue heart valves, related repair products and minimally invasive surgical instruments. Advanced circulatory support includes temporary life support controllers and product kits that can include a combination of pumps, oxygenators, and cannulae.

Product Remediation

On December 29, 2015, the FDA issued a Warning Letter alleging certain violations of FDA regulations applicable to medical device manufacturers at our Munich, Germany and Arvada, Colorado facilities and issued inspectional observations on FDA’s Form-483 applicable to our Munich, Germany facility.

The Warning Letter further stated that our 3T devices and other devices we manufactured at our Munich facility are subject to refusal of admission into the U.S. until resolution of the issues set forth by the FDA in the Warning Letter. The FDA informed us that the import alert was limited to the 3T devices, but that the agency reserved the right to expand the scope of the import alert if future circumstances warranted such action. The Warning Letter did not request that existing users cease using the 3T device, and manufacturing and shipment all of our products other than the 3T device were unaffected by the import limitation. To help clarify these issues for current customers, we issued an informational Customer Letter in January 2016 and that same month agreed with the FDA on a process for shipping 3T devices to existing U.S. users pursuant to a certificate of medical necessity program.

Finally, the Warning Letter stated that premarket approval applications for Class III devices to which certain Quality System regulation deviations identified in the Warning Letter were reasonably related would not be approved until the violations had been corrected; however, this restriction applied only to the Munich and Arvada facilities, which do not manufacture or design devices subject to Class III premarket approval.

On February 25, 2020, LivaNova received clearance for K191402, a 510(k) for the 3T devices that addressed issues contained in the 2015 Warning Letter along with design changes that further mitigate the potential risk of aerosolization. Concurrent with this clearance, (1) 3T devices manufactured in accordance with K191402 will not be subjected to the import alert and (2) LivaNova initiated a correction to distribute the updated Operating Instructions cleared under K191402.

We continue to work diligently to remediate the FDA’s inspectional observations for the Munich facility, as well as the additional issues identified in the Warning Letter. We take these matters seriously and intend to respond timely and fully to the

FDA's requests. For further information refer to "Note 10. Commitments and Contingencies" in our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Product Liability

The Company is currently involved in litigation involving our 3T device. The litigation includes a class action complaint in the U.S. District Court for the Middle District of Pennsylvania, federal multi-district litigation in the U.S. District Court for the Middle District of Pennsylvania, various U.S. state court cases and cases in jurisdictions outside the U.S. The class action, filed in February 2016, consists of all Pennsylvania residents who underwent open heart surgery at WellSpan York Hospital and Penn State Milton S. Hershey Medical Center between 2011 and 2015 and who currently are asymptomatic for NTM infection. Members of the class seek declaratory relief that the 3T devices are defective and unsafe for intended uses, medical monitoring, damages, and attorneys' fees.

On March 29, 2019, we announced a settlement framework that provides for a comprehensive resolution of the personal injury cases pending in the multi-district litigation in U.S. federal court, the related class action pending in federal court, as well as certain cases in state courts across the United States. The agreement, which makes no admission of liability, is subject to certain conditions, including acceptance of the settlement by individual claimants and provides for a total payment of up to $225 million to resolve the claims covered by the settlement. Per the agreed-upon terms, the first payment of $135 million was paid into a qualified settlement fund in July 2019 and the second payment of $90 million was paid in January 2020. Cases covered by the settlement are being dismissed as amounts are disbursed to individual plaintiffs from the qualified settlement fund.

Cases in state courts in the U.S. and in jurisdictions outside the U.S. continue to progress. As of July 29, 2020, including the cases encompassed in the settlement framework described above that have not yet been dismissed, we are aware of approximately 85 filed and unfiled claims worldwide, with the majority of the claims in various federal or state courts throughout the United States. This includes cases that have settled but have not yet been dismissed. The complaints generally seek damages and other relief based on theories of strict liability, negligence, breach of express and implied warranties, failure to warn, design and manufacturing defect, fraudulent and negligent misrepresentation or concealment, unjust enrichment, and violations of various state consumer protection statutes.

At June 30, 2020, the provision for these matters was $49.0 million. While the amount accrued represents our best estimate, the actual liability for resolution of these matters may vary from our estimate.

Cardiopulmonary

In April 2020, the U.S. Food and Drug Administration issued temporary guidance that permitted several of our cardiopulmonary products to be used for Extracorporeal Membrane Oxygenation ("ECMO") therapy greater than six hours to temporarily expand the availability of devices to address the COVID-19 pandemic. Product indications for use have been modified accordingly for many products within our Cardiopulmonary and Advanced Circulatory Support portfolios.

Also in April 2020, our Bi-Flow ECMO cannula received CE Mark for ECMO procedures where femoral artery cannulation can be applied. Bi-Flow previously received CE Mark in 2019 for cardiac surgery procedures requiring femoral artery cannulation. Now validated for up to 29 days of use, Bi-Flow ECMO is designed to reduce the risk of limb ischemia for patients receiving ECMO.

Heart Valves

In July 2020, we announced that the advanced Perceval Plus sutureless surgical aortic heart valve is available for commercial release in Europe, having successfully completed a one-year limited launch with initial real-world clinical data gathering. Building on the clinically proven experience with Perceval, this next-generation valve facilitates minimally invasive cardiac surgery and makes sutureless aortic valve replacement available to a wide patient population. Key innovations with Perceval Plus include the anticalcification treatment for valve durability, along with design changes intended to improve patient outcomes.

Neuromodulation

Our Neuromodulation segment designs, develops and markets Neuromodulation therapy for the treatment of drug-resistant epilepsy, DTD and obstructive sleep apnea. We are also developing and conducting clinical testing of the VITARIA System for treating heart failure through vagus nerve stimulation.

Depression

In February 2020, we announced a research collaboration with Verily, an Alphabet company, to capture measures of depression within our RECOVER clinical study. Through this initial research collaboration, LivaNova and Verily aim to gather quantitative data on patient behavior using technology and analytics developed by Verily to further understand depressive episodes and a patient's response to treatment. RECOVER clinical sites will have the ability to offer patients the Verily Study Watch, a wearable device designed to capture physiological and environmental data for clinical research, and a Verily mobile phone application. These complementary approaches are expected to help investigators better understand the impact of depression and its treatment on study participants' lives in a more objective and multi-dimensional manner.

In March 2020, our VNS Therapy System, Symmetry received CE mark approval for DTD, and our first two patients outside the U.S. to receive Symmetry were implanted shortly thereafter.

Significant Accounting Policies and Critical Accounting Estimates

In addition to our critical accounting policies provided in "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our 2019 Form 10-K, refer to "Significant Accounting Policies" within "Note 1. Unaudited Condensed Consolidated Financial Statements" included in this Quarterly Report on Form 10-Q.

The accompanying unaudited condensed consolidated financial statements of LivaNova and its consolidated subsidiaries have been prepared in accordance with U.S. GAAP on an interim basis.

New accounting pronouncements are disclosed in "Note 17. New Accounting Pronouncements" contained in the condensed consolidated financial statements in this Quarterly Report on Form 10-Q.

Other

Brexit

On January 31, 2020, the UK departed from the EU (in a move commonly referred to as "Brexit"), and the UK will now enter a transition period that is scheduled to end on December 31, 2020. During the transition period, the UK will cease to be an EU member but the trading relationship will remain the same under the EU's rules. Although the long-term effects of Brexit will depend on any agreements the UK makes to retain access to the EU markets, Brexit has created additional uncertainties that may ultimately result in new regulatory costs and challenges for medical device companies and increased restrictions on imports and exports throughout Europe. This could adversely affect our ability to conduct and expand our operations in Europe and may have an adverse effect on our business, financial condition and results of operations.

Passage of the withdrawal bill does not change the application of existing tax laws and does not establish a clear framework for what the ultimate outcome of the transition period will be. Various tax reliefs and exemptions that apply to transactions between EU Member States under existing tax laws may cease to apply to transactions between the UK and EU Member States when the transition period is over. It is unclear at this stage if or when any new tax treaties between the UK and the EU or individual EU Member States will replace those reliefs and exemptions. It is also unclear at this stage what financial, trade and legal implications will ensue from Brexit and how Brexit may ultimately affect us, our customers, suppliers, vendors, or our industry.

We and several of our wholly owned subsidiaries that are domiciled either in the UK, various EU Member States, or in the U.S., are party to intercompany transactions and agreements under which we receive various tax reliefs and exemptions in accordance with applicable international tax laws, treaties and regulations. If certain treaties applicable to our transactions and agreements change materially, Brexit may have a material adverse impact on our future financial results and results of operations. We continue to monitor and assess the potential impact of this event and explore possible tax-planning strategies that may mitigate or eliminate potential adverse impacts.

We will not account for the impact of Brexit in our income tax provisions until there are material changes in tax laws or treaties between the UK and other countries.

European Union State Aid Challenge

On October 26, 2017, the European Commission ("EC") announced that an investigation would be opened with respect to the UK's controlled foreign company ("CFC") rules for the period January 1, 2013 through December 31, 2018. Under the CFC rules, financing profits of entities controlled by UK parent companies are taxed when the funding originates in the UK, or Significant People Functions relating to the financing are located in the UK. The provisions under investigation provide group finance exemptions related to the profits of entities involved in financing of the non-UK group activities. On April 2, 2019, the

EC concluded that “when financing income from a foreign group company, channeled through an offshore subsidiary, is financed with UK connected capital and there are no UK activities involved in generating the finance profits, the group finance exemption is justified and does not constitute State aid under EU rules.” However, in relation to Significant People Functions, “when financing income from a foreign group company, channeled through an offshore subsidiary, derives from UK activities, the group finance exemption is not justified and constitutes State aid under EU rules.” Her Majesty’s Revenue and Customs (“HMRC”) has stated that they do not consider the timing and form of the UK’s exit from the EU will have a practical impact on the requirement to recover the alleged aid. On June 14, 2019, the UK filed an appeal to the Commission’s decision. On July 5, 2019, HMRC began the first step in the recovery process to identify beneficiaries and sent letters asking for information. Based upon our assessment of the technical arguments as to whether the exemption is State aid, together with no UK activities involved in our financing, no uncertain tax position reserve has been recognized related to this matter. Furthermore, in December 2019, we amended our 2017 tax return filing to avail ourselves of different rules to determine UK taxation, which are not subject to the EU decision. We filed our 2018 tax return similarly, and therefore, we do not believe that the EU state aid decision will result in a material liability.

Results of Operations

The following table summarizes our condensed consolidated results of operations (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Net sales	$ 182,206	$ 277,169	$ 424,603	$ 527,970
Costs and expenses:				
Cost of sales - exclusive of amortization	56,762	74,942	125,685	159,196
Product remediation	4,269	5,113	5,735	8,060
Selling, general and administrative	98,048	127,213	218,225	252,917
Research and development	25,152	34,544	61,054	78,119
Merger and integration expenses	2,048	4,378	5,522	7,629
Restructuring expenses	794	1,332	2,374	3,865
Impairment of intangible assets	—	50,295	—	50,295
Amortization of intangibles	9,394	9,228	19,661	18,544
Litigation provision, net	976	—	976	—
Operating loss from continuing operations	(15,237)	(29,876)	(14,629)	(50,655)
Interest income	287	224	435	473
Interest expense	(5,715)	(4,054)	(10,564)	(5,716)
Foreign exchange and other losses	(999)	(1,851)	(2,913)	(1,122)
Loss from continuing operations before tax	(21,664)	(35,557)	(27,671)	(57,020)
Income tax expense (benefit)	66,285	(6,164)	21,571	(12,778)
Losses from equity method investments	(44)	—	(173)	—
Net loss from continuing operations	(87,993)	(29,393)	(49,415)	(44,242)
Net income (loss) from discontinued operations, net of tax	—	178	(995)	178
Net loss	$ (87,993)	$ (29,215)	$ (50,410)	$ (44,064)

Net Sales

The table below presents net sales by operating segment and geographic region (in thousands, except for percentages):

	Three Months Ended June 30,			Six Months Ended June 30,		
	2020	2019	% Change	2020	2019	% Change
Cardiopulmonary						
United States	$ 25,816	$ 41,403	(37.6)%	$ 62,674	$ 80,526	(22.2)%
Europe	23,294	34,320	(32.1)%	57,528	69,881	(17.7)%
Rest of World	51,946	54,856	(5.3)%	97,221	101,742	(4.4)%
	101,056	130,579	(22.6)%	217,423	252,149	(13.8)%
Heart Valves						
United States	2,488	4,678	(46.8)%	5,861	9,034	(35.1)%
Europe	5,348	10,672	(49.9)%	14,877	21,185	(29.8)%
Rest of World	9,630	18,001	(46.5)%	21,939	28,805	(23.8)%
	17,466	33,351	(47.6)%	42,677	59,024	(27.7)%
Advanced Circulatory Support						
United States	5,668	7,944	(28.7)%	15,744	15,977	(1.5)%
Europe	303	192	57.8 %	673	311	116.4 %
Rest of World	42	178	(76.4)%	87	274	(68.2)%
	6,013	8,314	(27.7)%	16,504	16,562	(0.4)%
Cardiovascular						
United States	33,972	54,025	(37.1)%	84,279	105,537	(20.1)%
Europe	28,945	45,184	(35.9)%	73,078	91,377	(20.0)%
Rest of World	61,618	73,035	(15.6)%	119,247	130,821	(8.8)%
	124,535	172,244	(27.7)%	276,604	327,735	(15.6)%
Neuromodulation						
United States	44,215	80,551	(45.1)%	117,491	157,437	(25.4)%
Europe	6,416	12,996	(50.6)%	16,999	23,655	(28.1)%
Rest of World	6,581	10,722	(38.6)%	12,379	17,826	(30.6)%
	57,212	104,269	(45.1)%	146,869	198,918	(26.2)%
Other	459	656	(30.0)%	1,130	1,317	(14.2)%
Totals						
United States	78,187	134,576	(41.9)%	201,770	262,974	(23.3)%
Europe [1]	35,361	58,180	(39.2)%	90,077	115,032	(21.7)%
Rest of World	68,658	84,413	(18.7)%	132,756	149,964	(11.5)%
Total	$ 182,206	$ 277,169	(34.3)%	$ 424,603	$ 527,970	(19.6)%

(1) Europe sales include those countries in which we have a direct sales presence, whereas European countries in which we sell through distributors are included in “Rest of World.”

The table below presents segment (loss) income from continuing operations (in thousands, except for percentages):

	Three Months Ended June 30,			Six Months Ended June 30,		
	2020	2019	% Change	2020	2019	% Change
Cardiovascular	$ (9,407)	$ 10,120	(193.0)%	$ (726)	$ 11,109	(106.5)%
Neuromodulation	27,282	619	4,307.4 %	61,140	22,250	174.8 %
Other	(20,876)	(25,677)	(18.7)%	(47,486)	(53,976)	(12.0)%
Total reportable segment (loss) income from continuing operations [1]	$ (3,001)	$ (14,938)	(79.9)%	$ 12,928	$ (20,617)	(162.7)%

(1) For a reconciliation of segment (loss) income from continuing operations to loss from continuing operations before tax refer to “Note 15. Geographic and Segment Information” in the condensed consolidated financial statements in this Quarterly Report on Form 10-Q.

Cardiovascular

Cardiovascular net sales for the three and six months ended June 30, 2020 compared to the three and six months ended June 30, 2019 decreased 27.7% and 15.6%, respectively, largely due to the impact of COVID-19. The decline in net sales for the three and six month periods were due to declines in Cardiopulmonary sales of 22.6% and 13.8%. Cardiopulmonary sales of $101.1 million and $217.4 million for the three and six months ended June 30, 2020 were negatively impacted by declines in HLM and oxygenator sales and the impacts of foreign currency. HLM sales were negatively impacted due to COVID-19 impacts on hospital budgets for capital equipment, while Oxygenator sales were negatively impacted by a decline of non-emergent cardiac surgery procedures globally. Heart Valves sales of $17.5 million and $42.7 million for the three and six months ended June 30, 2020 declined by $15.9 million and $16.3 million, respectively, primarily due to declines in sales of Perceval and other tissue valves. Advanced Circulatory Support sales of $6.0 million for the three months ended June 30, 2020 were negatively impacted as customers delayed purchases anticipating the launch of the LifeSPARC system in the U.S during the third quarter of 2020.

Cardiovascular operating income for the three and six months ended June 30, 2020 compared to the three and six months ended June 30, 2019 decreased primarily related to a decline in net sales, as discussed above, partially offset by a decrease in 3T legal expenses.

Neuromodulation

Neuromodulation net sales for the three and six months ended June 30, 2020 compared to the three and six months ended June 30, 2019 decreased 45.1% and 26.2%, respectively. The decrease in net sales for the three and six months ended June 30, 2020 was primarily due to declines in implants globally as patients and physicians delayed implant procedures due to COVID-19.

Neuromodulation operating income for the three and six months ended June 30, 2020 increased compared to the three and six months ended June 30, 2019 due to a net reduction in the fair value of the contingent consideration liability associated with our obstructive sleep apnea business and a $50.3 million impairment of an IPR&D asset during the three and six months ended June 30, 2019, partially offset by overall declines in net sales.

Cost of Sales and Expenses

The table below presents our comparative cost of sales and significant expenses as a percentage of sales:

	Three Months Ended June 30,			Six Months Ended June 30,		
	2020	2019	Change	2020	2019	Change
Cost of sales - exclusive of amortization	31.2 %	27.0 %	4.2 %	29.6 %	30.2 %	(0.6)%
Product remediation	2.3 %	1.8 %	0.5 %	1.4 %	1.5 %	(0.1)%
Selling, general and administrative	53.8 %	45.9 %	7.9 %	51.4 %	47.9 %	3.5 %
Research and development	13.8 %	12.5 %	1.3 %	14.4 %	14.8 %	(0.4)%
Merger and integration expenses	1.1 %	1.6 %	(0.5)%	1.3 %	1.4 %	(0.1)%
Restructuring expenses	0.4 %	0.5 %	(0.1)%	0.6 %	0.7 %	(0.1)%
Impairment of intangible assets	— %	18.1 %	(18.1)%	— %	9.5 %	(9.5)%
Amortization of intangibles	5.2 %	3.3 %	1.9 %	4.6 %	3.5 %	1.1 %
Litigation provision, net	0.5 %	— %	0.5 %	0.2 %	— %	0.2 %

Cost of Sales - Exclusive of Amortization

Cost of sales consisted primarily of direct labor, allocated manufacturing overhead and the acquisition cost of raw materials and components. Cost of sales as a percentage of net sales for the three months ended June 30, 2020 compared to the three months ended June 30, 2019 increased primarily due to product mix and unfavorable manufacturing variances due to the decline in demand resulting from COVID-19, partially offset by a decrease in cost of sales resulting from the net impact of the change in fair value of sales-based contingent consideration arrangements of $3.9 million.

Selling, General and Administrative

SG&A expenses consisted of sales, marketing, general and administrative activities. SG&A expenses as a percentage of net sales for the three and six months ended June 30, 2020 compared to the three and six months ended June 30, 2019 increased primarily due to a decline in net sales, partially offset by a decline in 3T legal expenses and cost containment actions.

Research and Development (“R&D”) Expenses

R&D expenses consist of product design and development efforts, clinical study programs and regulatory activities, which are essential to our strategic portfolio initiatives, including DTD, obstructive sleep apnea and heart failure. R&D expenses as a percentage of net sales for the three months ended June 30, 2020 compared to the three months ended June 30, 2019 increased primarily due to a decline in net sales, partially offset by a decrease in R&D expense associated with TMVR of $4.9 million, as well as a decrease in R&D expense resulting from the net impact of changes in fair value of milestone-based contingent consideration arrangements of $4.5 million and the impact of COVID-19 on our clinical studies.

Impairment of Intangible Assets

During the second quarter of 2019, we determined that LivaNova would experience a delay in the estimated commercialization date of the Company’s obstructive sleep apnea product currently under development. This delay constituted a triggering event that required an impairment evaluation of the IPR&D asset arising from the ImThera acquisition. Based on the assessment performed, we determined that the IPR&D asset was impaired and as a result, recorded an impairment of $50.3 million, which is included in our Neuromodulation segment.

Amortization of Intangibles

Amortization of intangible assets consists primarily of the amortization of finite-lived intangible assets, primarily intellectual property and customer relationships. Amortization of intangibles increased for the six months ended June 30, 2020 compared to the six months ended June 30, 2019 primarily due to reclassifying the Advanced Circulatory Support IPR&D asset to developed technology upon receiving FDA approval of the LifeSPARC system during the third quarter of 2019 and commencing amortization.

Income Taxes

LivaNova PLC is domiciled and resident in the UK. Our subsidiaries conduct operations and earn income in numerous countries and are subject to the laws of taxing jurisdictions within those countries, and the income tax rates imposed in the tax jurisdictions in which our subsidiaries conduct operations vary. As a result of the changes in the overall level of our income, the earnings mix in various jurisdictions and the changes in tax laws, our consolidated effective income tax rate may vary substantially from one reporting period to another.

Our effective income tax rate from continuing operations for the three and six months ended June 30, 2020 was (306.0)% and (78.0)% compared with 17.3% and 22.4% for the three and six months ended June 30, 2019, respectively. Our effective income tax rate fluctuates based on, among other factors, changes in pretax income in countries with varying statutory tax rates, changes in valuation allowances, changes in tax credits and incentives, and changes in unrecognized tax benefits associated with uncertain tax positions.

Compared with the three months ended June 30, 2019, the change in the effective tax rate for the three months ended June 30, 2020 was primarily attributable to a $70.0 million valuation allowance for the U.K. net operating losses and attributes, as compared to the establishment of a valuation allowance for a portion of the U.S. federal and state net operating losses during the three months ended June 30, 2019. These valuation allowances are a result of cumulative losses and the current forecast, including the extended impact of COVID-19, that it is more likely than not that we will be unable to realize the related historical deferred tax assets.

Compared with the six months ended June 30, 2019, the change in the effective tax rate for the six months ended June 30, 2020 was primarily attributable to a $42.9 million realized discrete tax benefit related to the Coronavirus Aid, Relief, and Economic Security Act (“CARES Act”) offset by the establishment of a $70.0 million valuation allowance for the U.K. net

operating losses and attributes, as compared to a release of uncertain tax positions and other discrete tax items offset by the establishment of a valuation allowance for a portion of the U.S. federal and state net operating losses during the six months ended June 30, 2019.

We operate in multiple jurisdictions throughout the world, and our tax returns are periodically audited or subjected to review by tax authorities. As a result, there is an uncertainty in income taxes recognized in our financial statements. Tax benefits totaling $12.9 million were unrecognized as of June 30, 2020 and December 31, 2019. It is reasonably possible that, within the next twelve months, due to the settlement of uncertain tax positions with various tax authorities and the expiration of statutes of limitations, unrecognized tax benefits could decrease by up to approximately $12.0 million.

We monitor income tax developments in countries where we conduct business. On March 27, 2020, the U.S. enacted the CARES Act which provided for a 5-year loss carryback for losses incurred in 2018-2020. We recorded a discrete tax benefit of $42.9 million to account for the effect of the CARES Act. Further regulations and notices as well as state legislative changes addressing conformity to the CARES Act are still pending.

Liquidity and Capital Resources

In June 2020, we raised combined net proceeds of $699.9 million from our Term Loan and Notes borrowings. Additionally, we utilized the combined net proceeds to repay $525.4 million of aggregate outstanding principal. Refer to “Note 8. Financing Arrangements” in the condensed consolidated financial statements in this Quarterly Report on Form 10-Q for additional information regarding our debt and debt transactions. As of June 30, 2020, our cash and cash equivalents was $232.5 million.

