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

Form 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2023

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	The Nasdaq Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant was approximately $2.8 billion (based on the closing price of these shares on the Nasdaq Global Market on June 30, 2023, the last business day of the most recently completed second fiscal quarter). For purposes of this calculation, ordinary shares held by persons who hold more than 5% of the outstanding ordinary shares and shares held by executive officers and directors of the registrant have been excluded as such persons may be deemed to be affiliates.

As of February 23, 2024, 53,956,158 ordinary shares were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement of LivaNova PLC for the 2024 Annual General Meeting of Shareholders, which will be filed within 120 days of December 31, 2023, are incorporated by reference into Part III of this Annual Report on Form 10-K.

LIVANOVA PLC

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DEFINITIONS

In this Annual Report on Form 10-K for the year ended December 31, 2023, the following terms and abbreviations have the meanings listed below. "LivaNova" and "the Company" refer to LivaNova PLC and its consolidated subsidiaries.

Abbreviation	Definition
2015 Plan	LivaNova PLC 2015 Incentive Award Plan
2020 Restructuring Plan	A plan, initiated during the fourth quarter of 2020, to reduce LivaNova's cost structure
2021	The year ended December 31, 2021
2021 First Lien Credit Agreement	First Lien Credit Agreement for $125 million between LivaNova PLC and its wholly-owned subsidiary, Borrower, and Goldman Sachs Bank USA, as First Lien Administrative Agent and First Lien Collateral Agent, entered into on August 13, 2021
2022	The year ended December 31, 2022
2022 Plan	LivaNova PLC 2022 Incentive Award Plan
2022 Restructuring Plan	A plan, initiated during the second quarter of 2022, to implement a cost-optimization and cost reduction program to adapt to current economic conditions
2023	The year ended December 31, 2023
2024 Proxy Statement	Definitive Proxy Statement for the annual meeting of shareholders scheduled for June 11, 2024
2024 Restructuring Plan	A plan, initiated during the first quarter of 2024, to enhance LivaNova's focus on its core Cardiopulmonary and Neuromodulation segments
A&R 2022 Plan	Amended and Restated LivaNova PLC 2022 Incentive Award Plan
ACS	Advanced Circulatory Support
ALung	ALung Technologies, Inc.
AOCI	Accumulated other comprehensive income (loss)
APAC	Asia-Pacific
ASMs	Anti-seizure medications
Audit Committee	LivaNova's Audit and Compliance Committee
Barclays	Barclays Bank Ireland PLC
BEPS	Base Erosion and Profit Shifting
Borrower	LivaNova USA, Inc.
Bridge Loan Facility	Incremental Facility Amendment No. 1 to the 2021 First Lien Credit Agreement, relating to a €200 million bridge loan facility, dated February 24, 2022, and repaid on July 6, 2022
CCPA	California Consumer Privacy Act
CDC	Centers for Disease Control and Prevention
CE Mark	*Conformité Européenne, French for "European Conformity"*
CED	Coverage with Evidence Development
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CISO	Chief Information Security Officer
CLO	Chief Legal Officer
CMS	The US Centers for Medicare & Medicaid Services
Code of Conduct	LivaNova PLC's Code of Ethics and Business Conduct
CODM	Chief Operating Decision Maker
Court of Appeal	Court of Appeal in Milan
CPB	Cardiopulmonary bypass
CRO	Chief Risk Officer
Cyberonics	Cyberonics, Inc.
D23 study	The longest and largest naturalistic study on treatments for patients experiencing chronic and severe DTD, published by the American Journal of Psychiatry in 2017
Delayed Draw Term Facility	$50 million delayed draw term facility under the 2021 First Lien Credit Agreement resulting from the Incremental Facility Amendment No. 2
DRE	Drug-resistant epilepsy
DTC	Depository Trust Company

Abbreviation	Definition
DTD	Difficult-to-treat depression
ECJ	European Court of Justice
ECMO	Extracorporeal membrane oxygenation
ESG	Environmental, social and governance
ESPP	Global Employee Share Purchase Plan
EtO	Ethylene oxide
EU	European Union
EVP	Employee Value Proposition
Exchange Act	US Securities Exchange Act of 1934, as amended
False Claims Act	US False Claims Act
FCPA	US Foreign Corrupt Practices Act of 1977
FDA	US Food and Drug Administration
FIFO	First-in-first-out
FX	Foreign currency exchange rate
GAAP	Generally Accepted Accounting Principles
GDPR	General Data Protection Regulation
Hemolung RAS	Hemolung Respiratory Assist System
HHS	The US Department of Health & Human Services
HIPAA	Health Insurance Portability and Accountability Act of 1996
HITECH	Health Information Technology and Clinical Health Act
HLM	Heart-lung machine
IBR	Incremental borrowing rate
ILBM	In-line blood monitor
ImThera	ImThera Medical, Inc., acquired by LivaNova in 2018, a company developing an implantable neurostimulation device system for the treatment of obstructive sleep apnea
Incremental Facility Amendment No. 2	An incremental facility amendment to the 2021 First Lien Credit Agreement, dated July 6, 2022
Indenture	The indenture governing the Notes
Initial Term Facility	$300 million term facility under the 2021 First Lien Credit Agreement resulting from the Incremental Facility Amendment No. 2
IPR&D	In-Process Research and Development
IRC	US Internal Revenue Code
IRS	US Internal Revenue Service
IS	Information security
ISDA	International Swaps and Derivatives Association, Inc.
ISIN	National Inspectorate for Nuclear Safety and Radiation Protection, a sub-body of the Italian Ministry of Economic Development
ISMS	Information Security Management System
ISO	International Organization for Standardization
IT	Information technology
LivaNova PLC	A public limited company organized under the laws of England and Wales on February 20, 2015
LivaNova USA	LivaNova USA, Inc.
LSM	LivaNova Site Management S.r.l.
MDD	Medical Device Directive
MDL	Federal multi-district litigation in the US District Court for the Middle District of Pennsylvania
MDR	EU Medical Device Regulation
Mitral	Mitral Holdco S.à r.l.
MRI	Magnetic resonance imaging
Nasdaq	Nasdaq Global Market
NCD	Non-coverage determination

Abbreviation	Definition
NIST	National Institute of Standards and Technology
Notes	$287.5 million aggregate principal amount of 3.00% senior notes due December 2025, issued June 17, 2020
OCI	Other comprehensive income (loss)
OECD	Organization for Economic Co-operation and Development
Option Counterparties	Certain financial institutions with whom LivaNova entered into privately negotiated capped call transactions
Order	Administrative order from the Italian Ministry of the Environment received by LivaNova in 2021
OSA	Obstructive sleep apnea
OSPREY clinical trial	LivaNova's clinical trial, "Treating Obstructive Sleep Apnea using Targeted Hypoglossal Neurostimulation"
Pillar Two	OECD BEPS Pillar Two
Plan Committee	Qualified Plan Committee
PMA	Pre-market approval
PP&E	Property, plant and equipment
Public Administrations	The Italian Ministry of the Environment and other Italian government agencies
R&D	Research and Development
RECOVER clinical study	LivaNova's clinical study "A Prospective, Multi-center, Randomized Controlled Blinded Trial Demonstrating the Safety and Effectiveness of VNS Therapy System as Adjunctive Therapy Versus a No Stimulation Control in Subjects With Treatment-Resistant Depression"
Report	This Annual Report on Form 10-K
RSUs	Service-based restricted stock units
S&P	Standard & Poor's
SARs	Service-based stock appreciation rights
SDRT	UK Stamp Duty Reserve Tax
SEC	US Securities and Exchange Commission
Securities Act	US Securities Act of 1933, as amended
SG&A	Selling, general and administrative expenses
SNIA	SNIA S.p.A.
SNIA Litigation Guarantee	A first demand bank guarantee of €270.0 million in connection with the SNIA litigation
SOFR	Secured Overnight Financing Rate
Sorin	Sorin S.p.A.
Sorin spin-off	The spin-off of Sorin from SNIA in 2004
Term Facilities	The Initial Term Facility, together with the Delayed Draw Term Facility
Trust	LivaNova PLC Employee Benefit Trust
UK	United Kingdom
UK Act	Finance (No.2) Act 2023
UK Bribery Act	UK Bribery Act of 2010
US	United States of America
US GAAP	Generally Accepted Accounting Principles in the US
USD	US dollar
UTPR	Undertaxed profits rule
VNS	Vagus nerve stimulation
VNS Therapy	LivaNova Vagus Nerve Stimulation Therapy
WACC	Weighted average cost of capital
Warning Letter	FDA Warning Letter received by LivaNova on December 29, 2015

INTELLECTUAL PROPERTY, TRADEMARKS AND TRADE NAMES

This Report may contain references to LivaNova's proprietary intellectual property, including among others:

- Trademarks for LivaNova's Neuromodulation systems, the VNS Therapy™ System, the VITARIA™ System and LivaNova's proprietary pulse generator products: Model 102 (Pulse™), Model 102R (Pulse Duo™), Model 103 (Demipulse™), Model 104 (Demipulse Duo™), Model 106 (AspireSR™), Model 1000 (SenTiva™), Model 1000-D (SenTiva™ Duo), Model 7103 (VITARIA™ and TitrationAssist™) and Model 8103 (Symmetry™).
- Trademarks for LivaNova's Cardiopulmonary products and systems: Essenz™, S5™, S3™, S5 Pro™, B-Capta™, Inspire™, Heartlink™, XTRA™, 3T Heater-Cooler™, Connect™ and Revolution™.
- Trademarks for LivaNova's advanced circulatory support systems: TandemLife™, TandemHeart™, TandemLung™, ProtekDuo™, LifeSPARC™, ALung™, Hemolung™, Respiratory Dialysis™ and ActivMix™.
- Trademarks for LivaNova's obstructive sleep apnea system: ImThera™ and aura6000™.

These trademarks and trade names are the property of LivaNova or the property of LivaNova's consolidated subsidiaries and are protected under applicable intellectual property laws. Solely for convenience, LivaNova's trademarks and trade names referred to in this Report may appear without the ™ symbol, but such references are not intended to indicate in any way that the Company will not assert, to the fullest extent under applicable law, LivaNova's rights to these trademarks and trade names.

CAUTIONARY NOTE ABOUT FORWARD-LOOKING STATEMENTS

Certain statements in this Report, other than statements of historical or current fact, are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act and Section 21E of 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, the Company's actual financial results, performance, achievements or prospects may differ materially from those expressed or implied by these forward-looking statements. Generally, 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 the Company's control, that could cause the Company's actual results to differ materially from the forward-looking statements contained in this Report and include, but are not limited to, the following risks and uncertainties: volatility in the global market and worldwide economic conditions, including as caused by the invasion of Ukraine, the evolving instability in the Middle East, inflation, changing interest rates, foreign exchange fluctuations, changes to existing trade agreements and relationships between the US and other countries including the implementation of sanctions; cyber-attacks or other disruptions to the Company's information technology systems or those of third parties with which the Company interacts; costs of complying with privacy and security of personal information requirements and laws; risks related to reductions and interruptions in the Company's supply chain; changes in technology, including the development of superior or alternative technology or devices by competitors and/or competition from providers of alternative medical therapies; failure to obtain approvals or reimbursement in relation to the Company's products; failure to establish, expand or maintain market acceptance of the Company's products for the treatment of the Company's approved indications; failure to develop and commercialize new products and the rate and degree of market acceptance of such products; unfavorable results from clinical studies or failure to meet milestones; failure to comply with, or changes in, laws, regulations or administrative practices affecting government regulation of the Company's products; risks relating to recalls, enforcement actions or product liability claims; changes or reduction in reimbursement for the Company's products or failure to comply with rules relating to reimbursement of healthcare goods and services; failure to comply with anti-bribery laws; losses or costs from pending or future lawsuits and governmental investigations, including in the case of the Company's 3T Heater-Cooler and SNIA litigations; risks associated with environmental laws and regulations as well as environmental liabilities, violations, protest voting and litigation; product liability, intellectual property, shareholder-related, environmental-related, income tax and other litigation, disputes, losses and costs; failure to retain key personnel, prevent labor shortages, or manage labor costs; the failure of the Company's R&D efforts to keep up with the rapid pace of technological development in the medical device industry; risks relating to the impact of climate change and ESG pressures from internal and external stakeholders; the risk of quality concerns and the impacts thereof; failure to protect the Company's proprietary intellectual property; failure of new acquisitions to further the Company's strategic objectives or strengthen the Company's existing businesses; the potential for impairments of intangible assets, goodwill and other long-lived assets; risks relating to the Company's indebtedness including under the exchangeable senior notes, the Company's revolving credit facility and the Company's 2022 Term Facilities, as defined herein; effectiveness of the Company's internal controls over financial reporting; changes in the Company's profitability and/or failure to manage costs and expenses; fluctuations in future quarterly operating results and/or variations in revenue and operating expenses relative to estimates; changes in tax laws and regulations, including exposure to additional income tax liabilities; and other unknown or unpredictable factors that could harm the Company's financial performance.