Based on our current business plan, we believe that our existing cash and cash equivalents, future cash generated from operations and borrowing under our current debt facilities will be sufficient to fund our expected operating needs, working capital requirements, R&D opportunities, capital expenditures, and debt service requirements over the twelve-month period beginning from the issuance date of these condensed consolidated financial statements. Our liquidity could be adversely impacted by the factors affecting future operating results, including those referred to in “Part II, Item 1A. Risk Factors” in the 2019 Form 10-K as supplemented by the factors referred to in “Part II, Item 1A, Risk Factors” in our Quarterly Reports on Form 10-Q.

No provision has been made for income taxes on unremitted earnings of our foreign controlled subsidiaries (non-UK subsidiaries) as of June 30, 2020. In the event of the distribution of those earnings in the form of dividends, a sale of the subsidiaries or certain other transactions, we may be liable for income taxes. However, the tax liability on future distributions should not be significant as most jurisdictions with unremitted earnings have various participation exemptions or no withholding tax.

Cash Flows

Net cash and cash equivalents provided by (used in) operating, investing and financing activities and the net increase (decrease) in the balance of cash and cash equivalents were as follows (in thousands):

	Six Months Ended June 30,	
	2020	**2019**
Operating activities	$ (125,064)	$ (17,421)
Investing activities	(22,666)	(22,454)
Financing activities	319,697	37,057
Effect of exchange rate changes on cash and cash equivalents	(555)	125
Net increase (decrease) in cash and cash equivalents	$ 171,412	$ (2,693)

Operating Activities

Cash used in operating activities during the six months ended June 30, 2020 increased by $107.6 million as compared to the same prior-year period. The increase is primarily due to $122.2 million in 3T litigation settlement payments made during the six months ended June 30, 2020.

Investing Activities

Cash used in investing activities during the six months ended June 30, 2020 increased $0.2 million as compared to the same prior-year period. The increase is primarily due to an increase in purchases of property, plant and equipment of $7.2 million and the purchase of an investment and loans to investees totaling $5.4 million, partially offset by $10.8 million in cash paid for acquisitions in 2019.

Financing Activities

Cash provided by financing activities during the six months ended June 30, 2020 increased $282.6 million as compared to the same prior-year period. The increase is primarily due to an increase in net borrowings and associated costs of $345.7 million, offset by the purchase of a capped call associated with our Notes of $43.1 million and a closing adjustment payment for the sale of our former CRM business of $14.9 million.

Off-Balance Sheet Arrangements

As of June 30, 2020, we did not have any off-balance sheet arrangements.

Contractual Obligations

Except for the financing transactions discussed in “Note 8. Financing Arrangements,” we had no material changes in our contractual commitments and obligations from amounts listed under “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources” in our 2019 Form 10-K.

Item 3. *Quantitative and Qualitative Disclosures About Market Risk*

We are exposed to certain market risks as part of our ongoing business operations, including risks from foreign currency exchange rates, equity price risk, interest rate risks and concentration of procurement suppliers that could adversely affect our consolidated financial position, results of operations or cash flows. We manage these risks through regular operating and financing activities and, at certain times, derivative financial instruments. Quantitative and qualitative disclosures about these risks are included in this Quarterly Report on Form 10-Q in “Part I, Note 9. Derivatives and Risk Management,” “Part I, Item 2. Management’s Discussion and Analysis of Financial Conditions and Results of Operations” and “Part II, Item 1A. Risk Factors,” and in our 2019 Form 10-K in “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Part I, Item 1A. Risk Factors.” There have been no material changes from the information provided therein.

Item 4. *Controls and Procedures*

Disclosure Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

We maintain a system of disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act, that are designed to ensure that information required to be disclosed in our reports filed under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms. This information is also accumulated and communicated to management, including our Chief Executive Officer (“CEO”) and Chief Financial Officer (“CFO”), as appropriate, to allow timely decisions regarding required disclosure. Our management, under the supervision and with the participation of our CEO and CFO, evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the most recent fiscal quarter reported herein. Based on that evaluation, our CEO and CFO concluded that our disclosure controls and procedures were effective as of June 30, 2020.

(b) Changes in Internal Control Over Financial Reporting

No change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-5(f) under the Exchange Act) occurred during the quarter ended June 30, 2020 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. *Legal Proceedings*

For a description of our material pending legal and regulatory proceedings and settlements, refer to "Note 10. Commitments and Contingencies" in our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Item 1A. *Risk Factors*

There have been no material changes in our risk factors from those disclosed in Part I, Item 1A to our 2019 Annual Report on Form 10-K or in Part II Item 1A in our Quarterly Report on Form 10-Q for the period ended March 31, 2020, except as noted below. Those risk factors disclosed in addition to the other information set forth in this report, could materially affect our business, financial condition, or results of operations.

Risks Related to COVID-19

COVID-19 has had, and we expect will continue to have, an adverse effect on our business, results of operations, financial condition and cash flows, the nature and extent of which are uncertain and unpredictable.

The continuing global spread of COVID-19, including corresponding preventative and precautionary measures that we and other businesses, communities and governments are taking to mitigate the spread of the disease, has led to unprecedented restrictions on, disruptions in, and other related impacts on business. In addition to travel restrictions put in place in early 2020, countries, states and governments may continue to close borders, impose prolonged quarantines or other restrictions and requirements on travel, and further limit our ability to conduct business in-person as we did prior to COVID-19.

Per "Recent Developments Regarding COVID-19" within "Note 1. Unaudited Condensed Consolidated Financial Statements" and "COVID-19" under "Item 2. Management's Discussion and Analysis of Financial Conditions and Results of Operations," our sales and operating results for the second quarter of 2020 were materially adversely impacted. While we are beginning to see signs of stabilization in certain geographies as elective surgeries resume and expect this trend to continue on a global basis during the second half of 2020, recovery rates vary and the ultimate health and economic impact of COVID-19 is uncertain. In certain geographies, hospital systems continue to prioritize treatment of COVID-19 patients and otherwise comply with government guidelines, thereby resulting in the suspension or cancellation of elective medical procedures, which has caused a reduction in sales of these products. To the extent individuals and hospital systems continue to de-prioritize, delay or cancel these procedures, or if unemployment or loss of insurance coverage adversely impacts an individual's ability to pay for our products and services, our business, cash flows, financial condition and results of operations would continue to be negatively affected. Further, the COVID-19 pandemic is straining hospital systems around the world, resulting in adverse financial impacts to those systems that could result in reduced future expenditures for our products. Clinical trials generally have paused or slowed enrollment due to facility closures and governmental restrictions, which will delay enrollment and timelines.

As we noted in "COVID-19" under "Item 2. Management's Discussion and Analysis of Financial Conditions and Results of Operations," we have not closed any of our manufacturing plants. Additionally, the supply of raw materials and the distribution of finished products remain operational with no known or foreseen constraints. Regardless, there can be no assurance that any of our facilities will not need to shut down in the future, or that the supply of components, raw materials, and services may be interrupted or insufficient as a direct result of the COVID-19 outbreak. Any disruption of our operations or those of our suppliers could impact our sales and operating results.

In addition, COVID-19 has impacted and may further impact the global economy and capital markets, including by negatively impacting demand for our products, foreign currency exchange rates, and interest rates, each of which may adversely impact our business. We could experience loss of sales and profits due to delayed payments or insolvency of healthcare professionals, hospitals and other customers, suppliers and vendors facing liquidity issues. As a result, we may be compelled to take additional measures to preserve our cash flow.

Finally, COVID-19 could adversely impact our ability to retain key employees and the continued service and availability of skilled personnel necessary to run our productions and operations, including our executive officers and other members of our management team, as well as the ability of our third-party suppliers, manufacturers, distributors and vendors to retain their key employees. To the extent our management or other personnel are impacted in significant numbers by COVID-19 and are not available to perform their job duties, we could experience delays in, or the suspension of, our manufacturing operations,

research and product development activities, regulatory work streams, clinical development programs and other important commercial functions.

While the impact of COVID-19 has had, and we expect it to continue to have, an adverse effect on our business, results of operations, financial condition and cash flows, the nature and extent of such impact is uncertain and unpredictable. For more information on the impact of COVID-19 on the Company and LivaNova's mitigation measures, please refer to "Recent Developments Regarding COVID-19" within "Note 1. Unaudited Condensed Consolidated Financial Statements," "COVID-19" under "Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations," Part I, Item 1A to our 2019 Annual Report on Form 10-K, and Part II, Item 1A in our Quarterly Reports on Form 10-Q.

Risks Related to our Term Loan and Notes

Paying amounts due in cash in respect of our outstanding Term Loan and Notes on interest payment dates, at maturity and upon exchange thereof will require a cash payment. We may not have sufficient cash flow from our business to pay when due, or raise the funds necessary to pay when due, amounts owed in respect of the Notes and Term Loan, which could adversely affect our business and results of operations.

The ability to make scheduled payments of interest on, and principal of, to satisfy exchanges for cash in respect of, and/or to refinance, our outstanding Notes and Term Loan depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. If we are unable to generate enough cash flow to make payments on the Notes and Term Loan when due, we may be required to adopt one or more alternatives, such as selling assets or obtaining additional debt financing or equity capital on terms that may be onerous or highly dilutive. Our ability to refinance the Notes and Term Loan, which we may need to do in order to satisfy our obligations thereunder, will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on the Notes and Term Loan.

The holders of the Notes have the right to require us to repurchase their Notes upon the occurrence of a fundamental change (as defined in the indenture governing the Notes (the "Indenture")) at a repurchase price equal to 100% of the principal amount of the Notes to be repurchased, plus accrued and unpaid interest, if any. Upon repurchase of the Notes, we will be required to make cash payments in respect of the Notes being repurchased. In addition, upon a holder's exchange of the Notes for cash in accordance with the terms of the Indenture, we would be required to make cash payments in respect of the Notes being exchanged in the manner set forth in the Indenture. We may not have enough available cash or be able to obtain financing at the time we are required to make repurchases of, or exchange of, the Notes for cash. Our failure to repurchase the Notes or exchange the Notes for cash at a time when the repurchase or exchange is required by the Indenture governing the Notes would constitute a default under such Indenture.

In addition, our indebtedness on the Notes and Term Loan, combined with our other financial obligations and contractual commitments, could have other important consequences. For example, it could:

- Make us more vulnerable to adverse changes in government regulation and in the worldwide economic, industry and competitive environment;
- Limit our flexibility in planning for, or reacting to, changes in our business and our industry;
- Place us at a disadvantage compared to our competitors who have less debt;
- Limit our ability to borrow additional amounts to fund acquisitions, for working capital and for other general corporate purposes; and
- Make an acquisition of the Company less attractive or more difficult.

Any of these factors could harm our business, results of operations and financial condition. In addition, if we incur additional indebtedness, the risks related to our business and our ability to repay our indebtedness on the Notes and Term Loan would increase.

The conditional exchange features of the Notes and contingent embedded features of the Term Loan, when triggered, may adversely affect our liquidity and operating results.

If the conditional exchange feature of the Notes is triggered, holders of Notes are entitled to exchange the Notes at any time during specified periods, at their option. If holders elect to exchange their Notes during future periods following the satisfaction of an exchange condition, we would be required to settle our exchange obligation through the payment of cash, which could adversely affect our liquidity. In addition, if the contingent embedded features of the Term Loan are triggered, or if the Notes become redeemable due to the satisfaction of an exchange condition, then we could be required under applicable accounting

rules to reclassify all or a portion of the outstanding principal amounts as a current rather than long-term liability, which would result in a material reduction of our net working capital.

Our debt instruments require us to comply with affirmative covenants and specified financial covenants and ratios.

Certain restrictions and covenants in our debt instruments could affect our ability to operate and may limit our ability to react to market conditions or to take advantage of potential business opportunities as they arise. For example, such restrictions could adversely affect our ability to finance our operations, make strategic acquisitions, investments or alliances, restructure our organization or finance capital needs. Additionally, our ability to comply with these covenants and restrictions may be affected by events beyond our control, such as prevailing economic, financial, regulatory and industry conditions. If any of these restrictions or covenants is breached, we could be in default under one or more of our debt instruments, which, if not cured or waived, could result in acceleration of the indebtedness under such agreements and cross defaults under our other debt instruments. Any such actions could result in the enforcement of our lenders' security interests and/or force us into bankruptcy or liquidation, which could have a material adverse effect on our financial condition and results of operations.

The accounting for the Notes will result in LivaNova having to recognize interest expense significantly greater than the stated interest rates of the Notes and may result in volatility to our reported financial results, which could adversely affect the price at which our ordinary shares trade.

We will settle exchanges of the Notes entirely in cash. Accordingly, the exchange feature that is part of the Notes is accounted for as a derivative pursuant to accounting standards relating to derivative instruments. This resulted in an initial valuation of the exchange feature, which was bifurcated from the debt component of the Notes, resulting in an original issue discount. The original issue discount is amortized and recognized as a component of interest expense over the term of the Notes, which results in an effective interest rate reported in our consolidated statements of operations in excess of the stated interest rate of the Notes. Although this accounting treatment does not affect the amount of cash interest paid to holders of the Notes or our cash flows, it reduces our earnings and could adversely affect the price at which our ordinary shares trade.

Additionally, for each financial statement period after issuance of the Notes, a derivative gain or loss is and will be reported in our consolidated statements of income (loss) to the extent the valuation of the exchange feature changes from the previous period. The capped call transactions described below and elsewhere in this quarterly report are also accounted for as derivative instruments. The valuation of the exchange feature of the Notes and capped call transactions utilizes significant observable and unobservable market inputs, including stock price, stock price volatility, risk-free interest rate, and time to expiration of the Notes. The change of inputs at period end from the previous period may result in a material change of the valuation and the gain or loss resulting from the exchange feature of the Notes and capped call transactions may not completely offset each other. As such, there may be a material net impact to our consolidated statements of operations, which could adversely affect the price at which our ordinary shares trade.

The arbitrage or hedging strategy by purchasers of the Notes and Option Counterparties in connection with our capped call transactions may affect the value of our ordinary shares.

We expect that many investors in, and potential purchasers of the Notes will employ, or seek to employ, an arbitrage strategy with respect to the Notes. Investors would typically implement such a strategy by selling short our ordinary shares underlying the Notes and dynamically adjusting their short position while continuing to hold the Notes. Investors may also implement this type of strategy by entering into swaps on our ordinary shares in lieu of or in addition to selling short our ordinary shares. This activity could decrease (or reduce the size of any increase in) the market price of our ordinary shares at that time.

In connection with the pricing of the Notes, we entered into privately negotiated capped call transactions with certain financial institutions (the "Option Counterparties"). The capped call transactions are expected generally to offset cash payments due upon exchange of the Notes in excess of the principal amount thereof in the event that the market value per ordinary share of the Company is at the time of exchange of the Notes greater than the strike price under the capped call transactions, with such offset subject to a cap based on the cap price. We believe the Option Counterparties, in connection with establishing their initial hedges of the capped call transactions, purchased our ordinary shares and/or entered into various derivative transactions with respect to our ordinary shares concurrently with or shortly after the pricing of the Notes. The Option Counterparties may modify these initial hedge positions by entering into or unwinding various derivatives with respect to our ordinary shares and/or purchasing or selling our ordinary shares or other securities of ours in secondary market transactions prior to the maturity of the Notes (and are likely to do so during any observation period related to an exchange of the Notes or upon a repurchase or redemption of the Notes). This activity could cause an increase or decrease in the market price of our ordinary shares at that time.

We are subject to counterparty risk with respect to the capped call transactions.

The Option Counterparties are financial institutions, and we are subject to the risk that they might default under the capped call transactions. Our exposure to the credit risk of the Option Counterparties is not secured by any collateral.

If an Option Counterparty becomes subject to insolvency proceedings, we will become an unsecured creditor in those proceedings, with a claim equal to our exposure at that time under the capped call transactions with that Option Counterparty. Our exposure will depend on many factors but, generally, an increase in our exposure will be correlated to an increase in the market price and in the volatility of our ordinary shares. In addition, upon a default by an Option Counterparty, we may suffer adverse tax consequences and may, on a net basis, have to pay more cash to settle exchanges of the Notes. We can provide no assurances as to the financial stability or viability of the Option Counterparties.

Item 2. *Unregistered Sales of Equity Securities and Use of Proceeds*

None.

Item 3. *Defaults Upon Senior Securities*

None.

Item 4. *Mine Safety Disclosures*

Not applicable.

Item 5. *Other Information*

Disclosure Pursuant to Section 13(r) of the Exchange Act of 1934

Section 13(r) of the Exchange Act requires issuers to disclose in their quarterly reports certain types of dealings with Iran, including transactions or dealing with government-owned entities, even when those activities are lawful and do not involve U.S. persons. One of our non-U.S. subsidiaries currently sells medical devices, including cardiac surgery and cardiopulmonary products, to privately held distributors in Iran.

We have limited visibility into the identity of these distributors' customers in Iran. It is possible that their customers include entities, such as government-owned hospitals or sub-distributors, that are owned or controlled directly or indirectly by the Iranian government. To the best of our knowledge at this time, we do not have any contracts or commercial arrangements with the Iranian government.

Our gross revenues and net profits attributable to the above-mentioned Iranian activities were $3.5 million and $1.3 million for the three months ended June 30, 2020, respectively, and $4.0 million and $1.5 million for the six months ended June 30, 2020, respectively.

We believe our activities are consistent with applicable law, including U.S., EU, and other applicable sanctions laws, though such laws are complex and continue to evolve rapidly. We intend to continue our business in Iran.

Item 6. *Exhibits*

The exhibits marked with the asterisk symbol (*) are filed or furnished (in the case of Exhibit 32.1) with this Quarterly Report on Form 10-Q. The exhibits marked with the cross symbol (†) are management contracts or compensatory plans or arrangements filed pursuant to Item 601(b)(10)(iii) of Regulation S-K.

Exhibit Number	Document Description
3.1*	Amended Articles of Association
4.1	Indenture, dated as of June 17, 2020, among LivaNova USA, Inc., as Issuer, LivaNova PLC, as Guarantor, and Citibank, N.A., as Trustee., incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed on June 17, 2020.
4.2	Form of 3.00% Cash Exchangeable Senior Notes due 2025 (included in Exhibit 4.1)
10.1†*	Roy Khoury Confirmation Letter as President International Commercial and SVP, Global Strategic Marketing
10.2†*	Marco Dolci Confirmation Letter as SVP Global Operations & Global Research and Development
10.3	Amendment Letter, dated April 9, 2020, among LivaNova PLC and Barclays Bank PLC, as Agent, incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed on April 27, 2020
10.4	Amendment Letter, dated April 23, 2020, among LivaNova PLC and Barclays Bank PLC, as Agent, incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K, filed on April 27, 2020
10.5	Amendment Letter, dated April 17, 2020, among LivaNova PLC and Banca Nazionale del Lavoro S.p.A., as Original Lender, incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K, filed on April 27, 2020
10.6	Amendment Letter, dated April 21, 2020, among LivaNova PLC and Banca Nazionale del Lavoro S.p.A., as Original Lender, incorporated by reference to Exhibit 10.4 of the Company's Current Report on Form 8-K, filed on April 27, 2020
10.7	Amendment to Finance Contract 83.445 and Finance Contract 86.677, dated April 21, 2020, among LivaNova PLC, Sorin Group Italia S.r.l. and the European Investment Bank, incorporated by reference to Exhibit 10.6 of the Company's Current Report on Form 8-K, filed on April 27, 2020
10.8	Credit Agreement, dated as of June 10, 2020 , among LivaNova USA, Inc., as Borrower, the Company, as Guarantor, the several lenders from time to time parties thereto, Ares Capital Corporation, as Administrative Agent, and Ares Capital Corporation, as Collateral Agent incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed on June 11, 2020
10.9	Form of Capped Call Confirmation, incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed on June 17, 2020
10.10†*	Amendment to Outstanding 2019 and 2020 Restricted Stock Unit Awards under the LivaNova PLC 2015 Incentive Award Plan, dated June 15, 2020
10.11†*	Amendment to Outstanding 2018 Restricted Stock Unit Awards under the LivaNova PLC 2015 Incentive Award Plan dated June 15, 2020
10.12†*	Amendment to Outstanding 2018, 2019 and 2020 Performance Stock Unit Awards under the LivaNova PLC 2015 Incentive Award Plan, dated June 15, 2020
31.1*	Certification of the Chief Executive Officer of LivaNova PLC pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of the Chief Financial Officer of LivaNova PLC pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1*	Certification of the Chief Executive Officer and Chief Financial Officer of LivaNova PLC pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101*	Interactive Data Files Pursuant to Rule 405 of Regulation S-T formatted in Inline XBRL: (i) the Condensed Consolidated Statements of Income (Loss) for the three and six months ended June 30, 2020 and June 30, 2019, (ii) the Condensed Consolidated Statements of Comprehensive Income (Loss) for the three and six months ended June 30, 2020 and June 30, 2019, (iii) the Condensed Consolidated Balance Sheet as of June 30, 2020 and December 31, 2019, (iv) the Condensed Consolidated Statements of Cash Flows for the six months ended June 30 2020 and June 30, 2019, and (vi) the Notes to the Condensed Consolidated Financial Statements
104*	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

LIVANOVA PLC

Date: July 29, 2020 By: /s/ DAMIEN MCDONALD

Damien McDonald
Chief Executive Officer
(Principal Executive Officer)

LIVANOVA PLC

Date: July 29, 2020 By: /s/ THAD HUSTON

Thad Huston
Chief Financial Officer
(Principal Financial Officer)

EXHIBIT 3.1

ARTICLES OF ASSOCIATION

of

LIVANOVA PLC

PUBLIC LIMITED COMPANY

the "Company"

(effective as from 29 June 2020)

ARTICLES OF ASSOCIATION

CONTENTS

Clause Page

1. MODEL ARTICLES NOT TO APPLY

No model or specimen articles of association prescribed under any legislation shall apply to the Company.

2. INTERPRETATION

2.1 In these Articles (if not inconsistent with the subject or context) the following words shall bear the following meanings:

"**Articles**" means the articles of association for the time being of the Company;

"**Board**" means the board of Directors of the Company from time to time;

"**British Pounds Sterling**" or "**£**" means the lawful currency of the United Kingdom;

"**certificated share**" means a share in the capital of the Company which is not an uncertificated share and references in these Articles to a share being held in certificated form shall be construed accordingly;

"**clear days**" means, in relation to the period of a notice, that period excluding the day on which a notice is given or deemed to be given and the day for which it is given or on which it is to take effect;

"**Company**" means LivaNova PLC, a public company limited by shares, registered in England and Wales with registered number 09451374;

"**Companies Act**" means the UK Companies Act 2006 including any modifications or re-enactment of it for the time being in force;

"**Depositary**" means any depositary, custodian or nominee approved by the Board that holds legal title to shares in the capital of the Company for the purposes of facilitating beneficial ownership of such shares by another person;

"**Director**" means a director of the Company from time to time;

"**electronic address**" means any number or address used for the purposes of sending or receiving notices, documents or information by electronic means;

"**Exchange**" means any securities exchange, including NASDAQ, on which the securities of the Company are traded;

"**Exchange Act**" means the United States Securities Exchange Act of 1934, as amended from time to time, and the regulations promulgated thereunder;

"**Governmental Authority**" shall mean any supranational, national, federal, state, county, municipal, local or foreign government, or other political subdivision thereof, any entity exercising executive, legislative, judicial, regulatory, taxing or administrative functions of or pertaining to government, and any arbitrator or arbitral body or panel of competent jurisdiction;

"**holder**" means, in relation to a share in the capital of the Company, the member whose name is entered in the register as the holder of that share;

"**Independent Director**" means a Director who meets (i) the independence standards of the Relevant Rules applicable to non-controlled domestic US issuers and (ii) in the case of any

appointment to the audit committee of the Company, the independence standards set forth in Rule 10A-3 under the Exchange Act as amended from time to time;

"**member**" means a member of the Company;

"**NASDAQ**" means the National Association of Securities Dealers Automated Quotations;

"**Office**" means the registered office of the Company from time to time;

"**Operator**" means the operator of a relevant system for the purposes of the Uncertificated Securities Rules;

"**Ordinary Shares**" means the ordinary shares in the capital of the Company;

"**paid**" means paid or credited as paid;

"**participating class**" means a class of shares title to which is permitted by the Operator to be transferred by means of a relevant system;

"**person**" means any individual, corporation, limited company, limited liability company, partnership, association, trust, unincorporated organization, Governmental Authority, other entity or group (as defined in Section 13(d) of the Exchange Act);

"**present**" means for the purposes of physical general meetings, present in person or, for the purposes of electronic general meetings, present by electronic means or, for the purposes of meetings which are both physical and electronic, present by either such means;

"**public announcement**" shall mean disclosure in a press release reported by Reuters, the Dow Jones News Service, Associated Press or a comparable news service or other method of public announcement as the Board may deem appropriate in the circumstances or in a document publicly filed by the Company with the US Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act;

"**register**" means the register of members of the Company;

"**Relevant Rules**" means the rules of NASDAQ or any other Exchange;

"**relevant system**" means a computer-based system which allows units of securities to be transferred and endorsed without written instruments pursuant to the Uncertificated Securities Rules;

"**seal**" means the common seal (if any) of the Company and includes an official seal (if any) kept by the Company by virtue of section 49 or 50 of the Companies Act;

"**secretary**" means the secretary of the Company and includes a joint, assistant, deputy or temporary secretary and any other person appointed to perform the duties of the secretary of the Company;

"**Subsidiary**" shall mean, with respect to any person, any corporation, partnership, joint venture or other legal entity of which such person (either alone or through or together with any other Subsidiary), owns, directly or indirectly, a majority of the stock or other equity interests the holders of which are generally entitled to vote for the election of the board of directors or other governing body of such corporation, partnership, joint venture or other legal entity, or any person that would otherwise be deemed a "subsidiary" under Rule 12b-2 promulgated under the Exchange Act;

"**Uncertificated Securities Rules**" means every statute (including any orders, regulations or other subordinate legalisation made under it) relating to the holding, evidencing of title to, or transfer of, uncertificated shares and legislation, rules or other arrangements made under or by virtue of such provisions;

"**uncertificated share**" means a share (or a depositary interest representing such share) of a class which is at the relevant time a participating class, title to which is recorded on the register as being held in uncertificated form and references in these Articles to a share being held in uncertificated form shall be construed accordingly;

"**undertaking**" includes a body corporate, trust or partnership, joint ventures or an unincorporated association carrying on a trade or business with or without a view to profit (and, in relation to an undertaking which is not a company, expressions in these articles appropriate to companies shall be construed as references to the corresponding persons, officers, documents or organs (as the case may be) appropriate to undertakings of that description);

"**United Kingdom**" or "**UK**" means the United Kingdom of Great Britain and Northern Ireland;

"**United States**" or "**US**" means the United States of America; and

"**Voting Shares**" means the Ordinary Shares and any other shares which may be issued with the right to attend and vote at general meetings.

2.2 Subject to the following paragraph, references to any provision of any enactment or of any subordinate legislation (as defined by section 2(1) of the UK Interpretation Act 1978) include any modification or re-enactment of that provision for the time being in force.

2.3 Words and expressions contained in these Articles which are not defined in Article 2 but are defined in the Companies Act have the same meaning as in the Companies Act (but excluding any modification of the Companies Act not in force at the date these Articles took effect) unless inconsistent with the subject or the context.

2.4 In these Articles, unless the context otherwise requires:

(a) words in the singular include the plural, and *vice versa*;

(b) words importing any gender include all genders;

(c) a reference to a person includes a reference to a body corporate (wherever resident or domiciled) and to an unincorporated body of persons;

(d) reference to a document or information being "sent", "supplied" or "given" to or by a person means such document or information, or a copy of such document or information, being sent, supplied, given, delivered, issued or made available to or by, or served on or by, or deposited with or by that person by any method authorised by these Articles, and "sending", "supplying" and "giving" shall be construed accordingly;

(e) references to "electronic platforms" include, without limitation, website addresses and conference call systems, and references to persons attending meetings "by electronic means" means attendance at electronic general meeting via the electronic platform(s) stated in the notice of such meeting;

(f) references to documents "being signed" or to "signature" include a reference to it being executed under hand or under seal or by any other method and, in the case of a communication in electronic form, such references are to its being authenticated as specified in the Companies Act;

(g) references to "writing" include references to typewriting, printing, lithography, photography and any other modes of representing or reproducing words in a legible and non-transitory form, whether sent or supplied in electronic form or made available on a website or otherwise and "written" shall be construed accordingly;

(h) references to "other" and "otherwise" shall not be construed *ejusdem generis* where a wider construction is possible;

(i) references to a power are to power of any kind, whether administrative, discretionary or otherwise;

(j) references to a committee of the Board are to a committee established in accordance with these Articles, whether or not comprised wholly of Directors;

(k) any words following the terms "including", "include", "in particular" or any similar expression shall be construed as illustrative and shall not limit the sense of the words, description, definition, phrase or term preceding those terms;

(l) powers of delegation shall not be restrictively construed but the widest interpretation shall be given to them;

(m) the word "Board" in the context of the exercise of any power contained in these Articles includes any committee consisting of one or more Directors, any Director, any other officer of the Company and any local or divisional board, manager or agent of the Company to which or, as the case may be, to whom the power in question has been delegated by the Board;

(n) no power of delegation shall be limited by the existence or, except where expressly provided by the terms of delegation, the exercise of that or any other power of delegation; and

(o) except where expressly provided by the terms of delegation, the delegation of a power shall not exclude the concurrent exercise of that power by any other body or person who is for the time being authorised to exercise it under these Articles or under another delegation of the power.

2.5 The headings are inserted for convenience only and do not affect the construction of these Articles.

3. LIABILITY OF MEMBERS

The liability of each member is limited to the amount, if any, unpaid on the shares held by that member.

4. SHARES AND SHARE CAPITAL

4.1 The Company may issue Ordinary Shares, which shall be denominated in British Pounds Sterling with a nominal value of £1. Each Ordinary Share shall be issued with one vote attaching to it for voting purposes in respect of all matters on which Voting Shares have

voting rights and shall form a single class with the other Voting Shares for such purposes. The holders of Ordinary Shares shall, in respect of the Ordinary Shares held by them, be entitled to receive notice of, attend and speak at and vote at, general meetings of the Company.

4.2 Notwithstanding Article 4.1, subject to the provisions of the Companies Act, and without prejudice to any rights attached to any existing shares or class of shares:

(a) any share may be issued in one or more classes with such rights or restrictions as the Company may by special resolution determine or, subject to and in default of such determination, as the Board shall determine; and

(b) shares may be issued which are to be redeemed or are to be liable to be redeemed at the option of the Company or the holder and the Board may determine the terms, conditions and manner of redemption of shares provided that it does so before the shares are allotted.

4.3 The Company may exercise all powers of paying commissions or brokerage conferred or permitted by the Companies Act. Subject to the provisions of the Companies Act, any such commission may be satisfied by the payment of cash or by the allotment of fully or partly paid shares or partly in one way and partly in the other and may be in respect of a conditional or an absolute subscription.

4.4 Except as required by law, no person shall be recognised by the Company as holding any share upon any trust. Except as otherwise provided by these Articles or by law, the Company shall not be bound by or recognise (even if having notice of it) any equitable, contingent, future, partial or other claim or any interest in any share (or in any fractional part of a share) except the holder's absolute ownership of the entirety of the share and all the rights attaching to it.

4.5 Under and subject to the Uncertificated Securities Rules, the Board may permit title to shares of any class to be evidenced otherwise than by certificate and title to shares of such a class to be transferred by means of a relevant system and may make arrangements for a class of shares (if all shares of that class are in all respects identical) to become a participating class. Title to shares may only be evidenced otherwise than by a certificate where that class of shares is at the relevant time a participating class. The Board may also, subject to compliance with the Uncertificated Securities Rules, determine at any time that title to any class of shares may from a date specified by the Board no longer be evidenced otherwise than by a certificate or that title to such a class shall cease to be transferred by means of any particular relevant system.

4.6 In relation to a class of shares which is a participating class and for so long as it remains a participating class, no provision of these Articles shall apply or have effect to the extent that it is inconsistent in any respect with:

(a) the holding of shares of that class in uncertificated form;

(b) the transfer of title to shares of that class by means of a relevant system; or

(c) any provision of the Uncertificated Securities Rules,

and, without prejudice to the generality of this Article, no provision of these Articles shall apply or have effect to the extent that it is in any respect inconsistent with the maintenance, keeping or entering up by the Operator, so long as that is permitted or required by the

Uncertificated Securities Rules, of an Operator register of securities in respect of that class of shares in registered form.

4.7 Shares of a class which is at the relevant time a participating class may be changed from uncertificated to certificated form, and from certificated to uncertificated form, in accordance with and subject as provided in the Uncertificated Securities Rules.

4.8 Unless the Board determines otherwise, shares which a member holds in uncertificated form shall be treated as separate holdings from any shares which that member holds in certificated form, but shares in the capital of the Company that fall within a certain class shall not form a separate class of shares from other shares in that class because any share in that class is held in uncertificated form.

4.9 Where the Company is entitled under any provision of the Companies Act or these Articles to sell, transfer or otherwise dispose of, forfeit, re-allot, accept the surrender of, or otherwise enforce a lien over, an uncertificated share, the Company shall be entitled, subject to the provisions of the Companies Act and these Articles to:

(a) require the holder of the uncertificated share by notice in writing to change that share into certificated form within the period specified in the notice and to hold that share in certificated form so long as required by the Company;

(b) appoint any person to take such steps, by instruction given by means of a relevant system or otherwise, in the name of the holder of such share as may be required to effect the transfer of such share and such steps shall be as effective as if they had been taken by the holder of that share; and

(c) take any other action that the Board considers appropriate to achieve the sale, transfer, disposal, forfeiture, reallotment or surrender of that share, or otherwise to enforce a lien in respect of that share.

4.10 Unless the Board determines otherwise or the Uncertificated Securities Rules require otherwise, any shares issued or created out of or in respect of any uncertificated shares shall be uncertificated shares and any shares issued or created out of or in respect of any certificated shares shall be certificated shares.

4.11 The Company shall be entitled to assume that the entries on the record of securities maintained by it in accordance with the Uncertificated Securities Rules and regularly reconciled with the relevant Operator register of securities are a complete and accurate reproduction of the particulars entered in the Operator register of securities and shall accordingly not be liable in respect of any act or thing done or omitted to be done by or on behalf of the Company in reliance on such assumption. Any provision of these Articles which requires or envisages that action will be taken in reliance on information contained in the register shall be construed to permit that action to be taken in reliance on information contained in any relevant record of securities (as so maintained and reconciled).

5. AUTHORITY TO ALLOT SHARES AND DISAPPLICATION OF PRE-EMPTION RIGHTS

5.1 In addition to any similar authority which has not been fully utilised, the Board shall be generally and unconditionally authorised pursuant to section 551 of the Companies Act to:

(a) exercise all of the powers of the Company to allot shares in the Company, and to grant rights to subscribe for or to convert any security into shares in the Company up

to an aggregate nominal amount representing 20 per cent of the number of shares in the capital of the Company as at the date of the adoption of these Articles and after consummation of the transactions contemplated by the transaction Agreement between, amongst others, Sorin S.P.A. and Cyberonics, Inc. first dated 26 February 2015 (in addition to any authority to allot that has not yet expired granted to the Board prior to the date of the adoption of these Articles) for a period expiring (unless previously renewed, varied or revoked by the Company in general meeting) on the date which is five years from the date of the adoption of these Articles by the Company; and

(b) make an offer or agreement which would or might require shares to be allotted, or rights to subscribe for or convert any security into shares to be granted, after expiry of the authority described in this Article 5.1 and the Board may allot shares and grant rights in pursuance of that offer or agreement as if this authority had not expired.

5.2 Subject to these Articles, the Board shall be generally empowered pursuant to section 570 of the Companies Act and section 573 of the Companies Act to allot equity securities (as defined in the Companies Act) for cash, pursuant to the authority conferred by Article 5.1 of these Articles as if section 561(1) of the Companies Act did not apply to the allotment.

5.3 Subject to the provisions of the Companies Act relating to the authority to allot shares and the disapplication of pre-emption rights or otherwise and of any resolution of the Company in general meeting passed pursuant to those provisions, and, in the case of redeemable shares, the provisions of Article 5.4:

(a) all shares for the time being in the capital of the Company shall be at the disposal of the Board; and

(b) the Board may reclassify, allot (with or without conferring a right of renunciation), grant options over, or otherwise dispose of them to such persons on such terms and conditions and at such times as it thinks fit.

5.4 Subject to the provisions of the Companies Act, and without prejudice to any rights attached to existing shares, any share may be issued which is to be redeemed, or is liable to be redeemed at the option of the Company or the holder. The Board may determine the terms, conditions and manner of redemption of any redeemable share so issued provided that it does so before the share is allotted.

5.5 The Board may at any time after the allotment of a share, but before a person has been entered in the register as the holder of the share, recognise a renunciation of the share by the allottee in favour of another person and may grant to an allottee a right to effect a renunciation on such terms and conditions as the Board thinks fit.

6. VARIATION OF RIGHTS

6.1 Subject to the provisions of the Companies Act, if at any time the capital of the Company is divided into different classes of shares, all or any of the rights attached to any existing class may from time to time be varied or abrogated, either while the Company is a going concern or during or in contemplation of a winding up:

(a) in such manner (if any) as may be provided by those rights;

(b) with the written consent of the holders of 75% in nominal value of the issued shares of that class (excluding any shares of that class held as treasury shares), which

consent shall be in hard copy form or in electronic form sent to such address (if any) for the time being specified by or on behalf of the Company for that purpose, or in default of such specification to the Office, and may consist of several documents, each executed or authenticated in such manner as the Board may approve by or on behalf of one or more holders, or a combination of both; or

(c) with the sanction of a special resolution passed at a separate meeting of the holders of the shares of that class,

but not otherwise.

6.2 For the purposes of Article 6.1, if at any time the capital of the Company is divided into different classes of shares, unless otherwise expressly provided by the rights attached to any share or class of shares, those rights shall be deemed not to be varied by:

(a) the issue of further shares ranking *pari passu* with, or subsequent to, that share or class of shares;

(b) the purchase or redemption by the Company of any of its own shares; and

(c) the exercise by the Board of any of the powers contemplated by Articles 38.7, 38.8 and 39.1.

7. SHARE CERTIFICATES

7.1 On becoming the holder of any share other than a share in uncertificated form, every person (other than a person in respect of whom the Company is not required by law to complete and have ready a certificate) shall be entitled, without payment, to have issued to them within two months after allotment or lodgement of a transfer (unless the terms of issue of the shares provide otherwise) one certificate for all the shares of each class held by them (and, upon transferring a part of their holding of shares of any class, to a certificate for the balance of that holding). A holder may elect to receive one or more additional certificates for any of their shares upon payment for every certificate after the first of such reasonable sum as the Board may determine from time to time.

7.2 Every certificate shall:

(a) be executed by the Company in such manner as the Board (having regard to the Companies Act) may approve; and

(b) shall specify the number, class and distinguishing numbers (if any) of the shares to which it relates and the amount or respective amounts paid up on the shares.

7.3 The Company shall not be bound to issue more than one certificate for shares held jointly by more than one person and delivery of a certificate to the senior joint holder shall be sufficient delivery to all of them, and seniority shall be determined in the manner described in Article 21.3. Shares of different classes may not be included in the same certificate.

7.4 If a share certificate is damaged, defaced or worn out or said to be lost, stolen or destroyed, it may be renewed on such terms (if any) as to evidence and indemnity and payment of any exceptional out-of-pocket expenses incurred by the Company in investigating evidence and preparing the requisite form of indemnity as the Board may determine but otherwise free of charge, and (in the case of damage, defacement or wearing out) on delivery of the old certificate to the Company.

7.5 When a member's holding of shares of a particular class increases, the Company may issue such holder with a single, consolidated certificate in respect of all the shares of a particular class which that member holds or a separate certificate in respect of only those shares by which that member's holding has increased. When a member's holding of shares of a particular class is reduced, the Company must ensure that the member is issued with one or more certificates in respect of the number of shares held by the member after that reduction, save that the Company need not (in the absence of a request from the member) issue any new certificate if all the shares which the member no longer holds as a result of the reduction and none of the shares which the member retains following the reduction, were, immediately before the reduction, represented by the same certificate.

8. LIEN

8.1. The Company shall have a first and paramount lien on every share (not being a fully paid share) for all amounts payable to the Company (whether presently or not) in respect of that share. The Board may at any time (generally or in a particular case) waive any lien or declare any share to be wholly or in part exempt from the provisions of Articles 8.1 to 8.4 inclusive. The Company's lien on a share takes priority over any third party's interest in that share and shall extend to all amounts (including without limitation dividends) payable in respect of it.

8.2. The Company may sell, in such manner as the Board determines, any share on which the Company has a lien if an amount in respect of which the lien exists is presently payable and is not paid within 14 clear days after written notice has been sent to the holder of the share, or to the person entitled to it in consequence of the death or bankruptcy of the holder or otherwise by operation of law, demanding payment and stating that if the notice is not complied with the shares may be sold.

8.3. To give effect to the sale the Board may, in the case of a share in certificated form, authorise any person to execute an instrument of transfer of the share sold to, or in accordance with the directions of, the purchaser. In the case of a share in uncertificated form, the Board may, to enable the Company to deal with the share in accordance with the provisions of this Article 8.3, exercise any of the powers of the Company under Article 4.9 to effect the sale of the share. The title of the transferee to the share shall not be affected by any irregularity in or invalidity of the proceedings in reference to the sale and the transferee shall not be bound to see to the application of the purchase money.

8.4. The net proceeds of the sale, after payment of the costs, shall be applied in or towards payment or satisfaction of so much of the amount for which the lien exists as is presently payable, and any residue shall (upon surrender to the Company for cancellation of the certificate for the share sold, in the case of a share in certificated form, and, whether the share sold is in certificated form or uncertificated form, subject to a like lien for any amount not presently payable as existed upon the share before the sale) be paid to the person entitled to the share at the date of the sale.

9. CALLS ON SHARES

9.1 Subject to the terms of allotment, the Board may from time to time make calls upon the members in respect of any amounts unpaid on their shares (whether in respect of nominal value or premium) and each member shall (subject to receiving at least 14 clear days' notice specifying when and where payment is to be made) pay to the Company as required by the notice the amount called on their shares. A call may be required or permitted to be paid by instalments. A call may, by further notice in writing, before receipt by the Company of an amount due under it, be revoked in whole or in part and payment of a call may be postponed in whole or part. A person upon whom a call is made shall remain liable for calls made upon

them notwithstanding the subsequent transfer of the shares in respect of which the call was made.

9.2 A call shall be deemed to have been made at the time when the resolution of the Board authorising the call was passed.

9.3 The joint holders of a share shall be jointly and severally liable to pay all calls in respect of it.

9.4 A call notice need not be issued in respect of sums which are specified, in the terms on which a share is issued, as being payable to the Company in respect of that share (whether in respect of nominal value or premium) on allotment or on a date fixed by or in accordance with the terms of issue; provided that if the due date for payment of such sum has passed and it has not been paid, the holder of the share concerned at the due date for payment will be treated in all respects as having failed to comply with a call notice in respect of that sum and is liable to the same consequences as a person having failed to comply with a call notice as regards the payment of interest and forfeiture.

9.5 If a call or an instalment of a call remains unpaid in whole or in part after it has become due and payable the person from whom it is due shall pay interest on the amount unpaid from the day it became due and payable until it is paid at the rate fixed by the terms of allotment of the shares in question or in the notice of the call or, if no rate is fixed, the rate determined by the Board, not exceeding 15 per cent. per annum, or, if higher, at the appropriate rate (as defined by the Companies Act), but the Board may in respect of any individual member waive payment of interest wholly or in part.

9.6 An amount payable in respect of a share on allotment or at any fixed date, whether in respect of nominal value or premium or as an instalment of a call, shall be deemed to be a call duly made and notified and payable on the date so fixed or in accordance with the terms of the allotment. If it is not paid these Articles shall apply as if that sum had become due and payable by virtue of a call duly made and notified.

9.7 Subject to the terms of allotment, the Board may on the issue of shares differentiate between the allottees or holders in the amounts and times of payment of calls on their shares.

9.8 The Board may, if it thinks fit, receive from any member willing to advance it all or any part of the amount unpaid on any shares held by them (beyond the sums actually called up) as a payment in advance of calls, and such payment shall, to the extent of it, extinguish the liability on the shares in respect of which it is advanced. The Company may pay on all or any of the amount so advanced (until it would, but for such advance, become presently payable) interest on the amount so received, or so much of it as exceeds the sums called up on the shares in respect of which it has been received, at such rate (if any) as the member and the Board agree not exceeding 15 per cent. per annum or, if higher, the appropriate rate (as defined in the Companies Act).

10. FORFEITURE AND SURRENDER

10.1 If a call or an instalment of a call remains unpaid, in whole or in part, after it has become due and payable, the Board may give to the person from whom it is due not less than 14 clear days' written notice requiring payment of the amount unpaid together with any interest which may have accrued and any costs, charges and expenses incurred by the Company by reason of such non-payment. The notice shall name the place where payment is to be made and shall state that if the notice is not complied with the shares in respect of which the call was made will be liable to be forfeited.

10.2 If the notice is not complied with, any share in respect of which it was given may, at any time before the payment required by the notice has been made, be forfeited by a resolution of the Board. The forfeiture shall include all dividends and other amounts payable in respect of the forfeited shares and which have not been paid before the forfeiture. When a share has been forfeited, notice of the forfeiture shall be sent to the person who was the holder of the share before the forfeiture. An entry shall be made promptly in the register opposite the entry of the share showing that notice has been sent, that the share has been forfeited and the date of forfeiture. No forfeiture shall be invalidated by the omission or neglect to send that notice or to make those entries.

10.3 Subject to the provisions of the Companies Act, a forfeited share shall be deemed to belong to the Company and may be sold, re-allotted or otherwise disposed of on such terms and in such manner as the Board determines either to the person who was before the forfeiture the holder or to any other person. At any time before sale, re-allotment or other disposition, the forfeiture may be cancelled on such terms as the Board determines. Where for the purposes of its disposal a forfeited share is to be transferred to any person, the Board may, in the case of a share in certificated form, authorise someone to execute an instrument of transfer and, in the case of a share in uncertificated form, the Board may exercise any of the powers of the Company under Article 4.9. The Company may receive the consideration given for the share on its disposal and register the transferee as the holder of the share.