See also the section titled "Risk Factors" (refer to Part I, Item 1A of this report) for further discussion of certain risks and uncertainties that could cause actual results and events to differ materially from the forward-looking statements. All forward-looking statements in this Report are expressly qualified in their entirety by the cautionary statements set forth above. Forward-looking statements speak only as of the date of this Report, and LivaNova expressly disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. You are advised, however, to consult any further disclosures LivaNova makes on related subjects in its Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. This cautionary note is applicable to all forward-looking statements contained in this report.

The following discussion and analysis should be read in conjunction with and are qualified in their entirety by reference to the discussions included in "Item 1A. Risk Factors," "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in this Report.

PART I

Item 1. *Business*

Description of the Business and Background

LivaNova PLC is a market-leading global medical technology company. The Company designs, develops, manufactures, markets and sells products and therapies that are consistent with LivaNova's mission to provide hope for patients and their families through innovative medical technologies that deliver life-changing improvements. LivaNova is a public limited company organized under the laws of England and Wales and is headquartered in London, England. LivaNova's ordinary shares are listed for trading on the Nasdaq under the symbol "LIVN."

Business Overview

For the periods presented herein, LivaNova was comprised of three reportable segments: Cardiopulmonary, Neuromodulation and ACS. "Other" includes non-allocated corporate expenses for the years ended December 31, 2022 and 2023. For the year ended December 31, 2021, "Other" also includes the results of LivaNova's Heart Valve business, which was divested on June 1, 2021.

During the first quarter of 2024, the Company reorganized its operating and reporting structure upon initiating the 2024 Restructuring Plan as further described below. In 2024, LivaNova's ACS segment will be included within "Other," excluding the ACS standalone cannulae and accessories business, which will be included within the Cardiopulmonary reportable segment.

For further information regarding LivaNova's reportable segments, historical financial information and methodology for the presentation of financial results, please refer to "Item 15. Exhibits and Financial Statement Schedules" of this Report.

Cardiopulmonary

LivaNova's Cardiopulmonary segment is engaged in the design, development, manufacture, marketing and selling of cardiopulmonary products, including HLMs, oxygenators, autotransfusion systems, perfusion tubing systems, cannulae and other related accessories. It includes the Essenz Perfusion System, the Company's next-generation HLM with an embedded patient monitor for tailored patient care strategies and sensing technology for data-driven decision making during CPB procedures.

CPB is commonly used in many operations involving the heart. This technique enables the surgical team to oxygenate and circulate the patient's blood, thus enabling the surgeon to operate on the heart. The most commonly performed procedures requiring CPB are conventional coronary artery bypass grafting and valve surgeries. LivaNova's products enable CPB for neonatal, pediatric, and adult patients.

Heart-lung Machines

The HLM product group includes HLMs, heater-coolers, related cardiac surgery equipment and maintenance, and technical services. HLMs temporarily take over the work of the heart and/or lungs, providing blood and oxygen to the body. HLMs are most often used during procedures that require the heart to be stopped. Heater-coolers are used during surgeries to warm or cool patients as part of their care. They are especially important during surgeries involving the heart and lungs.

In March 2023, LivaNova announced it had received FDA 510(k) clearance for its Essenz HLM, which enabled the commercial launch of Essenz in the US. In the same month, LivaNova also initiated a broad commercial release of Essenz in Europe following a successful limited commercial release that supported more than 200 adult, pediatric and neonatal patients in that region. Approvals in various other countries have followed.

In August 2023, LivaNova announced it had received FDA 510(k) clearance and CE Mark for its Essenz ILBM, which provides continuous measurement of essential blood parameters to perfusionists throughout CPB procedures. The ILBM is integrated into the Essenz Perfusion System, which enables perfusionists to access and manage reliable blood parameters without the need for additional monitors or holders.

Oxygenators and Perfusion Tubing Systems

The oxygenators product group is comprised of disposable devices for extracorporeal circulation, including the Inspire systems. The Inspire range of products is comprised of 12 models that provide perfusionists with a customizable approach for the benefit of patients. Oxygenators exchange oxygen and carbon dioxide in the blood of patients during surgical procedures and are utilized by perfusionists during cardiac surgery in conjunction with a HLM and can also be utilized in ECMO.

Autotransfusion Systems

One of the key elements for a complete blood management strategy is autologous blood transfusion. The autotransfusion product group facilitates the collection, processing and reinfusion of the patient's own blood lost at the surgical site.

Cannulae

The cannulae product group in the Cardiopulmonary segment is used to connect the extracorporeal circulation system to the heart of the patient during cardiac surgery. During the first quarter of 2024, as a result of the 2024 Restructuring Plan as further described below, the Company will transition all ACS standalone cannulae and accessories, including ProtekDuo and transseptal (TandemHeart) cannulae, into its Cardiopulmonary segment. The ACS cannulae are designed and used for temporary unloading of the right ventricle, for supporting the left ventricle and for connecting ECMO systems.

Neuromodulation

LivaNova's Neuromodulation segment is engaged in the design, development, manufacture, marketing and selling of devices that deliver neuromodulation therapy for treating DRE and DTD. LivaNova's principal Neuromodulation product, the VNS Therapy System, consists of an implantable pulse generator and connective lead that stimulates the vagus nerve; surgical equipment to assist with the implant procedure; equipment and instruction manuals enabling a treating physician to set parameters for a patient's pulse generator; and for epilepsy, magnets to manually suspend or induce nerve stimulation. The lead does not need to be removed to replace a generator with a depleted battery.

The Neuromodulation segment is also engaged in the development and management of clinical testing for LivaNova's aura6000 System for treating OSA. The aura6000 device stimulates the hypoglossal nerve, which engages specific tongue and palate muscles to open the airway while a patient sleeps.

LivaNova's Neuromodulation segment also includes costs associated with the Company's former Heart Failure program, which the Company began winding down during the first quarter of 2023.

Epilepsy

There are several broad types of treatment available to patients with epilepsy: multiple ASMs; various forms of the ketogenic diet; VNS; resective and ablative brain surgery; and intracranial neurostimulation. ASMs typically serve as a first-line treatment and are prescribed for virtually all patients diagnosed with epilepsy. After two ASMs fail to deliver seizure control, the epilepsy is characterized as drug-resistant. At this point, adjunctive non-drug options are considered, including VNS therapy, ketogenic diet, resective or ablative surgery and other neuromodulation therapies.

In 1997, LivaNova's VNS Therapy System was the first medical device treatment approved by the FDA for the treatment of DRE, and today is the only neuromodulation device approved for use in the US in DRE patients as young as four years of age with partial onset, or focal, seizures. Other worldwide regulatory bodies have also approved the VNS Therapy System for treating patients with DRE, many without age or seizure-type restrictions. In 2020, CMS expanded reimbursement for VNS Therapy use in the treatment of Dravet Syndrome and, in January 2022, expanded reimbursement for VNS Therapy use in the treatment of Lennox-Gastaut Syndrome.

LivaNova distributes multiple VNS Therapy Systems for the treatment of epilepsy, including Model 103 (Demipulse), Model 104 (Demipulse Duo), Model 106 (AspireSR), Model 1000 (SenTiva) and Model 1000D (SenTiva Duo) pulse generators. LivaNova's AspireSR and SenTiva generators provide the traditional benefits of VNS Therapy but add an additional stimulation capability: closed loop stimulation (AutoStim) which responds to detection of changes in heart rate potentially indicative of a seizure. The SenTiva generator is the smallest and lightest VNS device capable of delivering responsive therapy for epilepsy and includes the additional flexibility of LivaNova's Scheduled Programming and Day & Night Programming capabilities. In 2017, the SenTiva, AspireHC and AspireSR VNS Therapy devices were approved by the FDA for expanded MRI access and similar CE Mark approval followed shortly thereafter.

Depression

In 2005, the FDA approved the VNS Therapy System for the adjunctive treatment of chronic or recurrent depression for patients 18 years or older who are experiencing a major depressive episode and have not had an adequate response to four or more antidepressant treatments. In 2007, CMS issued a non-coverage determination with respect to reimbursement of the VNS Therapy System for patients with DTD, significantly limiting access for most patients. In 2020, LivaNova's VNS Therapy System, Symmetry received CE mark approval for the treatment of DTD.

In 2017, the American Journal of Psychiatry published the results of the longest and largest naturalistic study on treatments for patients experiencing chronic and severe DTD. The findings showed that the addition of the VNS Therapy System to traditional

treatment was effective in significantly reducing symptoms of depression and well-tolerated compared with traditional treatment alone. Following publication of the D23 study, LivaNova requested that CMS reconsider its previous NCD, and in 2018, CMS published a tracking sheet to reconsider.

In 2019, CMS produced a final decision providing coverage for the VNS Therapy System for Medicare beneficiaries through CED when offered in a CMS-approved, double-blind, randomized, placebo-controlled trial with a follow-up duration of at least one year, as well as coverage of VNS Therapy System device replacement. The CED also includes the possibility to extend the study to a prospective longitudinal registry.

In 2019, CMS accepted the protocol for LivaNova's RECOVER clinical study and the first patient was enrolled. RECOVER includes 500 unipolar and up to 500 bipolar patients at a maximum of 100 sites in the US in the randomized part of the trial and may include up to an additional 5,800 patients in an open label registry.

In March 2023, LivaNova randomized the 500th unipolar depression patient into the RECOVER clinical study and subsequently completed all unipolar implants in May. Upon receipt of the 12-month follow-up data for all 500 patients, the Company expects to conduct a final analysis for the unipolar cohort, potentially culminating in publication of the study results for that cohort.

In June 2023, LivaNova randomized the 150th bipolar depression patient into the RECOVER clinical study. The RECOVER clinical study's protocol allows for a minimum of 150 and a maximum of 500 bipolar depression patients to be randomized into the study. Upon randomizing the 150th bipolar patient, a series of interim analyses are being conducted every 25 patients by an independent Statistical Analysis Committee to assess if predictive probability of success has been reached for the bipolar cohort of the study. If any analysis reveals that the predictive probability of success has been reached, recruitment into the bipolar arm of the study will cease and LivaNova will notify CMS and initiate the prospective open-label longitudinal study for future bipolar Medicare patients. After the last patient enrolled into the RECOVER clinical study has completed 12 months of follow-up, a final analysis will be conducted on the complete bipolar dataset.

The RECOVER clinical study, if successful, may potentially be used to support a peer-reviewed publication and reconsideration of reimbursement for the VNS Therapy System by CMS for the treatment of DTD. The reconsideration process will happen independently for the unipolar and bipolar cohorts.

Obstructive Sleep Apnea

In 2018, LivaNova acquired full ownership of ImThera, a company developing an implantable neurostimulation device system for the treatment of obstructive sleep apnea. The device stimulates the hypoglossal nerve, which engages specific tongue and palate muscles to open the airway while a patient sleeps.

In 2021, LivaNova received approval from the FDA to proceed with its investigational device exemption clinical study, the OSPREY clinical trial, and the first patient was implanted in March 2022. The OSPREY clinical trial seeks to confirm the safety and effectiveness of the aura6000 System.