10.4 A person shall cease to be a member in respect of any share which has been forfeited or surrendered and shall, if the share is held in certificated form, surrender to the Company for cancellation the certificate for the share forfeited but shall remain liable to the Company for all amounts which at the date of forfeiture were presently payable by them to the Company in respect of that share plus interest at the rate at which interest was payable on those amounts before the forfeiture or, if no interest was so payable, at the rate determined by the Board, not exceeding 15 per cent. per annum or, if higher, the appropriate rate (as defined in the Companies Act) from the date of forfeiture until payment. The Board may waive payment wholly or in part or enforce payment without any allowance for the value of the share at the time of forfeiture or for any consideration received on its disposal.

10.5 The Board may accept the surrender of any share which it is in a position to forfeit upon such terms and conditions as may be agreed and, subject to any such terms and conditions, a surrendered share shall be treated as if it had been forfeited.

10.6 The forfeiture of a share shall involve the extinction at the time of forfeiture of all interest in and all claims and demands against the Company in respect of the share and all other rights and liabilities incidental to the share as between the person whose share is forfeited and the Company, except only such of those rights and liabilities as are by these Articles expressly saved, or are by the Companies Act given or imposed in the case of past members.

10.7 A statutory declaration by a Director or the secretary that a share has been duly forfeited on a specified date shall be conclusive evidence of the facts stated in it as against all persons claiming to be entitled to the share. The declaration shall (subject to the execution of an instrument of transfer if necessary, in the case of a share in certificated form) constitute a good title to the share. The person to whom the share is disposed of shall not be bound to see to the application of the consideration, if any, nor shall their title to the share be affected by any irregularity in or invalidity of the proceedings relating to the forfeiture or disposal of the share.

11. TRANSFER OF SHARES

11.1 Without prejudice to any power of the Company to register as member a person to whom the right to any share has been transmitted by operation of law, the instrument of transfer of a share in certificated form may be in any usual form or in any other form which the Board may approve. An instrument of transfer shall be executed by or on behalf of the transferor and, where the share is not fully paid, by or on behalf of the transferee. An instrument of transfer need not be under seal.

11.2 Each member may transfer all or any of their shares which are in uncertificated form by means of a relevant system in such manner provided for, and subject as provided in, the Uncertificated Securities Rules. No provision of these Articles shall apply in respect of an uncertificated share to the extent it requires or contemplates the effecting of a transfer by an instrument in writing or the production of a certificate for the share to be transferred.

11.3 The Board may, in its absolute discretion, refuse to register the transfer of a share in certificated form if it is not fully paid.

11.4 The Board may, in its absolute discretion, also refuse to register the transfer of a share in certificated form:

(a) unless the instrument of transfer:

(i) is lodged, duly stamped, at the Office or such other place as the Board has appointed, accompanied by the certificate for the share to which it relates, or such other evidence as the Board may reasonably require to show the transferor's right to make the transfer, or evidence of the right of someone other than the transferor to make the transfer on the transferor's behalf;

(ii) is in respect of only one class of shares; and

(iii) is in favour of not more than four transferees; or

(b) with respect to a share on which the Company has a lien and a sum in respect of which the lien exists is presently payable and is not paid within 14 clear days after notice has been sent to the holder of the share in accordance with Article 8.2.

11.5 The Board may also refuse to register a transfer of uncertificated shares in any circumstances that are allowed or required by the Uncertificated Securities Rules and the relevant system.

11.6 If the Board refuses to register a transfer of a share, it shall notify the transferor of the refusal and the reasons for it as soon as practicable and in any event within two months after the date on which the instrument of transfer was lodged with the Company (in the case of a transfer of a share in certificated form) or the instructions to the relevant system were received. The Board shall send to the transferee such further information about the reasons for the refusal as the transferee may reasonably request.

11.7 No fee shall be charged for the registration of any instrument of transfer or other document or instruction relating to or affecting the title to any share.

11.8 The Company shall be entitled to retain any instrument of transfer which is registered, but any instrument of transfer which the Board refuses to register shall (except in the case of fraud) be returned to the person lodging it when notice of the refusal is sent.

11.9 Nothing in these Articles shall preclude the Board from recognising a renunciation of the allotment of any share by the allottee in favour of some other person.

12. TRANSMISSION OF SHARES

12.1. If a member dies, the survivor or survivors where they were a joint holder, or their personal representatives where they were a sole holder or the only survivor of joint holders, shall be the only persons recognised by the Company as having any title to their interest, but nothing in this Article 12.1 shall release the estate of a deceased member from any liability in respect of any share which had been solely or jointly held by them.

12.2. A person becoming entitled to a share in consequence of the death or bankruptcy of a member or otherwise by operation of law may, upon such evidence being produced as the Board may properly require, elect either to become the holder of the share or to have some person nominated by them registered as the transferee. If they elect to become the holder they shall give notice to the Company to that effect. If they elect to have another person registered, and the share is a certificated share, they shall execute an instrument of transfer of the share to that person. If they elect to have themselves or another person registered and the share is an uncertificated share, they shall take any action the Board may require (including without limitation the execution of any document) to enable themselves or that person to be registered as the holder of the share. All the provisions of these Articles relating to the transfer of shares shall apply to the notice or instrument of transfer as if it were an instrument of transfer signed by the member and the death or bankruptcy of the member or other event giving rise to the transmission had not occurred.

12.3. A person entitled by transmission to a share in uncertificated form who elects to have some other person registered shall either:

(a) procure that instructions are given by means of the relevant system to effect transfer of such uncertificated share to that person; or

(b) change the uncertificated share to certificated form and execute an instrument of transfer to that person.

12.4. The Board may at any time send a notice requiring any such person referred to in Article 12.2 to elect either to be registered themselves or to transfer the share. If the notice is not complied with within 60 days, the Board may after the expiry of that period withhold payment of all dividends or other amounts payable in respect of the share until the requirements of the notice have been complied with.

12.5. A person becoming entitled to a share by reason of the death or bankruptcy of a member or otherwise by operation of law shall, upon such evidence being produced as the Board may reasonably require as to their entitlement and subject otherwise to Article 12.2, have the same rights in relation to the share to which they would be entitled if they were the holder of the share, and may give a discharge for all dividends and other moneys payable in respect of the share, except that they shall not, before being registered as the holder of the share, be entitled in respect of it to receive notice of, or to attend or vote at, any general meeting or at any separate meeting of the holders of any class of shares in the capital of the Company.

13. SHARE WARRANTS

In accordance with applicable law, the Company shall not issue share warrants to bearer.

14. UNTRACED MEMBERS

14.1. The Company shall be entitled to sell any share held by a member, or any share to which a person is entitled by transmission, if:

(a) during the period of 12 years before the date of the notice referred to in paragraph (b) of this Article 14.1 (the "**relevant period"**) at least three dividends in respect of the share have been declared and all dividend warrants, cheques or other method of payment for amounts payable in respect of the share which have been sent and were payable in a manner authorised by these Articles have remained uncashed; and

(b) the Company has, after the expiration of the relevant period, sent a notice to the last known address that the Company has for the relevant member or person concerned of its intention to sell such share;

(c) before sending the notice referred to in paragraph (b) of this Article 14.1, the Company has made tracing enquiries for the purposes of contacting the member or person entitled by transmission which the Board considers to be reasonable and appropriate in the circumstances; and

(d) during the relevant period and the further period of three months after the date of the notice referred to in paragraph (b) of this Article 14.1, the Company has received no communication from, or on behalf of, such member or person concerned.

14.2. The Company shall also be entitled to sell any additional share issued during the relevant period in right of any share to which Article 14.1 applies (or in right of any share so issued), if the criteria in Article 14.1 are satisfied in relation to the additional share (but as if the words "during the period of 12 years" were omitted from paragraph (a) and the words ", after the expiration of the relevant period," were omitted from paragraph (b)).

14.3. To give effect to the sale of any share pursuant to this Article 14 the Company may:

(a) in the case of a share in certificated form, appoint any person to execute an instrument of transfer of the share, and the instrument shall be as effective as if it had been executed by the holder of, or person entitled by transmission to, the share; and

(b) in the case of a share in uncertificated form, in accordance with the Uncertificated Securities Rules, the Board may issue a written notification to the Operator or any Depositary of such shares requiring the conversion of the share to certificated form.

14.4. An instrument of transfer executed by that person appointed in accordance with Article 14.3(a) shall be as effective as if it had been executed by the holder of, or person entitled by transmission to, the share. An exercise by the Company of its powers in accordance with Article 14.3(b) shall be as effective as if exercised by the holder of or person entitled by transmission to the share. The purchaser shall not be bound to see to the application of the proceeds of sale, nor shall their title to the share be affected by any irregularity in or invalidity of the proceedings relating to the sale. The net proceeds of sale shall belong to the Company which shall be indebted to the member or other person entitled to the share for an amount equal to the net proceeds of the sale and the Company shall enter the name of such former member or other person in the books of the Company as a creditor for that amount. No trust or duty to account shall arise in respect of the net proceeds and no interest shall be payable in respect of the proceeds of sale, which may be employed in the business of the Company or invested in such investments as the Board may think fit.

15. ALTERATION OF CAPITAL

15.1 Subject to the Companies Act and the provisions of these Articles, and without prejudice to any relevant special rights attached to any class of shares, the Company may from time to time:

(a) increase its share capital by allotting new shares;

(b) consolidate and divide all or any of its share capital into shares of larger amount than its existing shares;

(c) sub-divide its shares, or any of them, into shares of smaller amount than its existing shares;

(d) redeem and/ or cancel any of its shares;

(e) redenominate its share capital or any class of share capital; and

(f) determine that, as between the shares resulting from such a sub-division, any of them may have any preference or advantage as compared with the others,

and where any difficulty arises in regard to any consolidation or division, the Board may settle such difficulty as they see fit.

15.2 Whenever any fractions arise as a result of a consolidation or sub-division of shares, the Board may on behalf of the members deal with the fractions as it thinks fit. In particular, without limitation, the Board may sell shares, representing fractions to which any members would otherwise become entitled, to any person (including, subject to the provisions of the Companies Act, the Company) and distribute the net proceeds of sale in due proportion among those members or retain such net proceeds for the benefit of the Company. In the case of shares to be sold being held in certificated form, the Board may authorise some person to execute an instrument of transfer of the shares to, or in accordance with the directions of, the purchaser. In the case of shares to be sold in uncertificated form, the Board may, to enable the Company to deal with the shares in accordance with the provisions of this Article 15.2, do all acts and things it considers necessary or expedient to effect the transfer of the shares to, or in accordance with the directions of, the purchaser, including arranging for any such shares to be entered in the register as shares in certificated form where this makes it easier to sell them. The transferee shall not be bound to see to the application of the purchase money nor shall their title to the shares be affected by any irregularity in or invalidity of the proceedings in reference to the sale.

15.3 All shares created by an increase of the Company's share capital (unless otherwise provided by the terms of allotment of the shares of that class), by consolidation, division or sub-division of its share capital shall be subject to all the provisions of these Articles, including without limitation provisions relating to the payment of calls, lien, forfeiture, transfer and transmission.

16. GENERAL MEETINGS

16.1. The Board shall convene and the Company shall hold general meetings as annual general meetings in accordance with the Companies Act.

16.2. All provisions of these Articles relating to general meetings of the Company shall, *mutatis mutandis*, apply to every separate general meeting of the holders of any class of shares in the capital of the Company, except that:

(a) the necessary quorum at any such meeting (or adjournment thereof) shall be members of that class, present in person or by proxy, who together represent at least a majority of the voting rights attaching to the shares (excluding any shares held as treasury shares) entitled to vote on the business to be transacted.

(b) each holder of shares of the class shall, on a poll, have one vote in respect of every share of the class held by them.

For the purposes of this Article 16.2, where a person is present by proxy or proxies, they are treated only as holding the shares in respect of which those proxies are authorised to exercise voting rights with respect to any matter proposed at the meeting.

16.3. The Board shall determine whether a general meeting is to be held as a physical general meeting or an electronic general meeting. The Board may call general meetings whenever and at such times and places (including electronic platforms) as it shall determine. On requisition of members pursuant to the provisions of the Companies Act, the Board shall promptly convene a general meeting in accordance with the requirements of the Companies Act. At a general meeting called by a requisition (or by requisitionists), no business may be transacted except that stated by the requisition or proposed by the Board.

16.4. A general meeting may also be called under this Article 16 if the Company has fewer than two Directors and the Director (if any) is unable or unwilling to appoint sufficient Directors to make up a quorum or to call a general meeting to do so. In such case, two or more members may call a general meeting (or instruct the secretary to do so) for the purpose of appointing one or more Directors.

17. NOTICE OF GENERAL MEETINGS

17.1. At least 21 clear days' notice must be given to call an annual general meeting. Subject to the provisions of the Companies Act, at least 14 clear days' notice must be given to call all other general meetings. A general meeting (other than an annual general meeting) may be called by shorter notice if it is so agreed by a majority in number of the members having a right to attend and vote at the meeting, being a majority who together hold not less than 95 per cent. in nominal value of the shares giving that right.

17.2. Subject to the provisions of the Companies Act and any relevant special rights or restrictions attached to any shares, notices shall be given to every member as of the record date for such meeting and to the Board. The beneficial owners nominated to enjoy information rights under the Companies Act and the auditors of the Company are entitled to receive all notices of, and other communications relating to, any general meeting which any member is entitled to receive.

17.3. Subject to the provisions of the Companies Act, the notice shall specify:

(a) whether the meeting shall be a physical or electronic general meeting, or a meeting which is both physical and electronic;

(b) for physical general meetings, or meetings which are both physical and electronic, the place (including without limitation any satellite meeting place arranged for the purposes of Article 18.9, which shall be identified as such in the notice), the date and the time of meeting;

(c) for electronic general meetings, or meetings which are both physical and electronic, the time, date and electronic platform for the meeting, which electronic platform may vary from time to time and from meeting to meeting as the Board, in its sole discretion, sees fit;

(d) the general nature of the business to be transacted; and

(e) in the case of an annual general meeting, shall specify the meeting as such.

In the case of a meeting to pass a special resolution, the notice shall specify the intention to propose the resolution as a special resolution.

17.4. Where the Company has given an electronic address in any notice of meeting, any document or information relating to proceedings at the meeting may be sent by electronic means to that address, subject to any conditions or limitations specified in the relevant notice of meeting.

17.5. The accidental omission to send notice of a meeting or resolution, or to send any notification where required by the Companies Act or these Articles in relation to the publication of a notice of meeting on a website, or to send a form of proxy where required by the Companies Act or these Articles, to any person entitled to receive it, or the non-receipt for any reason of any such notice, resolution or notification or form of proxy by that person, whether or not the Company is aware of such omission or non-receipt, shall not invalidate the proceedings at that meeting.

18. PROCEEDINGS AT GENERAL MEETINGS

18.1. No business shall be transacted at a meeting unless a quorum is present but the absence of a quorum shall not preclude the choice or appointment of a chairperson, which shall not be treated as part of the business of the meeting. If the Company has only one member entitled to attend and vote at the general meeting, one qualifying person present at the meeting and entitled to vote is a quorum. Except as otherwise provided by these Articles, a quorum is the members present in person or by proxy who together represent at least a majority of the voting rights attaching to the shares (excluding any shares held as treasury shares) entitled to vote on the business to be transacted.

18.2. If a quorum is not present within half an hour after the time appointed for holding the meeting (or such additional time as the chairperson of the meeting decides to wait), or if during a meeting a quorum ceases to be present, the meeting, if convened on the requisition of members, shall be dissolved, and in any other case shall stand adjourned. The continuation of a general meeting adjourned under this Article 18.2 for lack of quorum shall take place on a day that is not less than 14 days but not more than 28 days after it was adjourned and at such time and/or place as the chairperson of the meeting decides (or, in default, the Board decides). In the case of a general meeting to take place in accordance with this Article 18.2, the Company must give not less than seven clear days' notice of any adjourned meeting.

18.3. At an adjourned meeting the quorum is members present in person or by proxy who together represent at least a majority of the voting rights attaching to the shares (excluding any shares held as treasury shares) entitled to vote on the business to be transacted. If at the adjourned meeting a quorum is not present within 15 minutes after the time appointed for holding the meeting, the meeting shall be dissolved.

18.4. The chairperson (if any) of the Board, or in their absence the senior independent director of the Board, or in the absence of both of them some other Director nominated prior to the meeting by the Board, shall preside as chairperson of the meeting. If none of the chairperson, senior independent director or such other Director (if any) is present within 15 minutes after the time appointed for holding the meeting or is not willing to act as chairperson, the Directors present shall elect one of their number present and willing to act to be chairperson of the meeting, and if there is only one Director present, that Director shall be chairperson of the meeting.

18.5. If no Director is willing to act as chairperson or if no Director is present within 15 minutes after the time appointed for holding the meeting, the members present in person or by proxy and entitled to vote shall choose a member present in person or a proxy of a member or a

person authorised to act as a representative of a corporation in relation to the meeting to be chairperson of the meeting.

18.6. At any physical general meeting or meeting which is both physical and electronic, the Board and/or the chairperson of the meeting may make any arrangement and impose any restriction they consider appropriate to ensure the security of a general meeting, including to direct that any person wishing to attend any general meeting should submit to such searches or other security arrangements (including without limitation, requiring evidence of identity to be produced before entering the meeting and placing restrictions on the items of personal property which may be taken into the meeting) as they consider appropriate under the circumstances. The Board or the chairperson of the meeting may in their absolute discretion refuse entry to, or eject from, any general meeting any person who refuses to submit to a search or otherwise comply with such security arrangements or restrictions.

18.7. The Board or the chairperson of the meeting may take such action, give such direction or put in place such arrangements as they consider appropriate to secure the safety of the people attending the meeting and to promote the orderly conduct of the business of the meeting. Any decision of the chairperson of the meeting on matters of procedure or matters arising incidentally from the business of the meeting, and any determination by the chairperson of the meeting as to whether a matter is of such a nature, shall be final.

At any electronic general meeting or meeting which is both physical and electronic, the Board and/or the chairperson of the meeting may make any arrangement and impose any requirement or restrictions as is: (a) necessary to ensure the identification of those taking part and the security of the electronic communication, and (b) proportionate to those objectives. In this respect, the Company is able to authorise any voting application, system or facility for electronic general meetings as it sees fit.

18.8. Directors may attend and speak at general meetings and at any separate meeting of the holders of any class of shares, whether or not they are members. The chairperson of the meeting may permit other persons who are not members of the Company or otherwise entitled to exercise the rights of members in relation to general meetings to attend and, at the chairperson of the meeting's discretion, speak at a general meeting or at any separate class meeting.

18.9. Without prejudice to Article 18.10, in the case of any general meeting, the Board may, notwithstanding the specification in the notice convening the general meeting of the place at which the chairperson of the meeting shall preside (the "**principal place**"), make arrangements for simultaneous attendance and participation at satellite meeting places, or by way of any other electronic means, allowing persons not present together at the same place to attend, speak and vote at the meeting. The arrangements for simultaneous attendance and participation at satellite meeting places, or other places at which persons are participating via electronic means may include arrangements for controlling or regulating the level of attendance at any particular venue provided that such arrangements shall operate so that all members and proxies wishing to attend the meeting are able to attend at one or other of the venues. The members or proxies at the satellite meeting places, or other places at which persons are participating via electronic means, shall be counted in the quorum for, and be entitled to vote at, the general meeting in question, and that meeting shall be duly constituted and its proceedings valid if the chairperson of the meeting is satisfied that adequate facilities are available throughout the meeting to ensure that the members or proxies attending at the satellite meeting places, or other places at which persons are participating via electronic means, are able to:

(a) participate in the business for which the meeting has been convened;

(b) see and hear all persons who speak (whether through the use of microphones, loud speakers, audio-visual communication equipment or otherwise) in the principal place and any other such place; and

(c) be heard and seen by all other persons so present in the same way.

The chairperson of the general meeting shall be present at, and the meeting shall be deemed to take place at, the principal place.

18.10. Without prejudice to Article 18.9, the Board may resolve to enable persons entitled to attend a general meeting hosted on an electronic platform (such meeting being an "**electronic general meeting**") to do so by simultaneous attendance by electronic means with no member necessarily in physical attendance at the electronic general meeting. The members or their proxies present shall be counted in the quorum for, and entitled to vote at, the general meeting in question, and that meeting shall be duly constituted and its proceedings valid if the chairperson of the general meeting is satisfied that adequate facilities are available throughout the electronic general meeting to ensure that members attending the electronic general meeting who are not present together at the same place may, by electronic means, attend and speak and vote at it.

Nothing in these Articles prevents a general meeting being held both physically and electronically.

18.11. If it appears to the chairperson of the meeting that the facilities at the principal place or any satellite meeting place, or the electronic platform, facilities or security at the electronic general meeting, have become inadequate for the purposes set out in Articles 18.9 or 18.10, then the chairperson of the meeting may, without the consent of the meeting, interrupt or adjourn the general meeting. All business conducted at the general meeting up to the point of the adjournment shall be valid. The provisions of Article 18.17 shall apply to that adjournment.

18.12. The Board may make arrangements for persons entitled to attend a general meeting or an adjourned general meeting to be able to view and hear the proceedings of the general meeting or adjourned general meeting and to speak at the meeting (whether by the use of microphones, loudspeakers, audio-visual communications equipment or otherwise) by attending at a venue anywhere in the world not being a satellite meeting place. Those attending at any such venue shall not be regarded as present at the general meeting or adjourned general meeting and shall not be entitled to vote at the meeting at or from that venue. The inability for any reason of any member present in person or by proxy at such a venue to view or hear all or any of the proceedings of the meeting or to speak at the meeting shall not in any way affect the validity of the proceedings of the meeting.

18.13. The Board may from time to time make any arrangements for controlling the level of attendance at any venue for which arrangements have been made pursuant to Article 18.12 (including without limitation the issue of tickets or the imposition of some other means of selection) it in its absolute discretion considers appropriate, and may from time to time change those arrangements. If a member, pursuant to those arrangements, is not entitled to attend in person or by proxy at a particular venue, they shall be entitled to attend in person or by proxy at any other venue for which arrangements have been made pursuant to Article 18.12. The entitlement of any member to be present at such venue in person or by proxy shall be subject to any arrangement then in force and stated by the notice of meeting or adjourned meeting to apply to the meeting.

18.14. If, after the sending of the notice of a general meeting but before the meeting is held, or after the adjournment of a general meeting but before the adjourned meeting is held (whether or not notice of the adjourned meeting is required), the Board decides that it is impracticable or unreasonable, for a reason beyond its control, to hold (i) the physical general meeting at the declared place (or any of the declared places, in the case of a meeting to which Article 18.9 applies) or (ii) the electronic general meeting on the electronic platform specified in the notice, it may change the place (or any of the declared places, in the case of a meeting to which Article 18.9 applies) or electronic platform and/or postpone the time at which the meeting is to be held. If such a decision is made, the Board may then change the place (or any of the declared places, in the case of a meeting to which Article 18.9 applies) or electronic platform and/or postpone the time again if it decides that it is reasonable to do so. In either case:

(a) no new notice of the meeting need be sent, but the Board shall, if practicable, advertise the date, time and place of, or electronic platform for, the meeting by public announcement and in two newspapers with national circulation in the United Kingdom and shall make arrangements for notices of the change of place or electronic platform and/or postponement to appear at the original place and/or at the original time; and

(b) a proxy appointment in relation to the meeting may, if by means of a document in hard copy form, be delivered to the Office or such other place within the United Kingdom as may be specified by or on behalf of the Company in accordance with Article 22.7(a) or, if in electronic form, be received at the address (if any) specified by or on behalf of the Company in accordance with Article 22.7(b).

18.15. For the purposes of Articles 18.9, 18.11, 18.12, 18.13 and 18.14, in relation to physical general meetings and general meetings which are both physical and electronic, the right of a member to participate in the business of any general meeting shall include, without limitation, the right to speak, vote on a poll, be represented by a proxy and have access to all documents which are required by the Companies Act or these Articles to be made available at the meeting.

18.16. For the purposes of Articles 18.10, 18.11, 18.12, 18.13 and 18.14, in relation to electronic general meetings and general meetings which are both physical and electronic, the right of a member to participate in the business of any general meeting shall include, without limitation the right to speak, vote on a poll, be represented by a proxy and have access (including electronic access) to all documents which are required by the Companies Act or these Articles to be made available at the meeting.

18.17. Without prejudice to any other power of adjournment they may have under these Articles or at common law:

(a) the chairperson of the meeting may, with the consent of a meeting at which a quorum is present (and shall if so directed by the meeting), adjourn the meeting from time to time and from place to place or for an indefinite period; and

(b) the chairperson of the meeting may, without the consent of the meeting, adjourn the meeting before or after it has commenced, to another date, time and/or place which the chairperson of the meeting may decide, if the chairperson of the meeting considers that:

(i) there is not enough room for the number of members and proxies who wish to attend the meeting;

(ii) the behaviour of anyone present prevents, or is likely to prevent, the orderly conduct of the business of the meeting;

(iii) an adjournment is necessary to protect the safety of any person attending the meeting;

(iv) an adjournment is necessary to give all persons entitled to do so a reasonable opportunity of speaking and voting at the meeting; or

(v) an adjournment is otherwise necessary in order for the business of the meeting to be properly carried out.

18.18. Save in accordance with Article 18.2 an adjournment may, subject to the provisions of the Companies Act, be for such time and to such other place (or, in the case of a meeting held at a principal place and a satellite meeting place, such other places) as the chairperson may, in their absolute discretion determine, notwithstanding that by reason of such adjournment some members may be unable to be present at the adjourned meeting. Any such member may nevertheless appoint a proxy for the adjourned meeting either in accordance with Articles 22.2, 22.3 and 22.7 or by means of a document in hard copy form which, if delivered at the meeting which is adjourned to the chairperson or the secretary or any Director, shall be valid even though it is given at less notice than would otherwise be required by Article 22.7(a). Subject to the provisions of the Companies Act, it shall not be necessary to give notice of an adjourned meeting, except that when a meeting is adjourned for 28 days or more, or for an indefinite period, at least seven clear days' notice shall be given specifying the time and place (or places, in the case of a meeting to which Article 18.9 applies) of the adjourned meeting and the general nature of the business to be transacted. No business shall be transacted at an adjourned meeting other than business which might properly have been transacted at the meeting had the adjournment not taken place.

18.19. A resolution put to the vote of a general meeting must be decided on a poll.

18.20. Subject to Article 18.21, a poll shall be taken as the chairperson directs and they may, and shall if required by the meeting, appoint scrutineers (who need not be members) and fix a time and a place for declaring the result of the poll. The result of the poll shall be deemed to be the resolution of the meeting at which the poll was demanded.

18.21. A poll on the election of a chairperson or on a question of adjournment shall be taken immediately. A poll on any other question shall be taken at either the meeting or such time and place as the chairperson directs not being more than 30 days after the meeting.

19. AMENDMENTS TO RESOLUTIONS

19.1 A special resolution to be proposed at a general meeting may be amended by ordinary resolution if:

(a) the chairperson of the meeting proposes the amendment at the general meeting at which the resolution is to be proposed; and

(b) the amendment does not go beyond what is necessary to correct a clear error in the resolution.

19.2 An ordinary resolution to be proposed at a general meeting may be amended by ordinary resolution if:

(a) written notice of the terms of the proposed amendment and of the intention to move the amendment have been delivered in hard copy to the Company at the Office or to such other place as may be specified by or on behalf of the Company for that purpose, or received in electronic form at such address (if any) for the time being specified by or on behalf of the Company for that purpose, at least 48 hours before the time for holding the meeting or the adjourned meeting at which the ordinary resolution in question is proposed (which, if the Board so specifies, shall be calculated taking no account of any part of a day that is not a working day) and the proposed amendment does not, in the reasonable opinion of the chairperson of the meeting, materially alter the substance of the resolution; or

(b) the chairperson of the meeting, in their absolute discretion, decides that the proposed amendment may be considered or voted on.

19.3 With the consent of the chairperson of the meeting, an amendment may be withdrawn by its proposer before it is voted on. If an amendment proposed to any resolution under consideration is ruled out of order by the chairperson of the meeting, the proceedings on the resolution shall not be invalidated by any error in the ruling.

20. PROPOSED MEMBER RESOLUTIONS

20.1 Where a member or members, in accordance with the provisions of the Companies Act, request the Company to (i) call a general meeting for the purposes of bringing a resolution before the meeting, or (ii) give notice of a resolution to be proposed at a general meeting, such request must, in each case and in addition to the requirements of the Companies Act, contain the following:

(a) to the extent that the request relates to the nomination of a Director, as to each person whom the member(s) propose(s) to nominate for election or re-election as a Director, all information relating to such person that is required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for election of Directors, or is otherwise required, in each case pursuant to Regulation 14A under the Exchange Act including such person's written consent to being named in the proxy statement as a nominee and to serving as a Director if elected (or re-elected);

(b) to the extent that that request relates to any business other than the nomination of a Director that the member(s) propose(s) to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting and any material interest in such business of such member(s) (other than where the member is a Depositary) and any Member Associated Person on whose behalf the nomination or proposal is made, individually or in the aggregate, including any anticipated benefit to the member(s) (other than where the member is a Depositary) or the Member Associated Person therefrom on whose behalf the nomination or proposal is made; and

(c) as to the member(s) giving the notice and the Member Associated Person, if any, on whose behalf the nomination or proposal is made:

(i) the name and address of such member(s), as they appear on the Company's books, and of such Member Associated Persons, if any;

(ii) the class and number of shares of the Company held by such member(s) which are owned beneficially by such member(s) and such Member Associated Persons, if any;

(iii) a description of all agreements, arrangements and understandings between such member (other than where the member is a Depositary) and such Member Associated Persons, if any, each proposed nominee and any other person or persons (including their names) in connection with the nomination of a Director or the proposal of any other business by such member(s) or such Member Associated Person, if any;

(iv) any other information relating to such member or Member Associated Person that would be required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies pursuant to Section 14 of the Exchange Act; and

(v) to the extent known by the Member Associated Person or the member(s) giving the notice, the name and address of any other member or Member Associated Person supporting the nominee for election or re-election as a Director or the proposal of other business on the date of such request.

20.2 For the purposes of Article 20, a "**Member Associated Person**" of any member shall mean:

(a) any person controlling, directly or indirectly, or acting as a group with, such member;

(b) any beneficial owner of shares in the capital of the Company owned of record or beneficially by such member; and

(c) any person controlling, controlled by or under common control with such Member Associated Person,

with "**control**" for these purposes being the possession, directly or indirectly of the power to direct or cause the direction of the management and policies of the relevant person, whether through the ownership of shares or otherwise, and "**controlling**" and "**controlled**" having a correlative meaning.

20.3 If a request made in accordance with Article 20.1 does not include the information specified in that Article, or if a request made in accordance with Article 20.1 is not received in the time and manner required by Article 20.4, in respect of such shares which the relevant member(s) hold which are owned beneficially by such member(s) and the Member Associated Persons, if any, on whose behalf the nomination or proposal is made (the "**member default shares**") the relevant member(s) shall not be entitled to vote, either personally or by proxy at a general meeting or at a separate meeting of the holders of that class of shares (or at an adjournment of any such meeting), the member default shares with respect to the matters detailed in the request made in accordance with Article 20.1.

20.4 Without prejudice to the rights of any member under the Companies Act, a member who makes a request to which Article 20.1 relates, must deliver any such request in writing to the secretary at the Office not earlier than the close of business on the one hundred and twentieth (120^{th}) calendar day nor later than the close of business on the ninetieth (90^{th}) calendar day prior to the date of the first anniversary of the preceding year's annual general meeting provided, however, that in the event that the date of an annual general meeting is more than thirty (30) calendar days before or more than sixty (60) calendar days after the date of the first anniversary of the preceding year's annual general meeting, notice by the member must be so

delivered in writing not earlier than the close of business on the one hundred and twentieth (120th) calendar day prior to such annual general meeting and not later than the close of business on the later of (i) the ninetieth (90th) calendar day prior to such annual general meeting and (ii) the tenth (10th) calendar day after the day on which public announcement of the date of such annual general meeting is first made by the Company. In no event shall any adjournment or postponement of an annual general meeting or the public announcement thereof commence a new time period for the giving of a member's notice as described in this Article 20.4.

Notwithstanding anything in the foregoing provisions of this Article 20.4 to the contrary, in the event that the number of Directors to be elected to the Board is increased and there is no public announcement, naming all of the nominees for Director or specifying the size of the increased Board, made by the Company at least one hundred (100) calendar days prior to the date of the first anniversary of the preceding year's annual general meeting, a member's notice required by this Article 20.4 shall also be considered as validly delivered in accordance with this Article 20.4, but only with respect to nominees for any new positions created by such increase, if it shall be delivered to the secretary at the Office not later than 5.00 pm, local time, on the tenth (10th) calendar day after the day on which such public announcement is first made by the Company.

Notwithstanding the provisions of Articles 20.1 or 20.3 or the foregoing provisions of this Article 20.4, a member shall also comply with all applicable requirements of the Companies Act and of the Exchange Act with respect to the matters set forth in Articles 20.1 or 20.3 or in this Article 20.4. Nothing in Article 20.1 or 20.3 or in this Article 20.4 shall be deemed to affect any rights of members to request inclusion of proposals in, nor the right of the Company to omit proposals from, the Company's proxy statement pursuant to Rule 14a-8 (or any successor provision) under the Exchange Act, subject in each case to compliance with the Exchange Act.

21. VOTES OF MEMBERS

21.1 A resolution put to the vote of a general meeting must be taken on a poll. This Article 21.1 may only be removed, amended or varied by resolution of the members passed unanimously at a general meeting of the Company.

21.2 Subject to any relevant special rights or restrictions attached to any shares (including, for the avoidance of doubt, such rights and restrictions set out in Article 4.2 above), on a poll taken at a meeting, every member present and entitled to vote on the resolution has one vote in respect of each Ordinary Share.

21.3 In the case of joint holders the vote of the senior who tenders a vote shall be accepted to the exclusion of the votes of the other joint holders, and seniority shall be determined by the order in which the names of the holders stand in the register.

21.4 A member in respect of whom an order has been made by any court or official having jurisdiction (whether in the United Kingdom or elsewhere) in matters concerning mental disorder may vote by any person authorised for that purpose by that court or official and such person may vote by proxy. Evidence to the satisfaction of the Board of the authority of the person claiming the right to vote shall be delivered to the Office, or such other place as is specified in accordance with these Articles for the delivery or receipt of appointments of proxy, not less than 48 hours before the time appointed for holding the meeting or adjourned meeting at which the right to vote is to be exercised (provided that the Company may specify, in any case, that in calculating the period of 48 hours, no account shall be taken of any part of

a day that is not a working day). Failure to satisfy the requirements of this Article 21.4 shall cause the right to vote not to be exercisable.

21.5 In the case of an equality of votes, the chairperson of the meeting shall not be entitled to a casting vote.

21.6 No member shall have the right to vote at any general meeting or at any separate meeting of the holders of any class of shares, either in person or by representative or proxy, in respect of any share held by them unless all amounts presently payable by them in respect of that share have been paid.

21.7 If at any time the Board is satisfied that any member, or any other person appearing to be interested in shares held by such member, has been duly served with a notice under section 793 of the Companies Act (a "**section 793 notice**") and is in default for the prescribed period in supplying to the Company the information thereby required, or, in purported compliance with such a notice, has made a statement which is false or inadequate in a material particular, then the Board may, in its absolute discretion at any time by notice (a "**direction notice**") to such member direct that:

(a) in respect of the shares in relation to which the default occurred (the "**default shares**", which expression includes any shares issued after the date of the section 793 notice in respect of those shares) the member shall not be entitled to attend or vote either personally or by proxy at a general meeting or at a separate meeting of the holders of that class of shares or on a poll; and

(b) where the default shares represent at least 0.25 per cent. in nominal value of the issued shares of their class (calculated exclusive of any shares held in treasury), in respect of the default shares:

(i) no payment shall be made by way of dividend and no share shall be allotted or distributed pursuant to Articles 39.1, 40.1, and 40.2; and

(ii) no transfer of any default share shall be registered unless:

(A) the member is not themselves in default as regards supplying the information required and it has been proved to the reasonable satisfaction of the Board that no person in default of supplying the information required is interested in any of the shares which are the subject of the transfer; or

(B) the transfer is an approved transfer.

For the purposes of ensuring this Article 21.7(b)(ii) can apply to all shares held by the member, the Company may in accordance with the Uncertificated Securities Rules, issue a written notification to the Operator or any Depositary of the shares requiring conversion into certificated form of any share held by the member in uncertificated form.

21.8 The Company shall send the direction notice to each other person appearing to be interested in the default shares, but the failure or omission by the Company to do so shall not invalidate such notice.

21.9 Any direction notice shall cease to have effect not more than seven days after the earlier of receipt by the Company of:

(a) a notice of an approved transfer, but only in relation to the shares transferred; or

(b) all the information required by the relevant section 793 notice, in a form satisfactory to the Board.

21.10 The Board may at any time send a notice cancelling a direction notice.

21.11 The Company may exercise any of its powers under Article 4.9 in respect of any default share that is held in uncertificated form.

21.12 For the purposes of this Article 21.12 and Articles 21.7, 21.8, 21.9, 21.10 and 21.11:

(a) a person shall be treated as appearing to be interested in any shares if the member holding such shares has sent to the Company a notification under section 793 of the Companies Act which either:

(i) names such person as being so interested; or

(ii) fails to establish the identities of all those interested in the shares, and (after taking into account the said notification and any other relevant section 793 notification) the Company knows or has reasonable cause to believe that the person in question is or may be interested in the shares;

(b) the prescribed period is 14 days from the date of service of the section 793 notice; and

(c) a transfer of shares (or depositary interests representing such shares) is an approved transfer if:

(i) it is a transfer of shares (or depositary interests representing such shares) pursuant to an acceptance of a takeover offer (within the meaning of section 974 of the Companies Act);

(ii) the Board is satisfied that the transfer is made pursuant to a sale of the whole of the beneficial ownership of the shares the subject of the transfer to a party unconnected with the member and with any other person appearing to be interested in the shares; or

(iii) the transfer results from a sale made through any Exchange on which the Company's shares (or depositary interests representing such shares) are normally traded.

21.13 Nothing contained in Article 21.7, 21.8, 21.9, 21.10 and 21.11 limits the power of the Company under section 794 of the Companies Act.

21.14 Any objection to the qualification of any person voting at a general meeting or on a poll or to the counting of, or failure to count, any vote, must be made at the meeting or adjourned meeting or at the time the poll is taken (if not taken at the meeting or adjourned meeting) at which the vote objected to is tendered. Every vote not disallowed at such meeting shall be valid and every vote not counted which ought to have been counted shall be disregarded. Any objection made in due time shall be referred to the chairperson of the meeting whose decision shall be final and conclusive. If a vote is not disallowed by the chairperson of the meeting it is valid for all purposes.

21.15 If any votes are counted which ought not to have been counted, or might have been rejected, the error shall not vitiate the result of the voting unless it is pointed out at the same meeting,

or any adjournment of the meeting, and, in the opinion of the chairperson, it is of sufficient magnitude to vitiate the result of the voting.

22. PROXIES AND CORPORATE REPRESENTATIVES

22.1. A member is entitled to appoint another person as their proxy to exercise all or any of their rights to attend and to speak and vote at a meeting of the Company in respect of the shares to which the proxy appointment relates. The proxy appointment shall, unless it provides to the contrary, be valid for any adjournment of the meeting as well as for the meeting to which it relates. A proxy need not be a member.

22.2. The appointment of a proxy shall be:

(a) in the case of a proxy relating to shares in the capital of the Company held in the name of a Depositary, in a form or manner of communication approved by the Board, which may include, without limitation, a voter instruction form to be provided to the Company by certain third parties on behalf of the Depositary. Subject thereto, the appointment of a proxy may be:

(i) in hard copy form; or

(ii) in electronic form, to the electronic address provided by the Company for this purpose; or

(b) in the case of a proxy relating to the shares to which Article 22.2(a) does not apply:

(i) in any usual form or in any other form or manner of communication which the Board may approve. Subject thereto, the appointment of a proxy may be:

(A) in hard copy form; or

(B) in electronic form, to the electronic address provided by the Company for this purpose;

22.3. The appointment of a proxy, whether made in hard copy form or in electronic form, shall be executed by or on behalf of the appointor in such manner as the Board may approve, which in the case of a corporation may be either under its common seal or under the hand of a duly authorised officer or other person duly authorised for that purpose or in any other manner authorised by its constitution.

22.4. Without limiting these Articles, the Board may in relation to uncertificated shares:

(a) approve the appointment of a proxy by means of an electronic communication in the form of an uncertificated proxy instruction (a properly authenticated dematerialised instruction determined in accordance with the Uncertificated Securities Rules and/or other instruction or notification, which is sent by means of the relevant system and received by such participant in that system acting on behalf of the Company as the Board may prescribe, in such form and subject to such terms and conditions as the Board may prescribe (subject always to the facilities and requirements of the relevant system));

(b) approve supplements to, or amendments or revocations of, any such uncertificated proxy instruction by the same means; and

(c) prescribe the method of determining the time at which any such uncertificated proxy instruction is to be treated as received by the Company or such participant and may treat any such uncertificated proxy instruction which purports to be or is expressed to be sent on behalf of the holder of a share as sufficient evidence of the authority of the person sending that instruction to send it on behalf of that holder.

22.5. The Board may, if it thinks fit, but subject to the provisions of the Companies Act, at the Company's expense (with or without provision for their return prepaid) send hard copy forms of proxy for use at the meeting, or at any separate meeting of the holders of any class of shares, and issue invitations in electronic form to appoint a proxy in relation to the meeting in such form as may be approved by the Board. If, for the purpose of any meeting appointments of proxy or invitations to appoint as proxy a person or one of a number of persons specified in the invitations are issued at the Company's expense, they shall be issued to all (and not to some only) of the members entitled to be sent a notice of the meeting and to vote at it. The accidental omission or the failure due to circumstances beyond the Company's control, to send or make available such an appointment of proxy or give such an invitation to, or the non-receipt thereof by, any member entitled to attend and vote, at a meeting shall not invalidate the proceedings at that meeting.

22.6. The appointment of a proxy shall not preclude a member from attending and voting in person at the meeting or poll concerned. A member may appoint more than one proxy to attend on the same occasion, provided that each such proxy is appointed to exercise the rights attached to a different share or shares held by that member. References in these Articles to an appointment of proxy include references to an appointment of multiple proxies.

22.7. Without prejudice to Article 18.14(b) or the second sentence of Article 18.18, the appointment of a proxy shall:

(a) if in hard copy form, be delivered by hand or by post to the Office or such other place within the United Kingdom as may be specified by or on behalf of the Company for that purpose:

(i) in the notice convening the meeting; or

(ii) in any form of proxy sent by or on behalf of the Company in relation to the meeting,

by the time specified by the Board (as the Board may determine, in compliance with the provisions of the Companies Act) in any such notice or form of proxy; and

(b) if in electronic form, be received at the electronic address to which the appointment of a proxy may be sent by electronic means pursuant to a provision of the Companies Act or to any other address specified by or on behalf of the Company for the purpose of receiving the appointment of a proxy in electronic form:

(i) in the notice convening the meeting;

(ii) in any form of proxy sent by or on behalf of the Company in relation to the meeting;

(iii) in any invitation to appoint a proxy issued by the Company in relation to the meeting; or

(iv) on a website that is maintained by or on behalf of the Company and identifies the Company,

by the time specified by the Board (as the Board may determine, in compliance with the provisions of the Companies Act) in any such method of notification.

The Board may specify, when determining the dates by which proxies are to be lodged, that no account need be taken of any part of a day that is not a working day.

22.8. Subject to the provisions of the Companies Act, where the appointment of a proxy is expressed to have been or purports to have been sent or supplied by a person on behalf of a holder:

(a) the Company may treat the appointment as sufficient evidence of that person's authority to execute the appointment of proxy on behalf of that member; and

(b) the holder shall, if requested by or on behalf of the Company at any time, send or procure the sending of reasonable evidence of the authority under which the appointment of proxy has been made, sent or supplied (which may include, without limitation, a copy of such authority certified notarially or in some other way approved by the Board), to such address and by such time as may be specified in in the request and, if the request is not complied with in any respect, the appointment of proxy may be treated as invalid.

22.9. Subject to Article 22.8, a proxy appointment which is not delivered or received in accordance with Article 22.7 shall be invalid. Where two or more valid appointments of proxy are delivered or received in respect of the same share in relation to the same meeting, the one which was last delivered or received shall, unless otherwise specified in the notice convening the meeting, be treated as replacing and revoking the other or others as regards that share. If the Company is unable to determine which is last delivered or received, or if the Company determines that it has insufficient evidence to decide whether or not a proxy appointment is in respect of the same share, it shall be entitled to determine which proxy appointment (if any) is to be treated as valid. Subject to the Companies Act, the Company may determine at its discretion when a proxy appointment shall be treated as delivered or received for the purposes of these Articles.

22.10. The Company shall not be bound to enquire whether any proxy or corporate representative votes in accordance with the instructions given to them by the member they represent and if a proxy or corporate representative does not vote in accordance with any instructions given by the member by whom they are appointed, this shall not invalidate the proceedings on the resolution and the vote or votes cast shall nevertheless be valid for all purposes.

22.11. Any corporation which is a member of the Company (the "**grantor**") may, by resolution of its directors or other governing body, authorise such person or persons as it thinks fit to act as its representative or representatives at any meeting of the Company or at any separate meeting of the holders of any class of shares. A Director, the secretary or other person authorised for the purpose by the secretary may require all or any of such persons to produce a certified copy of the resolution of authorisation before permitting them to exercise their powers. Such person is entitled to exercise (on behalf of the grantor) the same powers as the grantor could exercise if it were an individual member of the Company. Where a grantor authorises more than one person and more than one authorised person purports to exercise a power in respect of the same shares:

(a) if they purport to exercise the power in the same way as each other, the power is treated as exercised in that way; and

(b) if they do not purport to exercise the power in the same way as each other, the power is treated as not exercised.

22.12. The termination of the authority of a person to act as a proxy or duly authorised representative of a corporation does not affect:

(a) whether they count in deciding whether there is a quorum at a meeting;

(b) the validity of anything they do as chairperson of a meeting;

(c) the validity of a poll demanded by them at a meeting; or

(d) the validity of a vote given by that person,

unless notice of the termination was either delivered or received as mentioned in the following sentence at least 24 hours before the start of the relevant meeting or adjourned meeting or (in the case of a poll taken otherwise than on the same day as the meeting or adjourned meeting) the time appointed for taking the poll. Such notice of termination shall be either by means of a document in hard copy form delivered to the Office or to such other place within the United Kingdom as may be specified by or on behalf of the Company in accordance with Article 22.7(a) or in electronic form received at the address specified by or on behalf of the Company in accordance with Article 22.7(b), regardless of whether any relevant proxy appointment was effected in hard copy form or in electronic form.