Advanced Circulatory Support

LivaNova's ACS segment was engaged in the design, development, manufacture, marketing and selling of temporary life support products. ACS's products, which comprise the LifeSPARC and Hemolung systems, and standalone cannulae and accessories, including ProtekDuo and transseptal (TandemHeart) cannulae, simplify temporary extracorporeal cardiopulmonary life support solutions for critically ill patients.

On January 5, 2024, the Board of Directors of LivaNova PLC approved the 2024 Restructuring Plan to enhance the Company's focus on its core Cardiopulmonary and Neuromodulation segments. The main component of this plan is to wind down the ACS segment, which the Company anticipates will be substantially complete by the end of 2024. During the first quarter of 2024, the Company reorganized its operating and reporting structure upon initiating the 2024 Restructuring Plan and transitioned all ACS standalone cannulae and accessories, including ProtekDuo and transseptal (TandemHeart) cannulae, into its Cardiopulmonary segment. Operations for other ACS products, including LifeSPARC and Hemolung systems, will be discontinued by the end of 2024. For additional information, please refer to "Note 6. Restructuring" in LivaNova's consolidated financial statements included in this Report.

R&D

The Company's R&D investment consists of product design and development expenses, including technology, software, clinical study programs and regulatory activities. LivaNova's markets are subject to rapid technological advances, and as such, product improvement, software advancements and innovation are necessary to maintain market leadership. The Company directs its R&D efforts toward maintaining or achieving technological leadership in each of its markets to help ensure that patients using the Company's devices and therapies receive the most advanced and effective treatment available. LivaNova remains committed to developing technological enhancements and new uses for existing products, as well as less invasive and new technologies to address unmet patient needs. LivaNova continues to engage researchers to collect clinical and health economic evidence that support regulatory filings and value dossiers and to establish the value proposition to patients, physicians, and payors for its current and future products.

Patents and Licenses

LivaNova relies on a combination of patents, trademarks, copyrights, trade secrets and non-disclosure and non-competition agreements to protect the Company's intellectual property. LivaNova generally files patent applications in the US and countries where patent protection for LivaNova's technology is appropriate and available. As of December 31, 2023, LivaNova held more than 865 issued patents worldwide, with approximately 295 pending patent applications that cover various aspects of the Company's technology. Patents typically have a 20-year term from the application filing date. In addition, LivaNova holds exclusive and non-exclusive licenses to a variety of third-party technologies covered by patents and pending patent applications. There can be no assurance that pending patent applications will result in the issuance of patents, that patents issued to or licensed by LivaNova will not be challenged or circumvented by competitors, or that these patents will be found to be valid or sufficiently broad to protect LivaNova's technology or to provide the Company with a competitive advantage. LivaNova has also obtained certain trademarks and trade names for the Company's products and maintains certain details about its processes, products and strategies as trade secrets. In the aggregate, LivaNova considers these intellectual property assets to be of material importance to its business. LivaNova regularly reviews third-party patents and patent applications in an effort to protect its intellectual property and avoid disputes over proprietary rights.

LivaNova relies on non-disclosure and non-competition agreements with employees, consultants and other parties to protect, in part, trade secrets and other proprietary technology. There can be no assurance that these agreements will not be breached or will be enforceable, that LivaNova will have adequate remedies for any breach, that others will not independently develop equivalent proprietary information or that third parties will not otherwise gain access to LivaNova's trade secrets and proprietary knowledge.

For additional information, please refer to "Item 1A. Risk Factors" of this Report, under the section entitled "*LivaNova is substantially dependent on patent and other proprietary rights and failing to protect such rights or to be successful in litigation related to LivaNova's rights or the rights of others may result in the Company's payment of significant monetary damages and/or royalty payments, negatively impact LivaNova's ability to sell current or future products or prohibit the Company from enforcing its patent and other proprietary rights against others.*"

Markets and Distribution Methods

LivaNova sells most of its medical devices through direct sales representatives in the US and a combination of direct sales representatives and independent distributors in international markets. Europe and the APAC region are the Company's largest international markets, comprising 19% and 13% of net revenue during the year ended December 31, 2023, respectively.

LivaNova's marketing and sales strategy is focused on rapid, cost-effective delivery of high-quality products to a diverse group of customers worldwide, including perfusionists, neurologists, neurosurgeons and other physicians, hospitals and other medical institutions and healthcare providers. To achieve this objective, LivaNova's sales team develops and preserves strong relationships with customers, and the Company cultivates and maintains close working relationships with professionals in the medical industry. These relationships provide LivaNova with a detailed understanding of therapeutic and diagnostic trends, developments, and emerging opportunities, which enables the Company to respond to the changing needs of providers and patients. LivaNova actively participates in medical meetings and conducts comprehensive training and educational activities to enhance its presence in the medical communities it serves. LivaNova believes that these activities also contribute to advancing the expertise of healthcare professionals.

The current trend among hospitals and other medical device customers is to consolidate into larger purchasing groups to enhance purchasing power. As a result, customer transactions have become increasingly complex, which has led, and may continue to lead, to downward pricing pressure and an increase in the use of preferred vendors. LivaNova's global customer base continues to evolve in response to these and other economic developments across the geographic markets the Company serves.

Competition and Industry

LivaNova competes in the global medical device market with sales in more than 100 countries. This market is characterized by technological advances and scientific discoveries which can often trigger rapid changes in market dynamics. LivaNova's competitors range from large manufacturers with multiple business lines to small manufacturers offering a limited selection of specialized products. LivaNova faces competition from, among others, providers of alternative medical therapies, pharmaceuticals and surgical interventions.

Physician advisories, regulatory safety alerts and publications about LivaNova's products, or competitor products, can cause major shifts in industry market share, reflecting the importance of product quality, product efficacy and quality systems in the medical device industry. In addition, developments in managed care, economically motivated customers, consolidation among healthcare providers, increased competition and declining reimbursement rates may increasingly require LivaNova to compete on the basis of price. In order to continue to compete effectively, LivaNova will likely be required to continue to create or acquire advanced technology, incorporate this technology into proprietary products, obtain regulatory approvals in a timely manner, maintain high-quality manufacturing processes, and successfully market and sell these products.

LivaNova's primary medical device competitors in the Cardiopulmonary, Neuromodulation and ACS product groups are Terumo Medical Corporation, Maquet Medical Systems, Medtronic plc, Haemonetics Corporation, NeuroPace, Inc. and Abbott Laboratories, Inc., although not all competitors are present in all product lines.

Production, Quality Systems and Raw Materials

LivaNova manufactures a majority of its products in facilities located in the US, Italy, Germany, Australia and Brazil. LivaNova purchases raw materials and components used in its products from numerous suppliers located in various countries worldwide. For quality assurance, sole source availability or cost effectiveness purposes, LivaNova may procure certain components and raw materials from a sole supplier. LivaNova takes countermeasures to reduce its supply chain risk, including working with suppliers to ensure continuity of supply while maintaining high quality and reliability and working to minimize the instances in which the Company relies on a sole supplier. LivaNova uses quality systems in the design, development, manufacturing, warehousing and distribution of its products to ensure its products are safe and effective. In addition, LivaNova utilizes environmental management systems and safety programs to protect the environment and the Company's employees. For example, all of LivaNova's manufacturing facilities are certified ISO 13485. Additionally, LivaNova's Mirandola, Italy plant is ISO 14001 and ISO 45001 certified, and its Munich, Germany plant is ISO 14001 certified. For additional information related to LivaNova's manufacturing facilities, refer to "Item 2. Properties" in this Report.

Government Regulation and Other Considerations

LivaNova's medical devices are subject to extensive government regulation by numerous government agencies, both within and outside the US. These agencies require LivaNova to comply with laws and regulations governing the research, development, testing, manufacturing, labeling, pre-market clearance or approval, marketing, distribution, advertising, promotion, record keeping, reporting, tracking, importing, and exporting of LivaNova's products. LivaNova's business is also affected by data privacy and security laws, cost containment initiatives, and environmental health and safety laws and regulations worldwide. LivaNova works to ensure compliance with such laws and regulations and continues to monitor the laws applicable to LivaNova, which are subject to changing and evolving interpretations.

Product Approval and Monitoring

Many countries in which LivaNova sells its products subject the Company's medical devices to their own product approval and requirements regarding performance, safety and quality. For example, each medical device that LivaNova seeks to distribute commercially in the US must receive 510(k) clearance or PMA from the FDA, unless specifically exempted by the agency. The 510(k) process, also known as pre-market notification, requires LivaNova to demonstrate that its new medical device is substantially equivalent to a legally marketed medical device. The PMA process, which is more costly and rigorous than the 510(k) process, requires LivaNova to demonstrate independently that a medical device is safe and effective for its intended use. One or more clinical studies may be required to support a 510(k) application and are almost always required to support a PMA application.

The EU has established a single regulatory product approval process, pursuant to which a CE Mark certifies conformity with all of the legal requirements of the regulatory process. To obtain a CE Mark, defined products must meet minimum standards of performance, safety and quality based on, among other things, the evaluation of clinical data supporting the safety and performance of the products during normal conditions of use. The competent authorities of the EU countries separately regulate the clinical research for medical devices and the market surveillance of products placed on the market, and manufacturers with CE marked devices are subject to regular inspections to monitor compliance with the applicable directives and essential

requirements. In 2017, for example, the EU published its MDR, which has resulted in significant additional pre- and post-market requirements. Certifications to EU MDR must be achieved by December 2027 or December 2028, based on the risk classification of the device. Penalties for regulatory non-compliance can be severe, including fines and revocation or suspension of a company's business license, mandatory price reductions and criminal sanctions.

LivaNova is also required to comply with the regulations of every other country where it commercializes products before the Company can launch or maintain new products in the market. To be sold in Japan, for example, LivaNova's medical devices must undergo thorough safety examinations and demonstrate medical efficacy from the Japanese government through the Ministry of Health, Labour and Welfare before they are granted approval. In China, regulatory requirements are becoming more stringent. Many countries also require that product approvals be recertified on a regular basis, generally every four to five years. The recertification process requires LivaNova to evaluate any device change and any new regulation or standard relevant to the device and, where required, conduct appropriate testing to document continued compliance.

The global regulatory environment is becoming increasingly more stringent and unpredictable. Several countries that did not have regulatory requirements for medical devices have established such requirements in recent years, and other countries have expanded, or plan to expand, their existing regulations. While some regulatory bodies have pursued harmonization of global regulations, requirements continue to differ significantly among countries. LivaNova expects this global regulatory environment will continue to evolve, which could impact the Company's cost, approval lead time, or ability to maintain existing or obtain future product approvals.

Product and Promotional Restrictions

Both before and after LivaNova releases a product for commercial distribution, the Company has ongoing responsibilities under various laws and regulations governing medical devices. The FDA and other regulatory agencies in and outside the US review LivaNova's design and manufacturing practices, labeling, record keeping, and required reports of adverse experiences and other information to identify potential problems with marketed medical devices. LivaNova is also subject to periodic inspections for compliance with applicable quality system regulations, which govern the methods used in, and the facilities and controls used for, the design, manufacture, packaging, and servicing of finished medical devices intended for human use. In addition, the FDA and other US regulatory bodies monitor the manner in which LivaNova promotes and advertises its products. Although physicians are permitted to use their medical judgment to prescribe medical devices for indications other than those cleared or approved by the FDA, LivaNova is prohibited from promoting products for such "off-label" uses and can only market the Company's products for cleared or approved uses.