22.13. A proxy given in the form of a power of attorney or similar authorisation granting power to a person to vote on behalf of a member at forthcoming meetings in general shall not be treated as valid for a period of more than three years, unless a contrary intention is stated in it.

23. NUMBER OF DIRECTORS AND COMPOSITION OF THE BOARD

23.1. Unless otherwise decided by the Board, the number of Directors shall be ten.

23.2. The composition of the Board (and, if applicable, each Director) will satisfy the requirements of applicable law and the Relevant Rules.

24. APPOINTMENT AND RE-APPOINTMENT OF DIRECTORS

24.1. Subject to these Articles (including but not limited to below), any person who is willing to act as a Director, and is permitted by law to do so, may be appointed to be a Director (either to fill a vacancy or as an additional Director) pursuant to Article 24.6 below, provided that notice is given of the resolution identifying the person concerned by name and:

(a) he is nominated by the Board; or

(b) notice in respect of that person is given by a member qualified to vote at the meeting in accordance with Article 20.1 and Article 20.4 or section 338 of the Companies Act of the intention to nominate that person for appointment stating the particulars which would, if they were so appointed, be required to be included in the Company's register of directors, together with notice by that person of their willingness to be appointed.

24.2. Subject to these Articles and without prejudice to the power of the Company to appoint any person as a Director in accordance with Article 24.1, the board may appoint as a Director any person who is willing to act as such.

24.3. The Directors shall stand for appointment or re-appointment at each annual general meeting of the Company. Each Director shall hold office until the earlier of:

(a) the end of the date of a general meeting of the Company at which it is proposed to vote for the appointment or re-appointment of Directors if he or she fails to be appointed or re-appointed at such general meeting in accordance with Article 24.6, (unless, in the case of such a general meeting where the number of nominees does not exceed the number of Directors to be appointed or re-appointed, the Board resolves that such Director should remain a Director; provided that the Director in question does not participate in any consideration or vote on the matter); or

(b) the date on which he or she ceases to be a Director in accordance with Article 30,

whereupon, in each case, such Director's appointment shall terminate.

24.4. If at the end of an annual general meeting there would otherwise be no Directors, each person to whom Article 24.3 applies:

(a) shall remain in office as a Director until someone else who was not a Director at the commencement of that meeting is appointed as a Director by the Company in general meeting, when they will cease to be a Director; and

(b) may, in their capacity as a Director for so long as they remain in office in accordance with this paragraph, act (with any other persons to whom this paragraph applies as a board) only:

(i) for the purposes of convening and holding a general meeting to appoint Directors; and

(ii) as they consider necessary or appropriate in order to comply with any legal or regulatory requirement applicable to the Company or the Directors or to them as a Director.

24.5. Except as otherwise authorised by the Companies Act, a motion for the appointment of two or more persons as Directors by a single resolution shall not be made unless a resolution that it should be so made has first been agreed to by the meeting without any vote being given against it.

24.6.

(a) At a general meeting of the Company where it is proposed to vote for the appointment or re-appointment of Directors, each Director shall be appointed or re-appointed by a vote of a majority of the votes cast with respect to that Director's appointment (in person or represented by proxy) and entitled to vote on the appointment of Directors. Notwithstanding the foregoing, if the number of nominees exceeds the total number of Directors to be appointed or re-appointed at such general meeting as of the date that is ten (10) days prior to the date the Company files its definitive proxy statement with the Securities and Exchange Commission (regardless of whether or not the proxy statement is thereafter revised or supplemented), then each Director shall be appointed or re-appointed by a plurality of the votes cast (in person or represented by proxy) and entitled to vote on the appointment of Directors.

(b) For purposes of this section:

(i) “majority of the votes cast” means that the number of shares voted “for” a Director exceeds the number of shares voted “against” a Director (with "abstentions" and "broker non-votes" not counted as a vote cast either "for" or "against" that Director's appointment); and

(ii) “plurality of the votes cast” means that the persons who shall be appointed as Directors shall first be the person who receives the greatest number of “for” votes (whether or not a majority of those are votes cast “for” that Director), then second shall be the person who receives the second greatest number of “for” votes (whether or not a majority of those votes are cast “for” that Director), and so on, until the number of directors so appointed equals the total number of Directors to be appointed or re-appointed at that general meeting.

(c) If, at a general meeting where the number of nominees does not exceed the total number of Directors to be appointed or re-appointed at that general meeting, (a) an incumbent Director fails to be appointed pursuant to this Article 24.6 and the Board does not resolve that such Director should remain a Director in accordance with Article 24.3, or (b) a nominee for Director is not appointed and the nominee is not an incumbent Director, then, in each case, the remaining members of the Board may fill the resulting vacancy pursuant to Article 24.2 above.

24.7. A Director shall not be required to hold any shares in the capital of the Company by way of qualification.

24.8. All acts done by:

(a) a meeting of the Board;

(b) a meeting of a committee of the Board;

(c) written resolution of the Directors; or

(d) a person acting as a Director, or a committee,

shall be valid notwithstanding that it is discovered afterwards that there was a defect in the appointment of a person or persons acting or that any of them were disqualified from holding office, had ceased to hold office or were not entitled to vote on the matter in question.

25. DIRECTORS’ FEES AND EXPENSES

25.1. Unless otherwise determined by the Company by ordinary resolution, there shall be paid to the Directors (other than alternate Directors and Directors employed by the Company in an executive capacity) such fees for their services in the office of Director as the Board may from time to time determine (or as the Company may decide by ordinary resolution). The fees shall be deemed to accrue from day to day and shall be distinct from and additional to any remuneration or other benefits which may be paid or provided to any Director pursuant to any other provision of these Articles.

25.2. Subject to the Companies Act and these Articles, Directors’ fees may be payable in any form and, in particular, the Board may arrange for part of a fee payable under this Article 25 to be provided in the form of fully paid shares of the Company. The amount of the fee payable in this way is at the Board’s discretion. The amount of the fee will be applied to purchase or subscribe for shares on behalf of the Director.

25.3. Unless the Board decides otherwise, a Director is not accountable to the Company for any remuneration which they receive as a Director or other officer or employee of the Company's subsidiary undertakings or of any other body corporate in which the Company is interested.

25.4. The Directors may also be paid all reasonable travelling, hotel and other expenses properly incurred by them in connection with their attendance at meetings of the Board, or of committees of the Board, or general meetings or separate meetings of the holders of any class of shares or debentures of the Company or otherwise in connection with the discharge of their duties as Directors.

25.5. Subject to the Companies Act, the Board may make arrangements to provide a Director with funds to meet expenditure incurred (or to be incurred) by them for the purposes of the Company; or enabling them to properly perform their duties as an officer of the Company; or enabling them to avoid incurring any such expenditure.

25.6. Subject to the Companies Act, the Board may enter into an agreement or arrangement with any Director for the provision of any services outside the scope of the ordinary duties of a Director, including but not limited to any Director who holds any executive office or who serves on any committee of the Board. Any such agreement or arrangement may be made on such terms and conditions as (subject to the Companies Act) the Board thinks fit and (without prejudice to any other provision of these Articles) they may remunerate any such Director for such services (whether by way of bonus, commission, participation in profits or otherwise) as it thinks fit. The Board may revoke or vary any such appointment but without prejudice to any rights or claims which the person whose appointment is revoked or varied may have against the Company because of the revocation or variation

26. [RESERVED]

27. POWERS OF THE BOARD

27.1. Subject to the provisions of the Companies Act, these Articles and to any directions given by special resolution to take, or refrain from taking, any specified action, the business of the Company shall be managed by the Board who may exercise all the powers of the Company, including without limitation the power to dispose of all or any part of the undertaking of the Company. No alteration of these Articles and no such direction shall invalidate any prior act of the Board which would have been valid if that alteration had not been made or that direction had not been given. The powers given by Articles 27.1 to 27.3 inclusive shall not be limited by any special power given to the Board by these Articles, and a meeting of the Board at which a quorum is present may exercise all powers exercisable by the Board.

27.2. The Board may exercise the voting power conferred by the shares in any body corporate held or owned by the Company in such manner in all respects as it thinks fit (including without limitation the exercise of that power in favour of any resolution appointing its members or any of them as directors of such body corporate, or voting or providing for the payment of remuneration or the provision of indemnification to the directors of such body corporate).

27.3. The Board may decide to make provision for the benefit of persons employed or formerly employed by the Company or any of its Subsidiaries (other than a Director or former Director or shadow Director) in connection with the cessation or transfer to any person of the whole or part of the undertaking of the Company or that Subsidiary.

27.4. The Board may exercise all the powers of the Company to borrow money and to mortgage or charge all or part of the undertaking, property and assets (present or future) and uncalled capital of the Company and, subject to the Companies Act, to issue debentures and other

securities, whether outright or as collateral security for a debt, liability or obligation of the Company or of a third party.

28. compliance with RELEVANT rules

28.1. For as long as the Ordinary Shares are listed on any Exchange in the United States, the Company shall comply with all corporate governance standards required by the Relevant Rules of such Exchange applicable to non-controlled domestic U.S. issuers, regardless of whether the Company is a foreign private issuer.

29. DELEGATION OF DIRECTORS' POWERS

29.1. Subject to the provisions of these Articles, the Directors may delegate any of the powers which are conferred on them under these Articles:

(a) to a committee consisting of one or more Directors and (if thought fit) one or more other persons, to such an extent and on such terms and conditions as the Board thinks fit; or

(b) to such person by such means (including by power of attorney), to such an extent, and on such terms and conditions, as they think fit including delegation to any Director holding any executive office such of its powers as the Board considers desirable to be exercised by them.

Any such delegation shall, in the absence of express provision to the contrary in the terms of delegation, be deemed to include authority to sub-delegate to one or more Directors (whether or not acting as a committee) or to any employee or agent of the Company all or any of the powers delegated and may be made subject to such conditions as the Board may specify, and may be revoked or altered.

29.2. The power to delegate under Article 29.1 includes the power to delegate the determination of any fee, remuneration or other benefit which may be paid or provided to any Director.

29.3. The Board may appoint any person to any office or employment having a designation or title including the word "director" or attach to any existing office or employment with the Company such a designation or title and may terminate any such appointment or the use of any such designation or title. The inclusion of the word "director" in the designation or title of any such office or employment shall not imply that the holder is a Director, and the holder shall not thereby be empowered in any respect to act as, or be deemed to be, a Director for any of the purposes of these Articles.

Committees

29.4. Subject to Article 29.5, the proceedings of any committee appointed under paragraph (a) of Article 29.1 with two or more members shall be governed by such of these Articles as regulate the proceedings of the Board so far as they are capable of applying, and the quorum at a meeting of any such committee may be fixed by the Board and unless so fixed shall be two.

29.5. The Board may make rules regulating the proceedings of such committees. For as long as the Ordinary Shares are listed on any Exchange, all committees shall comply with the Relevant Rules applicable to non-controlled domestic US issuers for such Exchange. The Board may otherwise make rules of procedure for all or any committees, which prevail over rules derived from these Articles.

30. DISQUALIFICATION AND REMOVAL OF DIRECTORS

30.1. A person ceases to be a Director if:

(a) the period expires, if they have been appointed for a fixed period;

(b) they ceases to be a Director by virtue of any provision of the Companies Act (including, without limitation, section 168 of the Companies Act) or they become prohibited by law from being a Director;

(c) they are deemed unfit or has otherwise been requested to be removed from office by any regulatory authority in any applicable jurisdiction;

(d) they become bankrupt or make any arrangement or composition with their creditors generally;

(e) a registered medical practitioner who is treating that person gives a written opinion to the Company stating that that person has become physically or mentally incapable of acting as a Director and may remain so for more than three months;

(f) they resign their office by notice in writing to the Company and such resignation has taken effect in accordance with its terms;

(g) in the case of a Director who holds any executive office, their appointment as such is terminated or expires and the Board resolves that they should cease to be a Director;

(h) they are absent for more than six consecutive months without permission of the Board from meetings of the Board held during that period and the Board resolves that they should cease to be a Director; or

(i) they die.

30.2. A unanimous resolution of the Directors (excluding the Director the subject of this Article) declaring a Director to have ceased to be a Director under the terms of this Article is conclusive as to the fact and grounds of cessation stated in the resolution.

30.3. If a Director ceases to be a Director for any reason, they shall cease to be a member of any committee of the Board.

31. EXECUTIVE DIRECTORS

31.1 Subject to the provisions of the Companies Act, the Board may appoint one or more of their number to the office of chief executive or to any other executive office of the Company (including, without limitation, to hold the office of president and/or treasurer but excluding that of auditor) and any such appointment may be made for such terms, at such remuneration and on such other conditions as the Board thinks fit.

31.2 Any appointment of a Director to an executive office shall terminate if they cease to be a Director but without prejudice to any rights or claims which they may have against the Company by reason of that cessation. A Director appointed to an executive office shall not cease to be a Director merely because their appointment to such executive office terminates.

31.3 The emoluments of any Directors holding executive office for their services shall be determined by the Board in accordance with Article 25.6, and may be of any description, including without limitation admission to, or continuance of, membership of any scheme

(including any share acquisition scheme) or fund instituted or established or financed or contributed to by the Company for the provision of pensions, life assurance or other benefits for employees or their dependants, or the payment of a pension or other benefits to them or their dependants on or after retirement or death, apart from membership of any such scheme or fund.

32. DIRECTORS' INTERESTS

32.1. For the purposes of these Articles (i) a conflict of interest includes (x) a conflict of interest and duty and (y) a conflict of duties and (ii) interest includes both direct and indirect interests.

32.2. A Director shall be authorised for the purposes of section 175 of the Companies Act to act or continue to act as a Director notwithstanding that at the time of their appointment or subsequently they also hold office as a director of, or holds any other office, employment or engagement with, any other member of the Group.

32.3. For the purposes of section 175 of the Companies Act, the Board may (subject to such terms and conditions, if any, as the Board may think fit to impose from time to time, and always subject to the Board's right to vary or terminate such authorisation) authorise, to the fullest extent permitted by law:

(a) any matter proposed to it in accordance with these Articles which would, if not so authorised, involve a breach of duty by a Director under that section, including, without limitation, any matter which relates to a situation in which a Director has, or can have, an interest which conflicts, or possibly may conflict, with the interests of the Company or which may reasonably be regarded as likely to give rise to a conflict of interest; and

(b) a Director to accept or continue in any office, employment or position in addition to their office as a Director and, without prejudice to the generality of Article 32.3(a), may authorise the manner in which a conflict of interest arising out of such office, employment or position may be dealt with, either before or at the time that such a conflict of interest arises,

provided that any such authorisation will be effective only if:

(i) any requirement as to quorum at the meeting at which the matter is considered is met without counting the Director in question or any other interested Director; and

(ii) the matter was agreed to without such Director voting or would have been agreed to if such Director's votes had not been counted.

The Board may (whether at the time of the giving of the authorisation or subsequently) make any such authorisation subject to any limits or conditions it expressly imposes but such authorisation is otherwise given to the fullest extent permitted. The Board may vary or terminate any such authorisation at any time.

32.4. Subject to the provisions of the Companies Act, and provided that they have disclosed to the Board the nature and extent of any material interest of theirs (unless the circumstances referred to in section 177(5) or section 177(6) of the Companies Act apply, in which case no disclosure is required), a Director notwithstanding their office:

(a) may be a party to, or otherwise interested in, any transaction or arrangement with the Company or in which the Company is otherwise (directly or indirectly) interested;

(b) may (or any firm of which they are a member may) act in a professional capacity for the Company (otherwise than as auditor) or any other body in which the Company is otherwise interested and they or their firm shall be entitled to remuneration for professional services as if they were not a Director; and

(c) may be a Director or other officer of, or employed by, or a party to any transaction or arrangement with, or otherwise interested in, any undertaking:

(i) in which the Company is (directly or indirectly) interested as shareholder, member, partner or otherwise; or

(ii) with which they have such a relationship at the request or direction of the Company.

32.5. A Director shall not, by reason of their office, be accountable to the Company for any remuneration or other benefit which they derive from any office or employment or from any transaction or arrangement or from any interest in any undertaking:

(a) the acceptance, entry into or existence of which has been authorised by the Board pursuant to Article 32.2 (subject, in any case, to any limits or conditions to which such authorisation was subject); or

(b) which they are permitted to hold or enter into by virtue of paragraphs (a), (b) or (c) of Article 32.4,

nor shall the receipt of any such remuneration or other benefit constitute a breach of their duty under section 176 of the Companies Act;

32.6. Any disclosure required by Article 32.4 may be made at a meeting of the Board, by notice in writing or by general notice or otherwise in accordance with section 177 of the Companies Act.

32.7. A Director shall be under no duty to the Company with respect to any information which they obtain or has obtained otherwise than as a Director and in respect of which they owe a duty of confidentiality to another person. However, to the extent that their relationship with that other person gives rise to a conflict of interest or possible conflict of interest, this Article 32.7 applies only if the existence of that relationship has been authorised by the Board pursuant to Article 32.2. In particular, the Director shall not be in breach of the general duties they owe to the Company by virtue of sections 171 to 177 of the Companies Act because they fail:

(a) to disclose any such information to the Board or to any Director or other officer or employees of the Company; and/or

(b) to use or apply any such information in performing their duties as a Director.

32.8. Where the existence of a Director's relationship with another person or undertaking has been authorised by the Board pursuant to Article 32.2 and their relationship with that person or undertaking gives rise to a conflict of interest or possible conflict of interest, the Director shall not be in breach of the general duties they owe to the Company by virtue of sections 171 to 177 of the Companies Act because they:

(a) absents themselves from meetings of the Board at which any matter relating to the conflict of interest or possible conflict of interest will or may be discussed or from the discussion of any such matter at a meeting or otherwise; and/or

(b) makes arrangements not to receive documents and information relating to any matter which gives rise to the conflict of interest or possible conflict of interest sent or supplied by the Company and/or for such documents and information to be received and read by a professional adviser,

for so long as they reasonably believe such conflict of interest or possible conflict of interest subsists, provided that if a majority of the Independent Directors of the Company so determine (excluding any Independent Director who is conflicted in respect of the particular matter), such conflicted Director may be permitted to participate in the relevant meeting (or part thereof), and to receive documents and information relating to the matter, but not to vote (save to the extent that such participation or access to such documents and information would constitute a breach of applicable competition law or regulation).

32.9. The provisions of Articles 32.7 and 32.8 are without prejudice to any equitable principle or rule of law which may excuse the Director from:

(a) disclosing information, in circumstances where disclosure would otherwise be required under these Articles; or

(b) attending meetings or discussions or receiving documents and information as referred to in Article 32.8, in circumstances where such attendance or receiving such documents and information would otherwise be required under these Articles.

32.10. For the purposes of Article 32.4:

(a) a general notice given to the Board that a Director is to be regarded as having an interest of the nature and extent specified in the notice in any transaction or arrangement in which a specified person or class of persons is interested shall be deemed to be a disclosure that the Director has an interest in any such transaction of the nature and extent so specified;

(b) an interest of which a Director has no knowledge and of which it is unreasonable to expect them to have knowledge shall not be treated as an interest of theirs; and

(c) a Director shall be deemed to have disclosed the nature and extent of an interest which consists of them being a Director, officer or employee of any undertaking in which the Company is interested.

33. PROCEEDINGS OF DIRECTORS

33.1. Subject to the provisions of these Articles, the Board may regulate their proceedings as they think fit.

33.2. A Director may, and the secretary at the request of a Director shall, call a meeting of the Board or a committee of the Board by giving notice to each Director. A notice of a meeting of the Board shall be deemed to be properly given to a Director if given to them personally or by word of mouth, or sent in hard copy to them at their last known address or any other address (if any) as may for the time being be specified by them or on their behalf to the Company for this purpose or sent in electronic form to such address (if any) for the time being specified by them or on their behalf to the Company for this purpose. Any Director may waive the requirement for notice of a meeting and any such waiver may be retrospective. Any notice pursuant to this Article 33.2 need not be in writing if the Board so determines and any such determination may be retrospective.

33.3. Questions arising at a meeting shall be decided by a majority of votes of the Directors present at such meeting who are entitled to vote on such question. A Director who is also an alternate Director shall be entitled in the absence of their appointor to a separate vote on behalf of their appointor in addition to their own vote, and an alternate Director who is appointed by two or more Directors shall be entitled to a separate vote on behalf of each of their appointors in the appointors' absence.

33.4. No business shall be transacted at any meeting of the Board unless a quorum is present. The quorum at a meeting of the Board shall be a majority of the Directors then in office. Any Director who ceases to be a Director at a Board meeting may continue to be present and to act as a Director and be counted in the quorum until the termination of the Board meeting if no Director objects. A Director shall not be counted in the quorum present in relation to a matter or resolution on which they are not entitled to vote (or when their vote cannot be counted) but shall be counted in the quorum present in relation to all other matters or resolutions considered or voted on at the meeting. An alternate Director, who is not themselves a Director shall, if their appointor is not present but is entitled to be counted in the quorum, be counted in the quorum.

33.5. The Directors may at any time elect from their number, and remove, a chairperson of the Board and a senior independent director. Unless they are unwilling to do so, the Director appointed as chairperson, or in their stead the Director appointed as senior independent director, shall preside at all meetings of the Board at which they are present. If there is no Director holding either office, or if neither the chairperson nor the senior independent director is present within five minutes after the time appointed for the meeting, or if the chairperson or senior independent director is not willing to preside, the Directors present may choose one of their number to be chairperson of the meeting.

33.6. All acts done by a meeting of the Board, or of a committee of the Board, or by a person acting as a Director, shall, notwithstanding that it may afterwards be discovered that there was a defect in the appointment of any Director, any member of the committee or that any of them were disqualified from holding office, or had vacated office, or were not entitled to vote, or that the meeting was not quorate (provided that the Directors present at the inquorate meeting believed, in good faith, that the meeting was quorate and made all such enquiries as were reasonable in the circumstances to establish that the meeting was quorate), be as valid as if every such person had been duly appointed and was qualified and had continued to be a Director and had been entitled to vote and that the meeting was quorate.

33.7. A resolution in writing agreed to by all the Directors entitled to receive notice of a meeting of the Board or of a committee of the Board and who would be entitled to vote (and whose vote would have been counted) on the resolution at a meeting of the Board or of a committee of the Board shall (if that number is sufficient to constitute a quorum) be as valid and effectual as if it had been passed at a meeting of the Board or (as the case may be) of that committee, duly convened and held. A resolution in writing is adopted when the Company receives from all such Directors a document indicating their agreement to the proposed resolution either by being signed or otherwise authenticated in the manner permitted by the Companies Act for a document in the relevant form, sent in either hard copy or electronic form (including by facsimile transmission, email, electronic board portal or other electronic means of whatever nature approved by the Board from time to time) to such address (if any) for the time being specified by the Company for that purpose. A resolution agreed to by an alternate Director need not also be agreed to by their appointor and, if it is agreed to by a Director who has appointed an alternate Director, it need not also be agreed to by the alternate Director in that capacity.