Any adverse regulatory action, depending on its magnitude, may limit LivaNova's ability to market and sell its products effectively, limit its ability to obtain future premarket approvals or result in a substantial modification to LivaNova's business practices and operations. For additional information, see "Item 1A. Risk Factors" of this Report, under the section entitled "*LivaNova's products are subject to complex laws and regulations, and failure to obtain product approvals, clearance or reimbursement may materially adversely affect LivaNova's business, results of operations, cash flows and financial condition.*"

Governmental Trade Regulations

The sale and shipment of LivaNova's products and services across international borders, as well as the purchase of components and products from international sources, subject LivaNova to extensive governmental trade regulations. Many countries control the export and re-export of goods, technology and services for public health, national security, regional stability, antiterrorism and other reasons. Some governments may also impose economic sanctions against certain countries, persons or entities. In certain circumstances, governmental authorities may require LivaNova to obtain approval before LivaNova may export or re-export goods, technology or services to certain destinations, to certain end-users and for certain end-uses. Because LivaNova is subject to extensive regulations in the countries in which it operates, the Company is subject to the risk that laws and regulations could change in a way that would expose LivaNova to additional costs, penalties or liabilities.

LivaNova also sells and provides goods, technology and services to agents, representatives and distributors who may export such items to customers and end-users, and if these third parties violate applicable export control or economic sanctions laws or regulations when engaging in transactions involving the Company's products, LivaNova may be subject to varying degrees of liability depending on the extent of its participation in the transaction. The activities of these third parties may cause disruption or delays in the distribution and sale of LivaNova's products or result in restrictions being placed on the Company's international distribution and sales of products, which may materially impact LivaNova's business activities.

Data Privacy and Security Laws

As a global medical device technology company, LivaNova may be subject to various laws worldwide that protect the privacy, security and confidentiality of certain data, including employee data and patient health information and restrict the use and

unauthorized disclosure of such information. Privacy standards are often strict. Enforcement actions and financial penalties related to privacy issues in the EU continue to grow, and new privacy and data localization laws and restrictions are being passed in other countries including the US. The management of cross-border transfers of personal information outside of EU member countries is becoming more complex, which may complicate LivaNova's business and clinical research activities, as well as product offerings that involve transmission or use of patient health information. LivaNova continues to adapt its business processes to comply with those standards and requirements applicable to it.

In the US, HIPAA, as amended by the HITECH Act and their respective implementing regulations, imposes specified requirements relating to the privacy and security of certain individually identifiable health information. Among other things, HITECH makes certain of HIPAA's privacy and security standards directly applicable to "business associates," essentially defined as service providers of covered entities that create, receive, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity. In certain instances, LivaNova may be considered a business associate. In such instances, the patient data that LivaNova receives may include protected health information, as defined under HIPAA. Related enforcement actions can be costly and may also interrupt LivaNova's regular business operations. In addition, state laws, such as the CCPA, govern the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways, thus complicating compliance and data protection efforts. Since the CCPA was enacted, other US states have enacted privacy laws. The effects of the CCPA and other recently adopted laws include an increased ability of individuals to control the use of their personal data, heightened transparency obligations, increased obligations of companies to maintain the security of data, and increased exposure to fines or damages for companies that violate these laws, including by not providing individuals their specified privacy rights or, not maintaining data security safeguards at specified levels of quality, or that experience data breaches. For additional information, see "Item 1A. Risk Factors" of this Report, under the section entitled "*Cyber-attacks or other disruptions to LivaNova's information technology systems could lead to reduced revenue, increased costs, liability claims, fines, harm to LivaNova's competitive position and loss of reputation.*"

In the EU, the processing of certain data, including employee and patient information, is subject to the privacy, security and confidentiality provisions set forth in Regulation 2016/679. Under the GDPR, data concerning health constitutes sensitive data. The processing of sensitive data is subject to, among other obligations, appropriate notice and consent requirements. Additional requirements apply with respect to issues such as data sharing, cross-border data transfers, data security, and data breach notification. The GDPR also requires LivaNova to implement a number of accountability measures in relation to the processing of sensitive data, including carrying out Data Protection Impact Assessments and appointing a Data Protection Officer. Administrative fines may be levied for non-compliance with the GDPR's requirements and can reach the higher of €20 million (approximately $22.1 million) or up to 4% of LivaNova's total worldwide annual net revenue for the preceding financial year.

Cost Containment Initiatives

Government and private sector initiatives to limit the growth of healthcare costs, including price regulation, competitive pricing, bidding and tender mechanics, coverage and payment policies, comparative effectiveness of therapies, technology assessments and managed-care arrangements are continuing in many countries where LivaNova does business. These changes are driving customers to place increased emphasis on the delivery of more cost-effective medical devices and therapies. Government programs, private healthcare insurance and managed-care plans have attempted to control costs by limiting the extent of coverage or amount of reimbursement available for particular procedures or treatments, by connecting reimbursement to outcomes, by shifting to population health management and through other mechanisms designed to constrain utilization and contain costs. Hospitals are also seeking to reduce costs through a variety of mechanisms, for example, creating centralized purchasing functions that set pricing and, in some cases, limit the number of vendors that can participate in a given purchasing program. Hospitals are also aligning their interests with those of physicians through employment and other arrangements, such as gainsharing, whereby a hospital agrees with physicians to share certain realized cost savings resulting from the physicians' collective change in practice patterns, such as standardization of devices where medically appropriate, and participation in affordable care organizations. Such alignment has created increased levels of price sensitivity among customers for LivaNova's products.

Some third-party payers must also approve coverage and set reimbursement levels for new or innovative devices or therapies before they reimburse healthcare providers that use the medical devices or therapies. Even though a new medical device may be cleared for commercial distribution, LivaNova may find limited demand for the device until coverage and sufficient reimbursement levels have been obtained from governmental and private third-party payers. In addition, some private third-party payers require that certain procedures or the use of certain products be authorized in advance as a condition of coverage.

As a result of LivaNova's manufacturing efficiencies, cost controls and other cost-savings initiatives, the Company believes it is well-positioned to respond to changes resulting from this worldwide trend toward cost containment. However, uncertainty

remains as to the nature of any future legislation or other reforms, making it difficult for LivaNova to predict the potential impact of cost-containment trends on future operating results.

Applicability of Anti-Corruption Laws and Regulations

LivaNova's worldwide business is subject to the FCPA, the UK Bribery Act and other anti-corruption laws and regulations applicable in the jurisdictions where LivaNova operates. The FCPA can be used to prosecute companies in the US for arrangements with physicians or other parties outside the US if the physician or party is a government official of another country and prohibited payments are made to obtain or retain business. The UK Bribery Act prohibits both domestic and international bribery, as well as bribery across both public and private sectors. There are similar laws and regulations applicable to LivaNova outside the US and the UK, all of which are subject to evolving interpretations. For additional information, please refer to "Item 1A. Risk Factors" of this Report, under the section entitled "*Failure to comply with anti-bribery laws could materially adversely affect LivaNova's business and result in civil and/or criminal sanctions.*"

Environmental Regulation and Management

LivaNova is subject to various environmental laws, directives and regulations both in the US and abroad that have resulted in, and could lead to, increased environmental compliance expenditures and reporting. LivaNova's ongoing manufacturing and other operations involve the use, storage and transportation of hazardous and non-hazardous substances regulated under environmental health and safety laws. In addition, governmental authorities may seek to hold LivaNova liable for successor environmental liability violations committed by any companies in which LivaNova invests or acquires or may require LivaNova to clean and remove hazardous substances at its sites that were produced by the operations of prior owners and are unrelated to the Company's current operations. For additional information, please refer to "Note 13. Commitments and Contingencies" in LivaNova's consolidated financial statements under the sections entitled "Saluggia Site Hazardous Substances" and "SNIA Environmental Liability" and "Item 1A. Risk Factors" of this Report, under the section entitled "*LivaNova is subject to environmental laws and regulations and the risk of environmental liabilities, violations, protest voting and litigation in multiple jurisdictions, any of which could have a material impact on LivaNova's business, results of operations, cash flows, financial condition and liquidity*."

Healthcare Fraud and Abuse and Related Laws

The delivery of LivaNova's products is subject to regulation by HHS and comparable state and non-US agencies responsible for reimbursement and regulation of healthcare products and services. LivaNova is subject to US federal and state government healthcare regulations and enforcement imposed primarily in connection with government healthcare programs, such as the Medicare and Medicaid programs, as well as healthcare regulations and enforcement imposed by governments in other countries in which LivaNova conducts business.

US federal healthcare laws apply when LivaNova or customers submit claims for items or services that are reimbursed under government healthcare programs, including laws related to kickbacks, false claims, self-referrals or other healthcare fraud. Specifically, the federal healthcare Anti-Kickback Statute prohibits persons from, among other things, knowingly and willfully offering or paying remuneration, directly or indirectly, to a person to induce them to order, purchase, lease, or recommend a good or service for which payment may be made in whole or in part under a federal healthcare program such as Medicare or Medicaid, unless the arrangement fits within one of several statutory exemptions or regulatory "safe harbors." Violations of the federal Anti-Kickback Statute may result in civil monetary penalties up to $100,000 for each violation, plus up to three times the remuneration involved. Violations can also result in criminal penalties, including criminal fines of up to $50,000 and imprisonment for up to 10 years. Finally, violations can result in exclusion from participation in government healthcare programs, including Medicare and Medicaid.

Additionally, violations of the False Claims Act can result in significant monetary penalties and treble damages. The US federal government utilizes the False Claims Act, the Anti-Kickback Statute and similar laws to investigate and prosecute device, pharmaceutical and biotechnology companies in connection with the promotion of products for unapproved uses, the provision of patient and provider support (e.g., reimbursement support), and other prohibited sales and marketing practices. The US government has obtained multi-million and multi-billion-dollar settlements under the False Claims Act, in addition to individual criminal convictions under applicable criminal statutes. Given the US government's success in prosecuting claims under the False Claims Act, LivaNova anticipates that the US government will continue to devote substantial resources to investigating healthcare providers' and manufacturers' compliance with applicable fraud and abuse laws.

In addition to the Anti-Kickback Statute and False Claims Act, many states have their own laws related to kickbacks, false claims, self-referrals or other healthcare fraud. These laws do not always have the same exceptions or safe harbors as their federal corollaries and, in some states, apply with respect to all payers, including commercial health insurance companies.

HIPAA includes federal criminal statutes that prohibit, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors; knowingly and willfully embezzling or stealing from a healthcare benefit program; willfully obstructing a criminal investigation of a healthcare offense; or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, products or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

There is also federal and state regulation of, and transparency with respect to, payments made to physicians and other healthcare providers. LivaNova is subject to, for example, the Physician Payments Sunshine Act, which requires the Company to report annually certain payments and other transfers of value it makes to US licensed physicians, nurse practitioners, physician assistants, or teaching hospitals. Any failure to comply with such laws and regulations may result in civil financial penalties.

In addition, as discussed above, the US and foreign government regulators enforce the FCPA and other anti-bribery laws. These laws and regulations are broad in scope and are subject to evolving interpretation. As a result, LivaNova has been, and will likely continue to be, required to incur substantial costs to investigate allegations, audit and monitor compliance, and/or alter the Company's practices with respect to these laws. Violations or alleged violations of these laws could result in litigation, and LivaNova may be subject to criminal or civil penalties and sanctions, including substantial fines, imprisonment of current or former employees and exclusion from participation in governmental healthcare programs.

The evolving commercial compliance environment and the resulting need to build and maintain robust systems to comply with different compliance and/or reporting requirements in multiple jurisdictions increases the possibility that a healthcare company may violate one or more of these requirements and be required to allocate significant resources to its compliance program. If LivaNova's operations are found to be in violation of any such laws or any other governmental regulations that apply to the Company, LivaNova may be subject to penalties, including, without limitation, civil and criminal penalties, damages, fines, entry into corporate integrity agreements or other monitoring agreements with governmental agencies, the curtailment or restructuring of its operations, and exclusion from participation in federal and state healthcare programs, any of which could adversely affect LivaNova's financial results and the Company's ability to operate its business.

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 annual reports, among other things, certain types of dealings with Iran and other entities, including transactions or dealing with government-owned entities, even when those activities are lawful and do not involve US persons. Two of LivaNova's non-US subsidiaries currently sell medical devices, including cardiopulmonary and neuromodulation products, to distributors and non-governmental organizations in Iran to support patient care in that country. LivaNova has limited visibility into the identity of the customers of these distributors' and non-governmental organizations 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. However, to the best of its knowledge at this time, LivaNova does not have any contracts or commercial arrangements with the Iranian government or other relevant entities.