33.8. Without prejudice to Article 33.1, a meeting of the Board or of a committee of the Board may consist of a conference between Directors who are not all in one place, but each of whom is able (whether directly or by conference telephone or by any other form of communication equipment) to hear each of the other participating Directors, and to speak to and be heard by each of the others simultaneously. A Director taking part in such a conference shall be deemed to be present in person at the meeting and shall be entitled to vote and be counted in the quorum accordingly and the word "meeting" in these Articles shall be construed accordingly. Such meeting shall be deemed to take place where it is convened to be held or (if no Director is present in that place) where the largest group of those participating is assembled, or, if there is no such group, where the chairperson of the meeting is located.

33.9. Except as otherwise provided by these Articles, a Director shall not vote at a meeting of the Board or a committee of the Board on any resolution concerning a matter in which they have, directly or indirectly, an interest (other than an interest in shares, debentures or other securities of, or otherwise in or through, the Company) which can reasonably be regarded as likely to give rise to a conflict with the interests of the Company, unless their interest arises only because the resolution falls within one or more of the following matters:

(a) the giving of a guarantee, security or indemnity in respect of money lent to, or an obligation incurred by them at the request of, or for the benefit of, the Company or any of its subsidiary undertakings;

(b) the giving of a guarantee, security or indemnity in respect of a debt or obligation of the Company or any of its subsidiary undertakings for which the Director has assumed responsibility (in whole or in part and whether alone or jointly with others) under a guarantee or indemnity or by the giving of security;

(c) a proposal for the Company: (i) to provide them with an indemnity permitted by applicable law; (ii) to provide them with funds in circumstances permitted by applicable law to meet their defence expenditure in respect of any civil or criminal proceedings or regulatory investigation or other regulatory action or in connection with any application for any category of relief permitted by applicable law; or (iii) to do anything to enable them to avoid incurring any such expenditure;

(d) a contract, arrangement, transaction or proposal concerning an offer of shares, debentures or other securities of the Company or any of its subsidiary undertakings for subscription, purchase or exchange, in which offer they are or may be entitled to participate as holder of securities or in the underwriting or sub-underwriting of which they are to participate;

(e) a contract, arrangement, transaction or proposal concerning any other undertaking in which they or any person connected with them is interested, directly or indirectly, and whether as an officer, shareholder, member, partner, creditor or otherwise if they and any persons connected with them do not to their knowledge hold an interest (as that term is used in sections 820 to 825 of the Companies Act) representing one per cent. or more of either any class of the equity share capital of such undertaking (or any other undertaking through which their interest is derived) or of the voting rights available to shareholders, members, partners or equivalent of the relevant undertaking (or any interest being deemed for the purpose of this Article 33.9 to be likely to give rise to a conflict with the interests of the Company in all circumstances);

(f) a contract, arrangement, transaction or proposal for the benefit of employees and Directors and/or former employees and Directors of the Company or any of its subsidiary undertakings and/or members of their families (including a spouse or civil

partner or a former spouse or former civil partner) or any person who is or was dependent on such persons, including but without being limited to a retirement benefits scheme and an employees' share scheme, which does not accord to any Director any privilege or advantage not generally accorded to the employees and/or former employees to whom such arrangement relates; and

(g) a contract, arrangement, transaction or proposal concerning any insurance against any liability which the Company is empowered to purchase or maintain for, or for the benefit of, any Directors or for persons who include Directors.

33.10. The Company may by ordinary resolution suspend or relax to any extent, either generally or in respect of any particular matter, any provision of these Articles prohibiting a Director from voting at a meeting of the Board or of a committee of the Board or ratify any transaction not duly authorised by reason of contravention of any such provision. The Board may suspend or relax to any extent, in respect of any particular matter, any provision of these Articles prohibiting a Director from voting at a meeting of the Board or of a committee of the Board.

33.11. Where proposals are under consideration concerning the appointment (including without limitation fixing or varying the terms of appointment) of two or more Directors to offices or employments with the Company or any undertaking in which the Company is interested, the proposals may be divided and considered in relation to each Director separately In such cases each of the Directors concerned shall be entitled to vote in respect of each resolution except that concerning their own appointment.

33.12. If a question arises at a meeting of the Board, or a meeting of a committee of the Board, as to the right of a Director to vote, the question may, before the conclusion of the meeting, be decided by a resolution of a majority of Directors present at the meeting (other than the Director concerned and any other Director having a like interest as such Director) and such resolution shall be final and conclusive.

34. MINUTES

34.1. The Directors shall cause minutes to be made in books kept for the purpose:

(a) of all appointments of officers made by the Directors; and

(b) of all proceedings at meetings of the Company, of the holders of any class of shares in the capital of the Company, and of the Board, and of committees of the Board, including the names of the Directors present at each such meeting.

34.2. Any such minutes, if purporting to be signed by the chairperson of the meeting to which they relate or of the meeting at which they are read, shall be sufficient evidence without any further proof of the facts therein stated.

35. SECRETARY

Subject to the provisions of the Companies Act, the Company Secretary of the Company shall be appointed by the Board for such term, at such remuneration and on such other conditions as they think fit. Any such Company Secretary so appointed may be removed by the Board but without prejudice to any claim for damages for breach of any contract of service between them and the Company.

36. THE SEAL

36.1. The seal, if any, shall be used only by the authority of a resolution of the Board or of a committee of the Board. The Board may determine whether any instrument to which the seal is affixed, shall be signed and, if it is to be signed, who shall sign it. Unless otherwise determined by the Board:

(a) share certificates and, subject to the provisions of any instrument constituting the same, certificates issued under the seal in respect of any debentures or other securities, need not be signed and any signature may be applied to any such certificate by any mechanical, electronic or other means or may be printed on it; and

(b) every other instrument to which the seal is affixed shall be signed by two authorised persons or by a Director in the presence of a witness who attests the signature and for this purpose an authorised person is any Director or the secretary of the Company.

36.2. Any document may be executed under the seal by impressing the seal by mechanical means or by printing the seal or a facsimile of it on the document or by applying the seal or a facsimile of it by any other means to the document. A document executed, with the authority of a resolution of the Board, in any manner permitted by section 44(2) of the Companies Act and expressed (in whatever form of words) to be executed by the Company has the same effect as if executed under the seal.

36.3. Subject to the provisions of the Companies Act, the Company may have an official seal for use in any place.

37. REGISTERS

37.1. Subject to the provisions of the Companies Act, the Company may keep an overseas or local register in any place, and the Board may make, amend and revoke any regulations it thinks fit about the keeping of that register.

37.2. Any Director or the secretary or any other person appointed by the Board for the purpose shall have power to authenticate and certify as true copies of and extracts from:

(a) any document comprising or affecting the constitution of the Company, whether in hard copy form or electronic form;

(b) any resolution passed by the Company, the holders of any class of shares in the capital of the Company, the Board or any committee of the Board, whether in hard copy form or electronic form; and

(c) any book, record and document relating to the business of the Company, whether in hard copy form or electronic form (including without limitation the accounts).

If certified in this way, a document purporting to be a copy of a resolution, or the minutes or an extract from the minutes of a meeting of the Company, the holders of any class of shares in the capital of the Company, the Board or a committee of the Board, whether in hard copy form or electronic form, shall be conclusive evidence in favour of all persons dealing with the Company in reliance on it or them that the resolution was duly passed or that the minutes are, or the extract from the minutes is, a true and accurate record of any proceedings at a duly constituted meeting.

38. DIVIDENDS

38.1 The rights as regarding income attaching to the Ordinary Shares shall be as set out in this Article.

38.2 Each Ordinary Share shall be entitled to receive all of the distributable profits available and declared by the Board for distribution by way of a dividend amongst the holders of the Ordinary Shares. Each Ordinary Share shall rank equally with all other Ordinary Shares in the capital of the Company for any dividend and shall receive its pro rata portion of any dividend rounded to the nearest whole number (such rounding to be in the sole discretion of the Board).

38.3 Subject to the provisions of the Companies Act, the Company may by ordinary resolution declare dividends in accordance with the respective rights of the members, but no dividend shall exceed the amount recommended by the Board.

38.4 Subject to the provisions of the Companies Act and to Article 38.8, the Board may pay interim dividends, whether or not satisfied wholly or partly by the distribution of assets including without limitation paid up shares or debentures of another body corporate, of such amounts and on such dates and in respect of such periods as they may think fit if it appears to them that they are justified by the profits of the Company available for distribution. If the share capital is divided into different classes, the Board may:

(a) pay interim dividends on shares which confer deferred or non-preferred rights with regard to dividend as well as on shares which confer preferential rights with regard to dividend, but no interim dividend shall be paid on shares carrying deferred or non-preferred rights if at the time of payment, any preferential dividend is in arrears; and

(b) pay at intervals settled by them any dividend payable at a fixed rate if it appears to them that the profits available for distribution justify the payment;

If the Board acts in good faith they shall not incur any liability to the holders of shares conferring preferred rights for any loss they may suffer by the lawful payment of an interim dividend on any shares having deferred or non-preferred rights.

38.5 Dividends may be declared and paid in any currency or currencies that the Board shall determine. The Board may also determine the exchange rate and the relevant date for determining the value of any dividend in any currency.

38.6 Subject to the provisions of the Companies Act and except as otherwise provided by these Articles or the rights attached to shares, all dividends shall be declared and paid according to the amounts paid up on the shares on which the dividend is paid. If any share is issued on terms that it ranks for dividend as from a particular date, it shall rank for dividend accordingly In any other case (and except as aforesaid), dividends shall be apportioned and paid proportionately to the amounts paid up on the shares during any portion or portions of the period in respect of which the dividend is paid. For the purpose of this Article 38.6, an amount paid up on a share in advance of a call shall be treated, in relation to any dividend declared after the payment but before the call, as not paid up on the share.

38.7 Subject to Article 38.8, a general meeting declaring a dividend may, upon the recommendation of the Board, by ordinary resolution direct that it shall be satisfied wholly or partly by the distribution of assets including without limitation paid up shares or debentures of another body corporate. Where any difficulty arises in regard to the distribution, the Board may settle the same as they think fit and in particular (but without limitation) may issue fractional certificates (or ignore fractions) and fix the value for distribution of any assets, and may determine that cash shall be paid to any member on the basis of the value so fixed in order to adjust the rights of members, and may vest any assets in trustees.

38.8 Unless otherwise recommended by the Board and approved by an ordinary resolution of the Company, where the securities of another body corporate are distributed, they must only be distributed to holders of Ordinary Shares on the basis that the holders of Ordinary Shares receive the identical class of securities on an equal per share basis.

38.9 Any dividend or other money payable in respect of a share may be paid:

(a) in cash;

(b) by cheque or warrant made payable to or to the order of the holder or person entitled to payment;

(c) by direct debit, bank or other funds transfer system to the holder or person entitled to payment or, if practicable, to a person designated by notice to the Company by the holder or person entitled to payment; or

(d) by any other method approved by the Board and agreed (in such form as the Company thinks appropriate) by the holder or person entitled to payment.

For uncertificated shares, any payment may be made by means of the relevant system (subject always to the facilities and requirements of the relevant system) and such payment may be made by the Company or any other person on its behalf sending an instruction to the Operator to credit the cash memorandum account of the holder or joint holder of such shares or, if permitted by the Company, of such person as the holder or joint holders may in writing direct.

38.10 If two or more persons are registered as joint holders of any share, or are entitled by transmission jointly to a share, the Company may:

(a) pay any dividend or other moneys payable in respect of the share to any one of them and any one of them may give effectual receipt for the payment; and

(b) for the purpose of Article 38.9, rely in relation to the share on the written direction, designation or agreement of, or notice to the Company by, any one of them.

38.11 A cheque or warrant may be sent by post:

(a) where a share is held by a sole holder, to the registered address of the holder of the share;

(b) if two or more persons are the holders of the share, to the registered address of the person who is first named in the register;

(c) if two or more persons are holders of the share or are jointly entitled to it by reason of the death or bankruptcy of the holder or otherwise by operation of law, as if it were a notice to be sent under Article 45.12; or

(d) in any case to such person and to such address as the person entitled to payment may direct by notice to the Company.

38.12 Every cheque or warrant shall be made payable to the order of or to the person or persons entitled or to such other person as the person or persons entitled may by notice direct and payment of the cheque or warrant shall be a good discharge to the Company. Every cheque or warrant sent or transfer of funds made by the relevant bank or relevant system in accordance with these Articles shall be at the risk of the holder or person entitled. The Company shall

have no responsibility for any sums lost or delayed in the course of payment by any method used by the Company in accordance with Article 38.9.

38.13 The Company may cease to send any cheque or warrant (or to use any other method of payment) for any dividend payable in respect of a share if:

(a) in respect of at least two consecutive dividends payable on that share the cheque or warrant has been returned undelivered or remains uncashed (or that other method of payment has failed); or

(b) following one such occasion, reasonable enquiries have failed to establish any new address of the holder;

but, subject to the provisions of these Articles, shall recommence sending cheques or warrants (or using another method of payment) for dividends payable on that share if the person or persons entitled so request and have supplied in writing a new address or account to be used for that purpose.

38.14 The Board may deduct from any dividend or other moneys payable to any member in respect of a share any moneys presently payable by them to the Company in respect of that share. Where a person is entitled by transmission to a share, the Board may retain any dividend payable in respect of that share until that person (or that person's transferee) becomes the holder of that share.

38.15 No dividend or other money payable in respect of a share shall bear interest against the Company, unless otherwise provided by the rights attached to the share.

38.16 Any dividend which has remained unclaimed for 12 years from the date when it became due for payment shall, if the Board so resolve, be forfeited and cease to remain owing by the Company. The payment of any unclaimed dividend or other money payable in respect of a share may (but need not) be paid by the Company into an account separate from the Company's own account. Such payment shall not constitute the Company a trustee in respect of it.

39. SCRIP DIVIDENDS

39.1. The Board may offer any holder of shares the right to elect to receive shares, credited as fully paid, instead of cash in respect of the whole (or some part, to be determined by the Board) of all or any dividend subject to the following terms and conditions:

(a) Each holder of shares shall be entitled to that number of new shares as are together as nearly as possible equal in value to (but not greater than) the cash amount (disregarding any tax credit) of the dividend that such holder would have received by way of dividend but elects to forego (each a "**new share**"). For this purpose, the value of each new share shall be:

(i) equal to the average quotation for the relevant shares in the capital of the Company, that is, the average of the closing prices for those shares on the Exchange or quotation service on which the Company's shares are listed or quoted as derived from such source as the Board may deem appropriate, on the day on which such shares are first quoted ex the relevant dividend and the four subsequent business days; or

(ii) calculated in any other manner the Board considers fit;

but shall never be less than the par value of the new share. A certificate or report by the auditors as to the value of a new share in respect of any dividend shall be conclusive evidence of that value.

(b) Each holder of shares shall only be entitled to new Ordinary Shares.

(c) On or as soon as possible after announcing that any dividend is to be declared or recommended, the Board, if it intends to offer an election in respect of that dividend, shall also announce that intention. If, after determining the basis of allotment, the Board decides to proceed with the offer, it shall notify the holders of shares of the terms and conditions of the right of election offered to them, specifying the procedure to be followed and place at which, and the latest time by which, elections or notices amending or terminating existing elections must be delivered in order to be effective.

(d) The Board shall not proceed with any election unless the Board has sufficient authority to allot shares and sufficient reserves or funds that may be appropriated to give effect to it after the basis of allotment is determined.

(e) The Board may exclude from any offer any holders of shares where the Board believes the making of the offer to them would or might involve the contravention of the laws of any territory or that for any other reason the offer should not be made to them.

(f) The dividend (or that part of the dividend in respect of which a right of election has been offered) shall not be payable in cash on shares in respect of which an election has been made (the "**elected shares**") and instead such number of new shares shall be allotted to each holder of elected shares as is arrived at on the basis stated in paragraph (a) of this Article 39.1. For that purpose the Board shall appropriate out of any amount for the time being standing to the credit of any reserve or fund (including without limitation the profit and loss account), whether or not it is available for distribution, a sum equal to the aggregate nominal amount of the new shares to be allotted and apply it in paying up in full the appropriate number of new shares for allotment and distribution to each holder of elected shares as is arrived at on the basis stated in paragraph (a) of this Article 39.1.

(g) The new shares when allotted shall rank *pari passu* in all respects with the fully paid shares of the same class then in issue except that they shall not be entitled to participate in the relevant dividend in lieu of which they were allotted.

(h) No fraction of a share shall be allotted. The Board may make such provisions as it thinks fit for any fractional entitlements including without limitation payment in cash to holders in respect of their fractional entitlements, provision for the accrual, retention or accumulation of all or part of the benefit of fractional entitlements to or by the Company or to or by or on behalf of any holder or the application of any accrual, retention or accumulation to the allotment of fully paid shares to any holder.

(i) The Board may do all acts and things it considers necessary or expedient to give effect to the allotment and issue of any share pursuant to this Article 39.1 or otherwise in connection with any offer made pursuant to this Article 39.1 and may authorise any person, acting on behalf of the holders concerned, to enter into an agreement with the Company providing for such allotment or issue and incidental matters Any agreement made under such authority shall be effective and binding on all concerned.

(j) The Board may, at its discretion, amend, suspend or terminate any offer pursuant to the above.

40. CAPITALISATION OF PROFITS

40.1 The Board may, subject to the provisions of this Article 40.1, Article 40.2 and Article 40.3 inclusive, resolve to capitalise any undistributed profits of the Company not required for paying any preferential dividend (whether or not they are available for distribution) or any sum standing to the credit of any reserve or fund of the Company (including without limitation the Company's share premium account and capital redemption reserve, if any) and:

(a) appropriate the sum resolved to be capitalised to the members or any class of members on the record date specified in the relevant resolution who would have been entitled to it if it were distributed by way of dividend and in proportion to the nominal amounts of the shares (whether or not fully paid) held by them respectively which would entitle them to participate in a distribution of that sum if the shares were fully paid and the sum were then distributable and were distributed by way of dividend;

(b) apply such sum on their behalf either in or towards paying up the amounts, if any, for the time being unpaid on any shares held by them respectively, or in paying up in full shares, debentures or other obligations of the Company of a nominal amount equal to that sum but the share premium account, the capital redemption reserve, and any profits which are not available for distribution may, for the purposes of this Article 40.1, only be applied in paying up shares to be allotted to members credited as fully paid;

(c) allot the shares, debentures or other obligations credited as fully paid to those members or as they may direct, in those proportions, or partly in one way and partly in the other;

(d) resolve that any shares so allotted to any member in respect of a holding by them of any partly paid shares shall so long as such shares remain partly paid rank for dividend only to the extent that the latter shares rank for dividend;

(e) where shares or debentures become, or would otherwise become, distributable under this Article 40.1 in fractions, make such provision as the Board thinks fit for any fractional entitlements including without limitation authorising their sale and transfer to any person, resolving that the distribution be made as nearly as practicable in the correct proportion but not exactly so, ignoring fractions altogether or resolving that cash payments be made to any members in order to adjust the rights of all parties;

(f) authorise any person to enter on behalf of all the members concerned into an agreement with the Company providing for either:

(i) the allotment to members respectively, credited as fully paid, of any further shares, debentures or other obligations to which they are entitled upon such capitalisation; or

(ii) the payment up by the Company on behalf of the members of the amounts, or any part of the amounts, remaining unpaid on their existing shares by the application of their respective proportions of the sums resolved to be capitalised,

and any agreement made under such authority being binding on all such members; and

(g) generally do all acts and things required to give effect to such resolution as aforesaid.

40.2 Subject to Article 40.3, in exercising its authority under Article 40.1, unless recommended by the Board and approved by an ordinary resolution of the Company, the Board may only resolve to capitalise any undistributed profits of the Company not required for paying any preferential dividend (whether or not they are available for distribution) or any sum standing to the credit of any reserve or fund of the Company (including without limitation the Company's share premium account and capital redemption reserve, if any) and to issue and allot Ordinary Shares, as otherwise contemplated by Article 40.1, to holders of Ordinary Shares on an equal per share basis.

40.3

(a) Where, pursuant to a share incentive scheme approved by shareholders of the Company, the Company has granted awards ("**awards**" for the purposes of this Article 40.3 being options or other incentive awards, including, without limitation, stock appreciation rights, restricted stock units, performance stock units and restricted stock awards) to subscribe for or with respect to shares on terms which provide (*inter alia*) for adjustments to the subscription, exercise or base price payable on the exercise of such award or to the number of shares to be allotted upon the exercise, or with respect to, such award, in the event of any increase or reduction in, or other reorganisation of, the Company's issued share capital and an otherwise appropriate adjustment would result in the subscription, exercise or base price for any share being less than its nominal value, then, subject to the provisions of the Companies Act, the Board may, on the exercise of any of the awards concerned and payment of the subscription, exercise or base price which would have applied had such adjustment been made, capitalise any such profits or other sum as is mentioned in Article 40.1 above (as if such Article 40.1 did not make reference to Article 40.2) to the extent necessary to pay up the unpaid balance of the nominal value of the shares which fall to be allotted on the exercise of such awards and apply such amount in paying up such balance and allot shares fully paid accordingly. The provisions of Article 40.1 shall apply mutatis mutandis to this Article 40.3(a) as if Article 40.1 did not make reference to Article 40.2.

(b) Where, pursuant to a share incentive scheme approved by shareholders of the Company, the Company has granted awards to subscribe for or with respect to shares, then, subject to the provisions of the Companies Act, the Board may, on the grant, exercise or vesting of any of the awards concerned, capitalise any such profits or other sum as is mentioned in Article 40.1 above (as if such Article 40.1 did not make reference to Article 40.2) to the extent necessary to pay up the unpaid balance of the nominal value of the shares which fall to be allotted on the grant, exercise or vesting of such awards and apply such amount in paying up such balance and allot shares fully paid accordingly. The provisions of Article 40.1 shall apply mutatis mutandis to this Article 40.3(b) as if Article 40.1 did not make reference to Article 40.2.

(c) Subject to the provisions of the Companies Act, the Board may, in connection with the exercise of any warrant (or other right) to subscribe for shares granted by the Company:

(i) capitalise any undistributed profits of the Company (whether or not they are available for distribution) and/or any sum standing to the credit of any reserve

or fund of the Company (including without limitation any share premium account, capital redemption reserve, merger relief reserve and/or revaluation reserve);

(ii) apply any capitalised sum in paying up the nominal value of shares to be allotted on the exercise of any such warrant (or other right to subscribe); and

(iii) allot shares credited as fully paid to the person(s) entitled under the warrant (or other right to subscribe) or as they may direct.

41. RETURN OF CAPITAL

41.1. The rights as regards return of capital attaching to the Ordinary Shares shall be as set out in this Article.

41.2. On a return of capital on a liquidation, reduction of capital or otherwise, the surplus assets of the Company available for distribution among the members shall be applied in the same order of priority as applies in respect of dividends and distributions set out in Article 38 (or as close thereto as is possible).

42. CHANGE OF THE COMPANY'S NAME

The Company's name may be changed by resolution of the Board.