LivaNova's gross revenues and net profits attributable to the above-mentioned Iranian activities were $1.0 million and $0.5 million for the three months ended December 31, 2023, respectively, and $4.3 million and $1.9 million for the year ended December 31, 2023, respectively.

LivaNova believes its activities are consistent with applicable law, including US, UK, EU, and other applicable sanction laws, though such laws are complex and continue to evolve rapidly. The Company intends to continue its business in Iran.

Human Capital Management

LivaNova has approximately 2,900 employees worldwide, representing 75 nationalities and located in 32 countries. These employees are crucial in achieving the Company's mission to provide hope to its patients and their families. LivaNova encourages its employees to live by LivaNova's five core values: patients first, meaningful innovation, act with agility, commitment to quality and integrity, and collaborative culture. LivaNova evaluates itself against these values and, ultimately, achieves success through them as an organization.

Compensation and Benefits

To meet the needs of LivaNova's patients and customers, the Company strives to attract, retain, develop and reward exceptional talent. LivaNova's proactive talent acquisition strategies, competitive compensation and benefits, collaborative and rewarding work environment, leadership development programs, and professional training opportunities have been a significant driver of the Company's success. In addition to base pay, LivaNova's rewards, compensation, and benefits programs may include, depending on jurisdiction, annual performance bonuses, stock awards, pensions, health and wellbeing programs, paid time off and parental leave, financial assistance for education-related purposes, flexible working schedules, hybrid and remote working, employee stock purchase plans, and employee rewards programs, among others.

Culture

LivaNova seeks to foster a culture of continuous learning, where open and direct communication is valued. Accordingly, LivaNova regularly conducts employee engagement surveys, called LivaNova4You, to measure overall employment engagement and satisfaction and to provide the Company with actionable data for potential opportunities for improvement.

The 2023 LivaNova4You survey results saw an increase in overall employee engagement since the last survey in 2021. With over 90% of employees completing the survey, the results indicate an increase in employee satisfaction and motivation. In response to feedback from the survey results, the executive leadership team has committed to improving, among other things, the digitization of work systems and the Company's branding.

Performance Management, Leadership Development and Professional Training

LivaNova's annual performance management process is designed to build employee skills and capabilities and develop and retain enterprise leaders for the future. It includes training to increase the quality of employee/manager talent review discussions and employee performance calibrations among leaders to drive consistency. All employees, which include full-time and part-time employees, start the year creating performance-aligned goals which are reviewed with their managers at both mid-year and year-end performance evaluation reviews.

Employees have access to an extensive training library called LivaNova University, which contains modules covering different aspects of the business. In addition, LivaNova has a range of tailored programs in place to develop and enhance employees' career paths. The LivaNova Leadership Academy is a program that promotes development through three different learning forums, Manager Fundamentals, Emerging Leaders and Advanced Leadership, to accelerate the development and succession readiness for employees chosen for the program.

LivaNova also supports the continuing education of its employees externally. In the US and internationally, eligible employees can access financial aid through education reimbursement programs for approved courses and certifications completed independently. Additionally, the Company sponsors professional growth opportunities.

Finally, LivaNova offers internships and apprenticeships across functions around the globe, in partnership with universities and institutions, which regularly lead to full-time employment at the Company.

Diversity, Equity, and Inclusion

LivaNova recognizes the value in fostering a diverse, equitable and inclusive work environment and strives to provide a workplace free of harassment or discrimination. Accordingly, the Company closely monitors its gender metrics on a regular basis. As of December 31, 2023, LivaNova had nine Directors on its Board, of whom three (33%) are female and six (67%) are male. The executive leadership team at the end of 2023 consisted of twelve individuals, of whom two (17%) are female and ten (83%) are male. Of the Company's senior leadership team, which includes the executive team, vice presidents and directors, as of December 31, 2023, approximately 30% are female and approximately 70% are male. Finally, as of December 31, 2023, of LivaNova's approximately 2,900 employees, 51% are female and 49% are male.

LivaNova's strategy for accelerating diversity begins with creating new ways to find extraordinary talent. Examples of the Company's efforts include networking with historically black colleges and universities, posting job listings on diverse sites, ensuring diversity-focused interview panels, and training interviewers on how to conduct a fair, unbiased interview process.

In addition, LivaNova supports internal diversity affinity initiatives, including the Global Women's Network which consists of female employees across the globe that convene to discuss topics that unite and celebrate the strength of diversity in the workplace. Similarly, the LivaNova Women's Network, a mentorship program created by women and for women, facilitates pairings between mentors and mentees in the US and Latin America. Topics range from career and financial advice to performance management and connection to the Company's strategy. These programs provide members with new perspectives, more personalized development, and an opportunity to network with other women across the organization.

Seasonality

The number of medical procedures incorporating LivaNova's products is generally lower during the summer months, particularly in European countries, due to summer vacation schedules.

Available Information

LivaNova's executive headquarters are located at 20 Eastbourne Terrace, London, UK W2 6LG. The Company's website address is *www.livanova.com*. Free of charge through its website, LivaNova makes available its Proxy Statements on Schedule 14A, Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, and reports relating to beneficial ownership of the Company's securities filed or furnished pursuant to Section 16 of the Exchange Act, as soon as reasonably practicable after electronically filing such material with the SEC. LivaNova's website also contains the charters for each standing committee of its Board of Directors in addition to the Company's Corporate Governance Guidelines.

LivaNova may from time to time provide important disclosures to investors by posting them in the Investor Relations section of its website, as allowed by SEC rules. Information on LivaNova's website is not incorporated into this Report.

The SEC also maintains a website at *www.sec.gov* that contains reports, proxy statements and other information about SEC registrants, including LivaNova.

Item 1A. *Risk Factors*

An investor should carefully consider the risks described below, as well as other information contained in this Report and in LivaNova's other filings with the SEC. The Company's business, results of operations, cash flows and financial condition could be materially and adversely affected by any such risks or uncertainties. Additional risks and uncertainties not presently known to the Company or that the Company currently believes to be immaterial may also adversely affect its business.

Risks Relating to the Company's Business and Operations

LivaNova is subject to the risks of conducting business internationally.

LivaNova designs, develops, manufactures, markets, and sells products globally, and the Company intends to continue to pursue growth opportunities worldwide. LivaNova's international operations are subject to risks that are inherent in conducting business globally and under non-US laws, regulations and customs. These risks, many of which LivaNova has experienced first-hand, include: higher danger of terrorist activity, war or civil unrest; greater exposure to inflation; volatility in freight and labor costs; fluctuating interest and exchange rates; evolving sanctions; increased exposure to cyber-attacks and supply chain challenges; changing energy prices; local product changes and compliance requirements; longer payments terms and collection times for receivables in local jurisdictions; difficulty enforcing agreements; greater exposure to creditworthiness of customers and inconsistent local law enforcement of obligations; trade protection measures and import and export licensing requirements; ensuring compliance with anti-bribery laws; different labor regulations and workforce instability; selling its products through distributors and agents; and political and economic instability.

Conflicts, for example, including those in Ukraine and the Middle East, have caused the Company to assess its ability to source materials, sell product, collect payment, and comply with international sanctions in the aforementioned markets. These conflicts have increased economic and regulatory uncertainties, and a significant escalation or continuation of these conflicts could have a material impact on the Company's operating results.

Certain of LivaNova's subsidiaries have engaged in business dealings in countries subject to comprehensive sanctions, including Iran, Sudan and Syria in addition to Russia and Belarus. These business dealings represent an insignificant amount of LivaNova's consolidated revenues and income but expose the Company to a heightened risk of violating applicable sanctions regulations. Violations of these regulations are punishable by civil and criminal penalties including fines, denial of export privileges, injunctions, asset seizures, debarment from government contracts and revocations or restriction of licenses, as well as criminal fines and imprisonment. Despite best efforts to comply, there can be no assurance that LivaNova's policies and procedures will prevent the Company from violating these regulations in every transaction in which LivaNova may engage, and such a violation could adversely affect its reputation, business, results of operations, cash flows and financial condition.

LivaNova's global operations result in revenues and expenses that are denominated in currencies other than LivaNova's reporting currency, the USD. Fluctuations in exchange rates may impact, and have impacted, LivaNova's results of operations and financial condition. Although LivaNova has in the past elected, and may in the future elect, to hedge certain foreign currency exposures, it is unlikely that any hedging strategy would eliminate its currency risk entirely.

In many of the countries where LivaNova operates, employees are covered by various laws and/or collective bargaining agreements that endow them, through their local or national representatives, with the right to be consulted in relation to specific issues, including reorganizations and staff reductions. The laws and/or collective bargaining agreements that are applicable to these agreements could have an impact on LivaNova's flexibility, as they apply to programs to redefine and/or strategically reposition the Company's activities. LivaNova's ability to implement staff reduction programs or even temporary interruptions of employment relationships is predicated on the approval of government entities and the consent of labor unions. A negative response from a works council or union-organized work stoppages by employees could have a negative impact on LivaNova's business.

Any of the aforementioned risks could adversely affect LivaNova's business, results of operations, cash flows and financial condition.

Cyber-attacks or other disruptions to LivaNova's information technology systems could lead to reduced revenue, increased costs, liability claims, fines, harm to LivaNova's competitive position and loss of reputation.

LivaNova is increasingly dependent on its information technology systems and those of third parties to operate its business, and certain products of the Company include integrated software and information technology. Such dependencies have been exacerbated by remote working practices. LivaNova relies on information technology systems to collect and process customer orders, manage product manufacturing and shipping, and support regulatory compliance. The Company routinely processes, stores and transmits large amounts of data, including sensitive personal information, patient health information and confidential business information. The secure processing, maintenance and transmission of this information is critical to LivaNova's operations. The quantity and complexity of the Company's products and information technology systems make such systems vulnerable to cyber-attacks, breakdown, interruptions, destruction, loss or compromise of data, obsolescence or incompatibility among systems or other significant disruptions. The Company has experienced, and is continually at risk of being subject to cyber-attacks and other disruptions. Programs and systems may require frequent updates or may no longer be supported, which may impact the ability of the Company's information technology systems to operate properly or without disruption. Unauthorized persons routinely attempt to access LivaNova's systems to disrupt, disable or degrade services, obtain proprietary or confidential information, make ransom demands, and/or remotely disrupt or access the systems of large health care providers by exploiting the Company's systems. Furthermore, LivaNova's security assessments of third-party vendors may be inadequate to determine whether their security protocols are sufficient to withstand a cyber-attack or other security breach. LivaNova also cannot be certain that the Company will receive timely notification of such cyber-attacks or other security breaches. Cyber-attacks or other security breaches could remain undetected for an extended period, which could potentially result in significant harm to the Company's information technology systems, as well as unauthorized access to the information stored on and transmitted by the Company's information technology systems. In addition, to access LivaNova's products and services, its clients may use computers and other devices that are beyond the Company's security control safeguards.

Unauthorized disclosure or use of, denial of access to, or other incidents involving sensitive or confidential customer, patient, employee, vendor or Company data, whether through systems failure, employee negligence, fraud, misappropriation, or cybersecurity, ransomware or malware attacks, or other intentional or unintentional acts, could expose the Company to liability under various laws and regulations across jurisdictions and increase the risk of litigation and governmental or regulatory investigation, damage LivaNova's reputation and its competitive positioning in the marketplace, disrupt its, or the Company's customers' businesses, or cause LivaNova to lose customers, resulting in significant financial exposure and legal liability. Similarly, unauthorized access to or through, denial of access to, or other incidents involving LivaNova or its vendors' information systems, whether by the Company's employees or third parties, including a cyber-attack by criminal hackers, members of organized crime groups or state-sponsored organizations, who continuously develop and deploy viruses, ransomware, malware or other malicious software programs or social engineering attacks, has resulted and could in the future result in negative publicity, significant remediation costs, legal liability, notification requirements, and damage to LivaNova's reputation, which could have a material adverse effect on the Company's business, results of operations, cash flows and financial condition. Cybersecurity threats are constantly expanding and evolving, becoming increasingly sophisticated and complex, increasing the difficulty of detecting and defending against them and maintaining effective security measures and protocols. Even when a cyber-attack or other security incident is detected, the full extent of the incident may not be determined immediately. The costs to the Company to mitigate cyber-attacks and security incidents could be significant and, while the Company has implemented security measures to protect its information technology systems, its efforts to address these problems may not be successful. LivaNova's cyber risk insurance may be insufficient to cover all losses, such as litigation costs or financial losses that exceed the Company's policy limits or are not covered under any of its current insurance policies. Cyber risk insurance has also become more difficult and expensive to obtain, and LivaNova cannot be certain that the Company's current levels of insurance will be available in the future on economically reasonable terms.

As previously disclosed, in November 2023, LivaNova detected a cybersecurity incident that resulted in a disruption of portions of the Company's information technology systems. Promptly after detecting the issue, LivaNova began an investigation with assistance from external cybersecurity experts and notified law enforcement. LivaNova continues to assess the full impact of the cybersecurity event on its business, and these impacts may materially affect its results of operations, cash flows and financial condition.

The costs of complying with the requirements of federal, state, and foreign laws pertaining to the privacy and security of personal information, including health-related information and the potential liability associated with failure to do so, could materially adversely affect LivaNova's business and results of operations.

There is significant regulatory and enforcement focus on data protection in the US (at both the federal and state level) and abroad, and an actual or alleged failure to comply with applicable US or foreign data protection regulations or other data protection standards may expose LivaNova to litigation, including class action litigation, fines, sanctions or other penalties, which could harm the Company's reputation and adversely impact LivaNova's business, results of operations, cash flows and financial condition. The Company collects, stores, and handles employee and patient data, including sensitive patient health information, which may present material obligations and risks to LivaNova's business, including significantly expanded compliance burdens, costs and enforcement risks. If LivaNova does not lawfully collect, store, handle or otherwise process personal information and does not prevent data breaches, particularly given the increased risks associated with sensitive health information, LivaNova may suffer legal and regulatory consequences in addition to business consequences. As a result of its worldwide operations, the Company may be subject to various data protection and cyber-security laws and regulations in many jurisdictions, including HIPAA, the CCPA and similar state laws, and the GDPR. Other governments have enacted, amended, or are enacting similar data protection laws, including data localization laws that require data to stay within their borders and other technical and operational adaptions that may be required given the rapid changes in data protection regulation where LivaNova conducts business. The enactment of such laws could have potentially conflicting requirements that would make compliance challenging. LivaNova's efforts to comply with applicable laws and regulations may be inadequate, and the Company may be unable to avoid enforcement actions by governmental bodies. Enforcement actions may be costly and could interrupt regular operations of LivaNova's business. Moreover, LivaNova's insurance coverage may be insufficient to cover all losses. In addition, there is a trend of civil lawsuits and class actions relating to compromises of personal data or other cyber-attacks pursuant to laws such as the CCPA. While LivaNova has not been named in any such lawsuits, the Company could become a target of civil litigation or government enforcement actions as a result of a compromise to or loss of data.

Reductions and interruptions in LivaNova's supply chain have had, and may continue to have, adverse effects on LivaNova's business, results of operations, cash flows and financial condition.

LivaNova purchases many of the components and raw materials used in manufacturing its products from numerous suppliers in various countries. In some cases, LivaNova purchases specific components and raw materials from primary or main suppliers (or in some cases, a single or sole supplier) for reasons related to quality assurance, cost-effectiveness and availability. Any problem affecting a supplier (whether due to external or internal causes) could have a negative impact on LivaNova. Difficulties and delays in manufacturing, internally, externally or otherwise within the supply chain, may lead to voluntary or involuntary business interruptions or shutdowns, product shortages, withdrawals or suspensions of products from the market, and potential regulatory action.

While LivaNova works closely with its suppliers to ensure supply continuity and minimize the instances in which LivaNova relies on a sole supplier, the Company cannot guarantee that its efforts will always be successful. Moreover, due to strict standards and regulations governing the manufacture and marketing of LivaNova's products, the Company may not be able to locate new supply sources quickly or at all in response to a supply reduction or interruption, resulting in negative effects on its ability to manufacture products effectively and timely. To date, the Company's supply of raw materials and the production and distribution of finished products have not been materially affected, but to the extent the Company is unsuccessful in managing its supply chain, any such issues could have a material adverse effect on LivaNova's business, results of operations, cash flows and financial condition.

The global medical device industry is highly competitive, and LivaNova may be unable to compete effectively.

LivaNova operates in a highly competitive market characterized by increasingly complex products that are expensive and time-consuming to develop and manufacture. In the product lines in which LivaNova competes, the Company faces a mixture of competitors ranging from large manufacturers with multiple business lines to small manufacturers that offer a limited selection of specialized products. Development by other companies of new or improved products, processes, or technologies may make LivaNova's products or proposed products less competitive. In addition, LivaNova faces competition from providers of alternative medical therapies, pharmaceuticals, and surgical interventions, among others. Competitive factors include: product quality, reliability and performance; product technology and innovation; breadth of product lines and product services; ability to identify new market trends; changes to the regulatory environment; cost-effectiveness and price; customer support and training; capacity to recruit engineers, scientists and other qualified employees; ability to navigate the regulatory approval process in the markets in which LivaNova operates; reimbursement approval; and effectiveness of systems and processes. Difficulties in any of these areas may have a material adverse effect on LivaNova's business, results of operations, cash flows and financial condition.

The rapid pace of technological development in the medical industry and the specialized expertise required in different areas of medicine make it difficult for one company alone to develop a broad portfolio of technological solutions. As a result, LivaNova also relies on investments and investment collaborations to provide the Company access to new technologies. If LivaNova fails to develop new and enhanced products and services on a timely basis, the Company's offerings will become obsolete over time, and its business and financial results would be negatively impacted. LivaNova's success depends on several factors, including its ability to appropriately allocate the Company's R&D funding to products and services with higher growth prospects, for example, further incorporation of software; hiring and retaining the necessary R&D talent; stimulating customer demand for and convincing customers to adopt new technologies; innovating and developing new technologies and applications; and acquiring or obtaining third-party technologies that may have valuable applications in the markets that LivaNova serves.

LivaNova expects to make investments where it believes that the Company can develop, or acquire, new technologies and products to further LivaNova's strategic objectives and strengthen LivaNova's existing businesses. Investments and investment collaborations in and with medical technology companies are inherently risky, and LivaNova cannot guarantee that any of its previous or future acquisitions, investments or investment collaborations will be successful or will not materially adversely affect LivaNova's business, results of operations, cash flows and financial condition.

The success and continuing development of LivaNova's products depend on maintaining strong relationships with physicians and healthcare professionals. If LivaNova fails to maintain its working relationships with physicians and other healthcare professionals, the Company's products may not be developed and marketed in line with the needs and expectations of the professionals who use and support LivaNova's products. Physicians assist LivaNova as researchers, marketing consultants, product consultants, inventors and public speakers, and LivaNova relies on these professionals to provide the Company with considerable knowledge and experience. If LivaNova is unable to maintain these strong relationships, the development and marketing of the Company's products could suffer, which could have a material adverse effect on LivaNova's business, results of operations, cash flows and financial condition.

LivaNova's products are subject to complex laws and regulations, and failure to obtain product approvals, clearance or reimbursement may materially adversely affect LivaNova's business, results of operations, cash flows and financial condition.

LivaNova's medical devices and technologies, as well as its business activities, are subject to a complex set of regulations and rigorous enforcement, including by the FDA, US Department of Justice, HHS, and numerous other federal, state, and non-US governmental authorities. The time required to obtain approvals from foreign countries may be longer or shorter than that required for FDA clearance, and requirements for such approvals may differ from FDA requirements. To varying degrees, each of these agencies requires LivaNova to comply with laws and regulations governing the development, testing, manufacturing, labeling, reimbursement, marketing, and distribution of LivaNova's products. As a part of the approval, marketing clearance or reimbursement process for new products and new indications for existing products, LivaNova may conduct clinical trials and studies. Unfavorable or inconsistent clinical data from existing or future clinical trials, or the interpretation of such clinical data by customers and/or regulatory authorities, may adversely impact LivaNova's ability to obtain product approvals and receive reimbursement.

LivaNova, for example, is currently conducting clinical studies, and any delays or news regarding unfavorable or inconsistent data could have a material adverse effect on LivaNova's business. Success in pre-clinical testing and early clinical studies does not always ensure that later clinical studies will be successful, as LivaNova experienced and announced, for instance, in connection with stopping enrollment of the ANTHEM-HFrEF clinical trial, and LivaNova cannot be sure that later studies will replicate the results of prior studies. Any delay or termination of LivaNova's clinical studies will delay or preclude the filing of

regulatory submissions or requests for coverage determinations and, ultimately, LivaNova's ability to commercialize new products or product modifications and obtain reimbursement for the Company's products. It is also possible that patients enrolled in clinical studies will experience adverse side effects that are not currently part of the product's profile, which could inhibit further marketing and development of such products.

Even if LivaNova is able to obtain approval, marketing clearance and reimbursement, it may take a significant amount of time, require the expenditure of substantial resources, involve stringent clinical and pre-clinical testing and increased post-market surveillance, and/or involve modifications, repairs or replacements of LivaNova's products or limitations on the proposed uses of its products. Ultimately, LivaNova cannot guarantee that its clinical trials will be successful or that the Company will be able to obtain or maintain marketing clearance and/or reimbursement for new products or modifications to existing products. Any such issues, whether in relation to trials, approvals, clearances or reimbursement, could have a material adverse effect on LivaNova's business, results of operations, cash flows and financial condition.

Failure to comply with product-related government regulations may materially adversely affect LivaNova's business, results of operations, cash flows and financial condition.

Both before and after a product is commercially released, LivaNova has ongoing responsibilities under FDA and other applicable non-US government agency regulations. For instance, many of LivaNova's facilities and procedures and those of its suppliers are subject to periodic inspections by the FDA, which can result, and in the past has resulted, in inspectional observations on the FDA's Form-483, warning letters, or other forms of enforcement. If the FDA were to conclude that LivaNova is not in compliance with applicable laws or regulations, or that any of the Company's medical products are ineffective or pose an unreasonable health risk, the FDA could ban such medical products, detain or seize adulterated or misbranded medical products, order a recall, repair, replacement or refund of such products, refuse to grant pending PMA applications, and/or require LivaNova to notify health professionals and others that the devices present unreasonable risks of substantial harm to the public health. Similar consequences could follow, such as audits by non-US regulators and notified bodies.

The FDA and other non-US government agencies could also assess civil or criminal penalties against LivaNova, the Company's officers, or other employees and/or impose operating restrictions on a company-wide basis. The FDA could also recommend prosecution to the US Department of Justice. An adverse regulatory action could restrict LivaNova from effectively marketing and selling its products, limit its ability to obtain future pre-market clearances or PMAs, and result in a substantial modification to LivaNova's business practices and operations. These potential consequences, as well as any adverse outcome from government investigations, could have a material adverse effect on LivaNova's business, results of operations, cash flows and financial condition.

In addition, device manufacturers are prohibited from promoting their products for uses and indications that are not set forth in the approved product labeling (so called "off-label uses"). While physicians may exercise their discretion in prescribing a device off-label, a device manufacturer's failure to comply with the related applicable regulations could subject LivaNova to significant civil or criminal exposure, administrative obligations and costs, and/or other potential penalties. The EU MDR, for example, prohibits manufacturers from misleading users and patients by suggesting uses for the device other than those stated as part of the intended purpose for which the conformity assessment was carried out.