43. RECORD DATES

43.1 Notwithstanding any other provision of these Articles, and subject to the Companies Act, but without prejudice to any special rights attached to any shares, the Company or the Board may:

(a) fix any date as the record date for any dividend, distribution, allotment or issue, which shall not be more than 60 days prior to such action;

(b) for the purpose of determining which persons are entitled to attend and vote at a general meeting of the Company, or a separate general meeting of the holders of any class of shares in the capital of the Company, and how many votes such persons may cast, specify in the notice of meeting a time by which a person must be entered on the register in order to have the right to attend or vote at the meeting provided that such time shall not be more than 60 days nor less than 10 days before the date of such meeting and changes to the register after the time specified by virtue of this Article 43.1 shall be disregarded in determining the rights of any person to attend or vote at the meeting; and

(c) for the purposes of sending notices to any one or more members (including, without limitation, notices of general meetings, or separate general meetings of the holders of any class of shares in the capital of the Company), give such notices by reference to the register as it stands at the close of business on a day determined by the Company or the Board, which day may not be more than 60 days before the day that such notices are sent.

44. ACCOUNTS

44.1. No member (as such, other than a Director) shall have any right to inspect any accounting record or other document of the Company, unless they are authorised to do so by statute, by order of the court, by the Board or by ordinary resolution of the Company.

44.2. Subject to the Companies Act, a copy of the Company's annual accounts and reports for that financial year shall, at least 21 clear days before the date of the meeting at which copies of those documents are to be laid in accordance with the provisions of the Companies Act, be sent to every member and to every holder of the Company's debentures, and to every person who is entitled to receive notice of meetings from the Company under the provisions of the Companies Act or of these Articles or, in the case of joint holders of any share or debenture, to one of the joint holders. A copy need not be sent to a person for whom the Company does not have a current address.

44.3. Subject to the Companies Act, the requirements of Article 44.2 shall be deemed satisfied in relation to any person by sending to the person, instead of such copies, a summary financial statement derived from the Company's annual accounts and directors' report, which shall be in the form and containing the information prescribed by the Companies Act and any regulations made under the Companies Act.

45. NOTICES AND OTHER COMMUNICATIONS

45.1. Any notice to be given to or by any person pursuant to these Articles shall be in writing other than a notice calling a meeting of the Board which need not be in writing.

45.2. Any notice, document or information may (without prejudice to Articles 45.9 and 45.10) be given, sent or supplied by the Company to any member either:

(a) personally;

(b) by sending it by post in a prepaid envelope addressed to the member at their registered address or postal address given to the Company for that purpose, or by leaving it at that address;

(c) through a relevant system, where the notice, document or information relates to uncertificated shares;

(d) subject to Article 45.3, by sending it in electronic form to a person who has agreed (generally or specifically) that the notice, document or information may be sent or supplied in that form (and has not revoked that agreement); or

(e) subject to the provisions of the Companies Act and the Exchange Act, by making it available on a website, provided that the requirements in (i) to (iii) below are satisfied.

The requirements referred to in paragraph (e) are that:

(i) the member has agreed (generally or specifically) that the notice, document or information may be sent or supplied to them by being made available on a website (and has not revoked that agreement), or the member has been asked by the Company to agree that the Company may send or supply notices, documents and information generally, or the notice, document or information in question, to them by making it available on a website and the Company has not received a response within the period of 28 days beginning on the date on which the Company's request was sent and the member is therefore taken to have so agreed (and has not revoked that agreement);

(ii) the member is the information required under the Companies Act and the Exchange Act, including but not limited to a notification of the presence of the notice, document or information on a website, the address of that website,

the place on that website where it may be accessed, and how it may be accessed ("**notification of availability**"); and

(iii) the notice, document or information continues to be published on that website, in the case of a notice of meeting, throughout the period beginning with the date of the notification of availability and ending with the conclusion of the meeting and in all other cases throughout the period specified by any applicable provision of the Companies Act, or, if no such period is specified, throughout the period of 28 days beginning with the date on which the notification of availability is sent to the member, save that if the notice, document or information is made available for part only of that period then failure to make it available throughout that period shall be disregarded where such failure is wholly attributable to circumstances which it would not be reasonable to have expected the Company to prevent or avoid.

45.3. The Board may from time to time issue, endorse or adopt terms and conditions relating to the use of electronic means for the sending of notices, other documents and proxy appointments by the Company to members or persons entitled by transmission and by members or persons entitled by transmission to the Company.

45.4. In the case of joint holders of a share:

(a) it shall be sufficient for all notices, documents and other information to be given, sent or supplied to the joint holder whose name stands first in the register in respect of the joint holding ("**first named holder**") only and any notice, document or other information so sent shall be deemed for all purposes sent to all the joint holders; and

(b) the agreement of the first named holder that notices, documents and information may be given, sent or supplied in electronic form or by being made available on a website shall be binding on all the joint holders.

45.5. The Company may at any time and at its sole discretion choose to give, send or supply notices, documents and information only in hard copy form to some or all members.

45.6. For the avoidance of doubt, the provisions of Articles 45.1 to 45.5 are subject to Article 17.5.

45.7. A member present either in person or by proxy, or in the case of a corporate member by a duly authorised representative, at any meeting of the Company or of the holders of any class of shares shall be deemed to have received notice of the meeting and, where requisite, of the purposes for which it was called.

45.8. Every person who becomes entitled to a share shall be bound by any notice in respect of that share which, before their name is entered in the register, has been given to the person from whom they derive their title, but this Article 45.8 does not apply to a notice given under section 793 of the Companies Act.

45.9. Subject to the Companies Act, where by reason of the suspension or curtailment of postal services, the Company is unable effectively to give notice of a general meeting, the general meeting may be convened by public announcement. The Company shall send a copy of the notice to members in the same manner as it sends notices under Articles 45.1 to 45.5 inclusive if at least seven clear days before the meeting the posting of notices again becomes practicable.

45.10. Subject to the Companies Act, any notice, document or information to be given, sent or supplied by the Company to the members or any of them, not being a notice to which Article 45.9 applies, shall be sufficiently given, sent or supplied if given by public announcement.

45.11. Any notice, document or information given, sent or supplied by the Company to the members or any of them:

(a) by hand shall be deemed to have been received by the member when it is handed to the member or left at their registered address;

(b) by post, shall be deemed to have been received twenty four (24) hours after the time at which the envelope containing the notice, document or information was posted unless it was (i) sent by second class post, (ii) there is only one class of post, or (iii) it was sent by air mail to an address outside the United Kingdom, in which case it shall be deemed to have been received 48 hours after it was posted. Proof that the envelope was properly addressed, prepaid and posted shall be conclusive evidence that the notice, document or information was sent or supplied;

(c) by means of a relevant system, shall be deemed to have been received when the Company, or any sponsoring system participant acting on its behalf sends the issuer instructions relating to the notice, document or information;

(d) by means of a Depositary, shall be deemed to have been received twenty four (24) hours after the Company, or a person acting on the Company's behalf, gives the notice, document or information to the Depositary;

(e) by advertisement, shall be deemed to have been received on the day on which the advertisement appears;

(f) by electronic means, shall be deemed to have been received by the member on the day following that on which it was sent or supplied. Proof that a notice, document or information in electronic form was addressed to the electronic address provided by the member for the purpose of receiving communications from the Company shall be conclusive evidence that the notice, document or information was sent or supplied and such notice, document or information shall be deemed received by the member at that time notwithstanding that the Company becomes aware that the member has filed to receive the relevant notice, document or information for any reason and notwithstanding that the Company subsequently sends or supplies a hard copy of such document or information by post to the member; or

(g) by making it available on a website, shall be deemed to have been received on the date on which the notice, document or information was first made available on the website or, if later, when the member is deemed to have been received notification of the fact that the notice, document or information was available on the website in accordance with this Article 45.11 and such notice, document or information shall be deemed received by the member on that day notwithstanding that the Company becomes aware that the member has failed to receive the relevant document or information for any reason and notwithstanding that the Company subsequently sends a hard copy of such notice, document or information by post to the member.

45.12. Any notice, document or information may be given, sent or supplied by the Company to the person entitled to a share in consequence of the death or bankruptcy of a member or otherwise by operation of law by sending or delivering it in any manner that the Company may choose

authorised by these Articles for the sending of notice, document or information to a member addressed to that person by name, or by the title of representative of the deceased or trustee of the bankrupt or by any similar description, at the address, if any, as may be supplied for that purpose by the person claiming to be so entitled. Until such an address has been supplied, a notice may be given in any manner in which it might have been given if the death or bankruptcy or other event giving rise to the transmission had not occurred.

45.13. If on three consecutive occasions, or on one occasion and reasonable enquiries have failed to establish the member's address, notices, documents or information sent or supplied to a member by post have been returned undelivered, the member shall not be entitled to receive any subsequent notice, document or information until they have supplied to the Company (or its agent) a new registered address or a postal address, or shall have informed the Company, in such a manner as may be specified by the Company, of an electronic address. For the purposes of this Article 45.13, references to notices, documents or information include references to a cheque or other instrument of payment, but nothing in this Article 45.13 entitles the Company to cease sending any cheque or other instrument of payment for any dividend, unless it is otherwise so entitled under these Articles. Without prejudice to the generality of the foregoing, any notice of a general meeting of the Company which is in fact sent or purports to be sent to such member shall be ignored for the purpose of determining the validity of the proceedings at such general meeting.

45.14. Where a document is required under these Articles to be signed by a member or any other person, if the document is in electronic form, then in order to be valid the document must either:

(a) incorporate the electronic signature, or personal identification details (which may be details previously allocated by the Company), of that member or other person, in such form as the Board may approve; or

(b) be accompanied by such other evidence as the Board may require in order to be satisfied that the document is genuine.

The Company may designate mechanisms for validating any such document and a document not validated by the user of any such mechanisms shall be deemed as having not been received by the Company. In the case of any document or information relating to a meeting, an instrument of proxy or invitation to appoint a proxy, any validation requirements shall be specified in the relevant notice of meeting in accordance with Articles 17.4 and 22.7(b).

46. DESTRUCTION OF DOCUMENTS

46.1. The Company shall be entitled to destroy:

(a) any instrument of transfer of shares which have been registered, and all other documents on the basis of which any entry is made in the register, at any time after the expiration of six years from the date of registration;

(b) any dividend mandate, variation or cancellation of dividend mandates, and notification of change of name or address, at any time after two years from the date on which it is recorded;

(c) any share certificate which has been cancelled at any time after the expiration of one year from the date on which it is cancelled;

(d) all paid dividend warrants and cheques at any time after the expiration of one year from the date of actual payment;

(e) all proxy appointments which have been used for the purpose of a poll at any time after the expiration of one year from the date of use;

(f) all proxy appointments which have not been used for the purpose of a poll at any time after one month from the end of the meeting to which the proxy appointment relates and at which no poll was demanded; and

(g) any other document on the basis of which an entry in the register is made, after six years from the date on which it is made.

Any document referred to in this Article 46.1 may be destroyed earlier than the relevant date authorised, provided that a permanent record of the document is made which is not destroyed before that date.

46.2. It shall be conclusively presumed in favour of the Company that:

(a) every entry in the register purporting to have been made on the basis of an instrument of transfer or other document destroyed in accordance with Article 46.1 was duly and properly made;

(b) that every instrument of transfer destroyed in accordance with Article 46.1 was a valid and effective instrument duly and properly registered;

(c) that every share certificate destroyed in accordance with Article 46.1 was a valid and effective certificate duly and properly cancelled; and

(d) that every other document destroyed in accordance with Article 46.1 was a valid and effective document in accordance with the particulars in the records of the Company.

provided that

(i) Article 46.1 shall apply only to the destruction of a document in good faith and without notice of any claim (regardless of the parties to it) to which the document might be relevant;

(ii) nothing in Article 46.1 shall be construed as imposing upon the Company any liability in respect of the destruction of any such document otherwise than in accordance with Article 46.1 which would not attach to the Company in the absence of Article 46.1; and

(iii) references in Article 46.1 to the destruction of any document include references to the disposal of it in any manner.

46.3. References in this Article 46 to instruments of transfer shall include, in relation to uncertificated shares, instructions and/or notifications made in accordance with the relevant system relating to transfer of such shares.

47. WINDING UP

47.1. If the Company commences liquidation, the liquidator may, with the sanction of a special resolution of the Company and any other sanction required by law, subject to the provisions of the Companies Act:

(a) divide among the members in specie the whole or any part of the assets, whether they shall consist of property of the same kind or not, of the Company and may, for that purpose, value any assets as they deem fair and determine how the division shall be carried out as between the members or different classes of members; and

(b) vest the whole or any part of the assets in trustees upon such trusts for the benefit of the members as they may with the like sanction determine;

but no member shall be compelled to accept any assets upon which there is a liability.

47.2. The power of sale of a liquidator shall include a power to sell wholly or partially for shares or debentures or other obligations of another body corporate, either then already constituted or about to be constituted for the purpose of carrying out the sale.

48. INDEMNITY AND INSURANCE

48.1. Subject to the provisions of the Companies Act, the Company may exercise all the powers of the Company to:

(a) indemnify to any extent any person who is or was a Director, or a Director of any associated company ("**associated company**" for the purposes of this Article 48 being interpreted in accordance with section 256 of the Companies Act), directly or indirectly (including by funding any expenditure incurred or to be incurred by them) against any loss or liability, whether in connection with any proven or alleged negligence, default, breach of duty or breach of trust by them or otherwise, in relation to the Company or any associated company;

(b) indemnify to any extent any person who is or was a Director of an associated company that is a trustee of an occupational pension scheme, directly or indirectly (including by funding any expenditure incurred or to be incurred by them) against any liability incurred by them in connection with the Company's activities as trustee of an occupational pension scheme; and/or

(c) purchase and maintain insurance for or for the benefit of any person who is or was:

(i) a Director, officer or employee of the Company, or any body corporate which is or was the holding company or subsidiary undertaking of the Company, or in which the Company or such holding company or subsidiary undertaking has or had any interest (whether direct or indirect) or with which the Company or such holding company or subsidiary undertaking is or was in any way allied or associated; or

(ii) a trustee of any pension fund in which employees of the Company or any other body referred to in paragraph (c)(i)of this Article 48.1 are or have been interested;

including without limitation insurance against any loss or liability or any expenditure they may incur, whether in connection with any proven or alleged act or omission in the actual or purported execution or discharge of their duties or in the exercise or purported exercise of their powers or otherwise in relation to this duties, power or offices, whether comprising negligence, default, breach of duty, breach of trust or otherwise, in relation to the relevant body or fund.

48.2. No Director of former Director shall be accountable to the Company or the members for any benefit provided pursuant to these Articles. The receipt of any such benefit shall not disqualify any person from being or becoming a Director.

49. DISPUTE RESOLUTION

49.1. The courts of England and Wales shall have exclusive jurisdiction to determine any and all disputes brought by a member in that member's capacity (whether in its own name or in the name of the Company) as such against the Company and/or the Board and/or any of the Directors individually or collectively, arising out of or in connection with these Articles or any non-contractual obligations arising out of or in connection with these Articles.

49.2. The governing law of these Articles is the law of England and Wales and these Articles shall be interpreted in accordance with English law.

49.3. For the purposes of Article 49.1:

(a) "**Director**" shall be read so as to include each and any Director from time to time in their capacity as such or as an employee of the Company and shall include any former Director; and

(b) "**Company**" shall be read so as to include each any of the Company's Subsidiaries.

Exhibit 10.1

December 2019

Dear Roy Khoury,

We are happy to confirm your new role as President International Commercial and SVP Global Strategic Marketing.

Effective January 1, 2020, your gross annual base salary is **GBP 305,000 and** your target variable compensation will be **65%** of the weighted average of your annual base salary during the year**.**

In addition, we can confirm that, on March 2020, we will recommend to the Compensation Committee of the Board of Directors a grant of an equity awards in line with the equity vehicles that will be used for all members of the LivaNova leadership team with a total grant-date cost equal to **USD 1,000,000** plus an additional grant of Restricted Stock Units with a grant-date cost equal to **USD 200,000** vesting in 2 tranches of 50% each at each of the 2 first anniversary of the grant date.

The grant of any of the awards under the Plan as described in this letter is, of course, always subject to the discretion of the Compensation Committee, and nothing in this letter shall be taken to fetter the discretion of the Compensation Committee. The Compensation Committee may decide not to grant awards as described in this letter.

Grant and vesting of any of the awards is conditional on your continued employment with the Company and vesting will cease upon you ceasing to be employed by the Company. All awards made under the Plan will be subject to the terms of the Plan and the award agreement pursuant to which the particular award is granted.

Best regards,

Human Resources

Cc: Damien McDonald

Exhibit 10.2

December 2019

Dear Marco Dolci,

We are happy to confirm your new role as SVP Global Operations & Global Research and Development.

Effective January 1, 2020, your gross annual base salary is **Euro 500,000 and** your target variable compensation will be **60%** of the weighted average of your annual base salary during the year**.**

In addition, we can confirm that, on March 2020, we will recommend to the Compensation Committee of the Board of Directors a grant of an equity awards in line with the equity vehicles that will be used for all members of the LivaNova leadership team with a grant-date cost equal to **USD 1,000,000**.

The grant of any of the awards under the Plan as described in this letter is, of course, always subject to the discretion of the Compensation Committee, and nothing in this letter shall be taken to fetter the discretion of the Compensation Committee. The Compensation Committee may decide not to grant awards as described in this letter.

Grant and vesting of any of the awards is conditional on your continued employment with the Company and vesting will cease upon you ceasing to be employed by the Company. All awards made under the Plan will be subject to the terms of the Plan and the award agreement pursuant to which the particular award is granted.

Best regards,

Human Resources

Cc: Damien McDonald

Exhibit 10.10

Amendment to
Outstanding 2019 and 2020 Restricted Stock Unit Awards
under the LivaNova PLC 2015 Incentive Award Plan

This amendment (the "Amendment"), dated as of June 15, 2020, hereby modifies each 2019 and 2020 service-based restricted stock unit ("RSU") award agreement evidencing a currently outstanding RSU award under the LivaNova PLC 2015 Incentive Award Plan (as permitted pursuant to Section 11.7 of the LivaNova PLC 2015 Incentive Award Plan) as follows:

1. Section 2.2(d) of each outstanding RSU award agreement is hereby deleted and replaced with the following:

   "In the event of a Change in Control that occurs following the Grant Date, the RSUs, to the extent not forfeited or otherwise vested immediately prior to such Change in Control, shall become fully vested immediately prior to, but subject to the consummation of, such Change in Control, subject to the Participant's continuous employment with the Company or a Subsidiary through such Change in Control."

2. Except as expressly amended by this Amendment, all terms and conditions of the Plan and the outstanding Awards thereunder shall remain in full force and effect.

3. This Amendment shall be governed by and construed in accordance with the laws of the State of Delaware, without reference to principles of conflict of laws.

LIVANOVA PLC

_____
Name: Trui Hebbelinck
Title: Chief Human Resources Officer

Exhibit 10.11

Amendment to
Outstanding 2018 Restricted Stock Unit Awards
under the LivaNova PLC 2015 Incentive Award Plan

This amendment (the "Amendment"), dated as of June 15, 2020, hereby modifies each 2018 service-based restricted stock unit ("RSU") award agreement evidencing a currently outstanding RSU award under the LivaNova PLC 2015 Incentive Award Plan (as permitted pursuant to Section 11.7 of the LivaNova PLC 2015 Incentive Award Plan) as follows:

1. Section 2.2(c) of each outstanding RSU award agreement is hereby deleted and replaced with the following:

   "In the event of a Change in Control that occurs following the Grant Date, the RSUs, to the extent not forfeited or otherwise vested immediately prior to such Change in Control, shall become fully vested immediately prior to, but subject to the consummation of, such Change in Control, subject to the Participant's continuous employment with the Company or a Subsidiary through such Change in Control."

2. Except as expressly amended by this Amendment, all terms and conditions of the Plan and the outstanding Awards thereunder shall remain in full force and effect.

3. This Amendment shall be governed by and construed in accordance with the laws of the State of Delaware, without reference to principles of conflict of laws.

LIVANOVA PLC

_____
Name: Trui Hebbelinck
Title: Chief Human Resources Officer

Exhibit 10.12

Amendment to
Outstanding 2018, 2019 and 2020 Performance Stock Unit Awards
under the LivaNova PLC 2015 Incentive Award Plan

This amendment (the "Amendment"), dated as of June 15, 2020, hereby modifies each 2018, 2019 and 2020 performance stock unit ("PSU") award agreement evidencing a currently outstanding PSU award under the LivaNova PLC 2015 Incentive Award Plan (as permitted pursuant to Section 11.7 of the LivaNova PLC 2015 Incentive Award Plan) as follows:

1. Section 2.2(d) of each outstanding PSU award agreement is hereby deleted and replaced with the following:

   "PSUs (and the associated Dividend Equivalents), to the extent not forfeited or otherwise vested immediately prior to the occurrence of a Change in Control, may be assumed or an equivalent Award substituted by the successor corporation or a parent or subsidiary of the successor corporation, subject to the Participant's continuous employment with the Company or a Subsidiary through such Change in Control. For purposes of this Section 2.2(d), the PSUs (and the associated Dividend Equivalents) shall be considered assumed or substituted if, following the Change in Control, the applicable assumed or substituted Award (i) meets the requirements set forth in Section 13.2(f) of the Sub-Plan and (ii) the Performance Criteria and Performance Goals applicable to the PSUs (as set forth in the Grant Notice) as of immediately prior to the Change in Control are equitably adjusted in connection with such Change in Control as determined to be appropriate by the Administrator in its sole discretion."

2. A new Section 2.2(e) shall be added to each outstanding PSU award agreement and shall read as follows:

   "In the event of a Change in Control where the PSUs (and the associated Dividend Equivalents) are not assumed or substituted by the successor corporation or parent or subsidiary of the successor corporation, then the PSUs (and the associated Dividend Equivalents), to the extent not forfeited or otherwise vested immediately prior to such Change in Control, shall become vested (assuming 100% achievement or funding, as applicable, as set forth in the Grant Notice) immediately prior to, but subject to the consummation of, such Change in Control, subject to the Participant's continuous employment with the Company or a Subsidiary through such Change in Control."

3. Except as expressly amended by this Amendment, all terms and conditions of the Plan and the outstanding Awards thereunder shall remain in full force and effect.

4. This Amendment shall be governed by and construed in accordance with the laws of the State of Delaware, without reference to principles of conflict of laws.

LIVANOVA PLC

_____
Name: Trui Hebbelinck
Title: Chief Human Resources Officer

EXHIBIT 31.1

CERTIFICATION

I, Damien McDonald, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2020 of LivaNova PLC and its consolidated subsidiaries;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: July 29, 2020

/s/ DAMIEN MCDONALD

Damien McDonald

Chief Executive Officer

(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION

I, Thad Huston, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2020 of LivaNova PLC and its consolidated subsidiaries;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: July 29, 2020

/s/ THAD HUSTON

Thad Huston

Chief Financial Officer

(Principal Financial Officer)

EXHIBIT 32.1

CERTIFICATION OF THE

CHIEF EXECUTIVE OFFICER AND

CHIEF FINANCIAL OFFICER

OF LIVANOVA PLC

PURSUANT TO 18 U.S.C. SECTION 1350

Each of Damien McDonald, Chief Executive Officer of LivaNova PLC (the "Company"), and Thad Huston, Chief Financial Officer of the Company, each hereby certifies pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of his knowledge:

(a) the Quarterly Report on Form 10-Q of the Company and its consolidated subsidiaries for the quarter ended June 30, 2020, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(b) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: July 29, 2020

/s/ DAMIEN MCDONALD

Damien McDonald
Chief Executive Officer
(Principal Executive Officer)

Date: July 29, 2020

/s/ THAD HUSTON

Thad Huston
Chief Financial Officer
(Principal Financial Officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as a part of this report or on a separate disclosure document.