Governmental regulations outside the US have, and may continue to, become increasingly stringent and common as well. For example, the EU MDR has resulted in significant additional premarket and post-market requirements. Certifications to EU MDR must be achieved by December 2027 or December 2028, based on the risk classification of the device. In the interim, the European Commission is allowing companies to use their MDD certifications. LivaNova is working to obtain all appropriate approvals as required, as penalties for regulatory non-compliance can be severe, including fines and revocation or suspension of a company's business license. The development and implementation of future laws and regulations may also have a material adverse effect on LivaNova.

Global healthcare policy changes and reduction in reimbursement for products may have a material adverse effect on LivaNova.

In response to increases in healthcare costs, there have been and continue to be proposals by governments, regulators and third-party payers to control these costs. These proposals have resulted in efforts to enact healthcare system reforms that may lead to pricing restrictions, payback requirements, limits on the amounts of reimbursement available for LivaNova's products and limits on the acceptance and use of LivaNova's products. For example, in 2015, the Italian Parliament introduced rules for entities that supply goods and services to the Italian National Healthcare System, impacting the business and financial reporting of medical technology sector companies that sell devices in Italy. A key provision of the law is a "payback" measure, requiring companies selling medical devices in Italy to repay a percentage of the healthcare expenditures exceeding the regional

maximum caps for medical devices. While LivaNova is appealing the imposition of the guidelines and requests for payment pursuant to the rule as well as waiting on the Constitutional Court in Italy to determine the constitutionality of the rule, the Company may not be successful. See "Note 13. Commitments and Contingencies" in LivaNova's consolidated financial statements included in this Report for additional information.

LivaNova's ability to profitably commercialize the Company's products is dependent, in large part, on whether third-party payers, including private healthcare insurers, managed care plans, governmental programs and others, agree to cover the costs and services associated with LivaNova's products and related medical procedures in the US and internationally. Third-party payers, including private and government insurers, are increasingly requiring evidence that medical devices are cost-effective. If LivaNova is unable to demonstrate that the Company's devices are cost-effective, third-party payers may not reimburse the use of LivaNova's products or provide sufficient reimbursement for LivaNova's products, which could reduce sales of the Company's products to healthcare providers that depend upon reimbursement for payment for their services. Similarly, periodic changes to reimbursement methodologies could have an adverse impact on LivaNova's business. Adoption of some or all of such healthcare policy and reimbursement proposals could have a material adverse effect on LivaNova's business, results of operations, cash flows and financial position.

Failure to comply with rules relating to reimbursement of healthcare goods and services, healthcare fraud and abuse, false claims and other applicable laws or regulations may subject LivaNova to penalties and limit patient access to its devices, thereby adversely impacting the Company's reputation and business operations.

LivaNova's devices and therapies are subject to regulation by various governmental agencies worldwide that are responsible for regulating healthcare goods and services, including laws and regulations related to kickbacks, false claims, self-referrals and healthcare fraud. Because LivaNova's marketing practices involve direct promotion to patients in certain jurisdictions, the Company is subject to additional laws and regulations intended to prevent misleading of patients and consumers through unethical promotional activities and related data collection practices. Any failure to comply with these laws and regulations could subject the Company or its officers and employees to criminal and civil financial penalties.

The risk of being found in violation of these laws is increased by the fact that many of them have not been fully interpreted by regulatory authorities or the courts and their provisions are open to a variety of interpretations. Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available under such laws, it is possible that some of LivaNova's business activities, including the Company's relationships with surgeons and other healthcare providers, some of whom recommend, purchase and/or prescribe LivaNova's devices, group purchasing organizations and LivaNova's independent sales agents and distributors, could be subject to challenge under one or more of such laws. Even an unsubstantiated allegation of impropriety could adversely impact LivaNova's reputation and/or business operations.

Furthermore, LivaNova's devices, products and therapies are purchased principally by hospitals or physicians that typically bill various third-party payers, such as governmental healthcare programs (e.g., Medicare, Medicaid and comparable non-US programs), private insurance plans and managed care plans for the healthcare services provided to their patients. The ability of LivaNova's customers to obtain appropriate reimbursement for products and services from third-party payers is critical because it affects which products customers purchase and the prices they are willing to pay. LivaNova's devices, products and therapies are subject to regulation regarding quality and cost by HHS, including CMS, as well as comparable state and non-US agencies responsible for reimbursement and regulation of healthcare goods and services, including laws and regulations related to kickbacks, false claims, self-referrals and healthcare fraud. In addition, as a manufacturer of US FDA-approved devices reimbursable by federal healthcare programs, LivaNova is subject to the Physician Payments Sunshine Act, which requires the Company to annually report certain payments and other transfers of value LivaNova makes to US-licensed physicians, US teaching hospitals or other covered recipients. Any failure to comply with these laws and regulations could subject the Company or its officers and employees to criminal and civil financial penalties.

Finally, LivaNova is subject to risks relating to changes in government and private medical reimbursement programs and policies and changes in legal regulatory requirements in the US and around the world. Implementation of further legislative or administrative reforms to these reimbursement systems, or adverse decisions relating to coverage of or reimbursement for LivaNova's products by administrators of these systems, could have a material adverse impact on the acceptance of and demand for the Company's products and the prices that LivaNova's customers are willing to pay for them.

If LivaNova's marketed medical devices are defective or otherwise pose safety risks, the FDA and similar non-US governmental authorities could require their recall or initiate an enforcement action, or LivaNova may initiate a recall of the Company's products voluntarily.

The FDA and similar non-US governmental authorities may require the recall of commercialized products in the event of material deficiencies or defects in design, software or manufacture, or in the event that a product poses an unacceptable risk to

patients' health. Manufacturers, on their own initiative, may recall a product with a material deficiency, and the Company has initiated voluntary product recalls in the past. Any recall announcement could harm LivaNova's reputation with customers and negatively affect LivaNova's reputation, business, results of operations, cash flows and financial position. A recall could also impair LivaNova's ability to produce its products in a cost-effective and timely manner. In the future, LivaNova may initiate voluntary withdrawal, removal or repair actions that the Company determines do not require notification as a recall. If a regulating authority were to disagree with LivaNova's determinations, it could require the Company to report those actions as recalls.

In addition, depending on the corrective action taken to redress a device's deficiencies or defects, regulators may require, or LivaNova may decide, that the Company needs to obtain new approvals or clearances before it markets or distributes the corrected device. Seeking such approvals or clearances may delay LivaNova's ability to replace the recalled device in a timely manner. Any corrective action, whether voluntary or involuntary, or related litigation will require investment of the Company's time and capital, distract management from operating the business, and may harm LivaNova's reputation and financial results. Moreover, if LivaNova does not adequately address problems associated with its devices, the Company may face additional regulatory enforcement action, including FDA warning letters, product seizure, injunctions, administrative penalties, or civil or criminal fines, any of which could have a material adverse effect on LivaNova's business.

Failure to comply with anti-bribery laws could materially adversely affect LivaNova's business and result in civil and/or criminal sanctions.

LivaNova's operations are subject to anti-corruption laws, including the UK Bribery Act, the FCPA and other anti-corruption laws that apply in countries where the Company does business. These laws generally prohibit LivaNova and its employees and intermediaries from bribing, being bribed or making other prohibited payments to government officials or other persons to obtain or retain business or gain some other business advantage. Because of the predominance of government-administered healthcare systems in many parts of the world outside the US, many of LivaNova's customer relationships are potentially subject to such laws.

LivaNova is, therefore, exposed to the risk that its employees, independent contractors, principal investigators, consultants, vendors, independent sales agents, and distributors may engage in fraudulent or other illegal activity in violation of these laws and LivaNova's Code of Conduct. LivaNova maintains policies and programs to educate its employees and agents on these legal requirements, and to prevent and prohibit improper practices. However, existing safeguards and any future improvements may not always be effective, and LivaNova's employees, consultants, sales agents, or distributors may engage in conduct for which LivaNova could be held responsible. In addition, regulators could seek to hold LivaNova liable for conduct committed by companies in which LivaNova invests or acquires. The FCPA can pose unique challenges for manufacturers who operate in foreign cultures where conduct prohibited by the FCPA may not be viewed as illegal in local jurisdictions. It is not always possible to identify and deter misconduct by LivaNova's employees and other third parties, and the precautions the Company takes to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting LivaNova from governmental investigations or other actions or lawsuits stemming from a failure to comply with such laws or regulations.

Global enforcement of anti-corruption laws has increased substantially in recent years, with more frequent voluntary self- disclosures by companies, aggressive investigations and enforcement proceedings by governmental agencies, and assessment of significant fines and penalties against companies and individuals. LivaNova cannot predict the nature, scope or effect of future regulatory requirements to which the Company's international operations might be subject or the manner in which existing laws might be administered or interpreted. Any alleged or actual violations of these laws and regulations may subject LivaNova to government scrutiny, severe criminal or civil sanctions and other liabilities, including exclusion from government contracting or government healthcare programs, and could negatively affect LivaNova's reputation, business, results of operations, cash flows and financial condition.

Quality concerns with LivaNova's processes, products, and services could harm the Company's reputation for producing high-quality products and erode LivaNova's competitive advantage, revenue, and market share.

Quality is extremely important to LivaNova and its customers due to the serious and costly consequences of product failure. LivaNova's quality certifications are critical to the marketing success of the Company's products and services. If LivaNova fails to meet these standards, the Company's reputation could be damaged, the Company could lose customers and LivaNova's revenue and results of operations could decline. Aside from specific customer standards, LivaNova's success depends generally on the Company's ability to manufacture precision-engineered components, sub-assemblies, and finished products to exact tolerances with certified materials. If LivaNova's components fail to meet these standards or fail to adapt to evolving standards, the Company's reputation as a manufacturer of high-quality components will be harmed, its competitive advantage could be damaged, and LivaNova could lose customers and market share.

LivaNova may not successfully execute or achieve the expected benefits of the Company's 2024 Restructuring Plan and other cost saving measures the Company may take in the future which may adversely affect the Company's business, financial condition and results of operations.

On January 5, 2024, LivaNova's Board of Directors approved the 2024 Restructuring Plan to enhance the Company's focus on its core Cardiopulmonary and Neuromodulation segments. As part of the 2024 Restructuring Plan, the Company will wind down the ACS segment, which is anticipated to be substantially complete by the end of 2024. The 2024 Restructuring Plan is based on the Company's current estimates, assumptions and forecasts, which are subject to known and unknown risks and uncertainties, including assumptions regarding cost savings, cash burn rate, and effectiveness of the Company's reduced spend. Additionally, LivaNova may not fully achieve the expected cost savings, enhanced liquidity and other benefits anticipated from the 2024 Restructuring Plan. To the extent that the Company is unsuccessful in implementing the 2024 Restructuring Plan or other, future cost saving measures, such issues could have a material adverse effect on LivaNova's business, reputation, result of operations, cash flows, and financial condition. For additional information on the 2024 Restructuring Plan, please refer to "Note 6. Restructuring" in LivaNova's consolidated financial statements included in this Report.

Legal and Intellectual Property Risks

As a manufacturer of medical devices, LivaNova is exposed to product liability claims that could adversely affect its consolidated financial condition and tarnish the Company's reputation.

LivaNova designs, develops, manufactures, markets, and sells medical devices, both equipment and implantables, that pose product liability risks. Component failures, manufacturing defects, software errors, design flaws or inadequate disclosure of product-related risks or product or use-related information, or physician misuse with respect to these or other products the Company manufactures or sells could result in an unsafe condition for, injury to, or death of, a patient. Such an event could result in product liability claims or a recall of, or safety alert relating to, one or more of LivaNova's products. For example, as described in "Note 13. Commitments and Contingencies" in LivaNova's consolidated financial statements included in this Report, the Company is involved in product liability litigation relating to its cardiopulmonary 3T Heater-Cooler product that may adversely affect LivaNova's financial condition and may require the Company to devote significant resources to its defense and/or settlement of these claims. Although the Company is defending these matters vigorously, the outcome could have a material adverse effect on LivaNova's business.

LivaNova holds global insurance policies to cover a portion of future potential product liability losses and has elected to self-insure with respect to a significant portion of the Company's product liability risks. Product liability claims or product recalls in the future, regardless of their ultimate outcome, could have a material adverse effect on LivaNova's business and reputation and on the Company's ability to attract and retain customers for its products, and future losses from product liability claims could exceed LivaNova's product liability insurance coverage and lead to a material adverse effect on the Company's financial condition and liquidity. In addition, future unanticipated large liability claims may raise substantial doubt about LivaNova's ability to continue as a going concern.

LivaNova is subject to environmental laws and regulations and the risk of environmental liabilities, violations, and litigation in multiple jurisdictions, any of which could have a material impact on LivaNova's business, results of operations, cash flows, financial condition and liquidity.

Certain environmental laws assess liability on current, prior and/or related owners or operators of real property for the costs of investigation, removal, or remediation of hazardous substances on their properties or at properties on which they have disposed of hazardous substances. For example, LivaNova's Saluggia campus contains hazardous substances as a result of nuclear installations built in 1960 under previous ownership, and the Italian Government has stated that LivaNova will eventually be responsible for dismantling the nuclear installation on Company property, as well as delivering the aforementioned waste to a national repository. It is also possible that a governmental authority may seek to hold LivaNova liable for successor liability violations committed by any companies in which LivaNova invests or acquires. For example, LivaNova is currently in litigation with the government in Italy stemming from a civil action where the Court of Appeal declared LivaNova (formed through a merger with Sorin) liable for environmental liabilities incurred by SNIA's (a former parent company of Sorin) other subsidiaries. See "Note 13. Commitments and Contingencies" in LivaNova's consolidated financial statements included in this Report for additional information regarding these two matters. LivaNova's business, results of operations, cash flows, financial condition and liquidity could be materially adversely affected by a negative decision in the case of SNIA and could be adversely affected by an increase in anticipated costs relating to disposal of hazardous waste in Saluggia. Private parties could also bring personal injury or other claims due to the presence of, or exposure to, hazardous substances.

In addition, LivaNova's operations involve the use of substances regulated under environmental laws, including for purposes of sterilization. Regulations require sterilization of LivaNova's products, and the Company operates a sterilization facility in

Colorado allowing the Company to sterilize certain of its products in-house. The US Environmental Protection Agency and certain states have begun scrutinizing the levels of community exposure to EtO, which is used in the sterilization process. Certain medical device operating facilities have been designated as "elevated risk" facilities based on emission levels of EtO. LivaNova is not on the "elevated risk" list, nor is it in violation of any current local or federal regulations. However, to the extent LivaNova or its contract sterilizers are unable to sterilize LivaNova's products, whether due to regulatory, legislative, or other constraints, including on the use of EtO, LivaNova may be unable to transition to alternative internal or external resources or methods in a timely or cost-effective manner or at all, which could have a material impact on LivaNova's results of operations and financial condition.

LivaNova is substantially dependent on patent and other proprietary rights and failing to protect such rights or to be successful in litigation related to LivaNova's rights or the rights of others may result in the Company's payment of significant monetary damages and/or royalty payments, negatively impact LivaNova's ability to sell current or future products or prohibit the Company from enforcing its patent and other proprietary rights against others.

LivaNova relies on a combination of patents, trade secrets, and non-disclosure and non-competition agreements to protect the Company's proprietary intellectual property, and LivaNova will continue to do so. While LivaNova intends to defend against any threats to the Company's intellectual property, any litigation to counter the infringement, misappropriation, or unauthorized use of LivaNova's intellectual property may require the expenditure of significant financial and managerial resources, which may adversely affect LivaNova's business, results of operations, cash flows and financial condition. Additionally, LivaNova's patents, trade secrets, or other agreements may not prevent competitors from independently developing or selling similar products and services and may not adequately deter misappropriation or improper use of the Company's technology. Further, pending patent applications may not result in patents being issued to LivaNova. Patents issued to or licensed by LivaNova in the past or in the future may be challenged or circumvented by competitors and such patents may be found invalid, unenforceable or insufficiently broad to protect the Company's technology, and may limit LivaNova's competitive advantage. Third parties could obtain patents that may require LivaNova to negotiate licenses to conduct business, and the required licenses may not be available on reasonable terms or at all.

LivaNova also relies on non-disclosure and non-competition agreements with certain employees, consultants and other parties to protect, in part, trade secrets and other proprietary rights. LivaNova cannot be certain that these agreements will not be breached, that the Company will have adequate remedies for any breach, that others will not independently develop substantially equivalent proprietary information, or that third parties will not otherwise gain access to LivaNova's trade secrets or proprietary knowledge. Further, new proposed regulations in the US would prohibit certain competition agreements, and if final regulations are adopted as proposed and enforced, LivaNova may not be able to rely on such agreements with certain of the Company's employees or other parties.

LivaNova operates in an industry characterized by extensive patent litigation and has been, and is, subject to patent claims from time to time. While LivaNova intends to defend against any third-party intellectual property threats, intellectual property litigation is inherently complex and unpredictable. Such litigation can result in significant damage awards and injunctions that could prevent LivaNova's manufacture and sale of affected products or require the Company to pay significant royalties in order to continue to manufacture or sell affected products.

In addition, the laws and intellectual property systems of certain countries in which LivaNova markets some of its products do not protect the Company's intellectual property rights to the same extent as in the US, which may impact its market position in those countries. LivaNova could also face competition in countries where the Company has not invested in an intellectual property portfolio, or where the Company has not invested in the same protection as in the US. If the Company is unable to protect LivaNova's intellectual property in those countries, it could have a material adverse effect on LivaNova's reputation, business, results of operations, cash flows and financial condition.

Inadequate funding for US federal government agencies and government shutdowns could negatively affect LivaNova's business, results of operations, cash flows and financial condition.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government funding levels, the ability to hire and retain key personnel, government shutdowns, and statutory, regulatory and policy changes. In addition, a portion of LivaNova's revenue is dependent on US federal government healthcare program reimbursement. Any disruption in US federal government operations, including government shutdowns, could have a material adverse effect on LivaNova's business, results of operations, cash flows and financial condition.

Risks Related to LivaNova's Indebtedness

Paying amounts due with respect to LivaNova's outstanding Notes on interest payment dates, at maturity and upon exchange thereof will require a cash payment. LivaNova may not have sufficient cash flow from its business operations to pay when due or be able to raise the funds necessary to pay when due, amounts owed with respect to the Notes and/or any amounts owed under the Company's revolving credit facility and term facilities, which could adversely affect LivaNova's business and results of operations.

On June 17, 2020, LivaNova's wholly-owned subsidiary, LivaNova USA, issued the Notes. The ability to make scheduled payments of interest on, and principal of, to satisfy exchanges for cash in respect of, and/or to refinance LivaNova's outstanding Notes or other indebtedness (including any indebtedness under LivaNova's revolving credit facility or term facilities) depends on the Company's future performance, which is subject to economic, financial, competitive and other factors beyond its control. For further information on LivaNova's term facilities, please refer to "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Report under the section entitled "*Liquidity and Capital Resources."* If LivaNova is unable to generate enough cash flow to make payments on the Notes or other indebtedness when due, the Company 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. LivaNova's ability to refinance the Notes or other indebtedness, which the Company may need to do in order to satisfy its obligations thereunder, will depend on the capital markets and LivaNova's financial condition at such time. LivaNova may not be able to engage in these activities on desirable terms or at all, which could result in a default on the Notes and/or LivaNova's revolving credit facility and term facilities.

The holders of the Notes have the right to require LivaNova to repurchase their Notes upon the occurrence of a fundamental change (as defined in 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, LivaNova will be required to make cash payments as required by the Indenture. LivaNova may not have enough available cash or be able to obtain financing at the time the Company is required to make repurchases of, or exchange of, the Notes for cash. LivaNova's 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, LivaNova's indebtedness including under the Notes, combined with the Company's other financial obligations and contractual commitments including those under LivaNova's revolving credit facility or term facilities, could have other important consequences. For example, it could:

- Make LivaNova more vulnerable to adverse changes in government regulations and in the global economy, healthcare and competitive environment;
- Limit the Company's flexibility in planning for, or reacting to, changes in LivaNova's business and its markets;
- Place the Company at a disadvantage compared to LivaNova's competitors who have less debt;
- Limit LivaNova's ability to borrow additional amounts for working capital, to fund acquisitions and for other general corporate purposes; and
- Make a sale of the Company less attractive to buyers or more difficult to complete.

Any of these factors could harm LivaNova's business, results of operations, cash flows and financial condition. In addition, if LivaNova incurs additional indebtedness under the revolving credit facility or term facilities, the risks related to LivaNova's business and its ability to repay the Company's indebtedness, including under the Notes, would increase. For additional information, please refer to "Note 10. Financing Arrangements" in LivaNova's consolidated financial statements included in this Report.

The conditional exchange features of the Notes, if triggered, may adversely affect LivaNova's liquidity and operating results.

If the conditional exchange feature of the Notes is triggered, holders of the Notes are entitled to exchange the Notes at any time during specified periods, at their option. Holders of the Notes for example, are entitled to exchange the Notes during the current calendar quarter if the closing price of LivaNova's ordinary shares for at least 20 trading days (whether or not consecutive) during the last 30 consecutive trading days of the immediately preceding calendar quarter is greater than or equal to 130% of the exchange price – the exchange price being $60.98 per share and the "conversion trigger" (subject to other conditions per the Indenture) being $79.27 per share – on each applicable trading day. The exchange condition was not satisfied on December 31, 2023, and therefore, exchangeability is not an option from January 1, 2024, through March 31, 2024. If holders elect to exchange their Notes during future periods following the satisfaction of an exchange condition as laid out in the Indenture, LivaNova would be required to settle its exchange obligation through the payment of cash, which could adversely affect the Company's liquidity.

LivaNova's debt instruments require LivaNova to comply with affirmative covenants and specified financial covenants and ratios and other obligations.

Certain restrictions and covenants in LivaNova's debt instruments, including the Company's revolving credit facility or term facilities, could affect its ability to operate and may limit its ability to react to market conditions or to take advantage of potential business opportunities as they arise. For example, such restrictions could adversely affect LivaNova's ability to finance its operations, make strategic investments, alliances or acquisitions, restructure its organization or finance capital needs. Additionally, LivaNova's ability to comply with these covenants and restrictions may be affected by events beyond its control, such as prevailing economic, financial, regulatory and industry conditions. If any of these restrictions or covenants are breached, LivaNova could be in default under one or more of its debt instruments, which, if not cured or waived, could result in acceleration of the indebtedness under such agreements and cross-defaults under its other debt instruments. For more information on these debt instruments, please refer to "Note 10. Financing Arrangements" in LivaNova's consolidated financial statements included in this Report.

The effective interest rate and related interest expense reported in LivaNova's consolidated financial statement of operations is significantly greater than the stated interest rate of the Notes and may result in volatility to the Company's reported financial results, which could adversely affect the price at which LivaNova's ordinary shares trade.

LivaNova 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 accounting 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 LivaNova's 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 LivaNova's cash flows, it reduces the Company's earnings and could adversely affect the price at which its 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 LivaNova's 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 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 in input values at the current period end compared to the previous period end may result in a material change in the respective valuations 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 on LivaNova's consolidated statements of operations, which could adversely affect the price at which its ordinary shares trade.

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

LivaNova expects 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 LivaNova's 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 LivaNova's ordinary shares in lieu of or in addition to selling short the Company's ordinary shares. This activity could decrease, or reduce the size of any increase in, the market price of LivaNova's ordinary shares at that time.

In connection with the pricing of the Notes, LivaNova entered into privately negotiated capped call transactions with certain financial institutions. 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 price per ordinary share of the Company at the time of exchange of the Notes is greater than the strike price under the capped call transactions, with such offset subject to a cap based on the cap price. It is LivaNova's understanding that the Option Counterparties, or their respective affiliates, in connection with establishing their initial hedges of the capped call transactions, purchased LivaNova's ordinary shares and/or entered into various derivative transactions with respect to the Company's ordinary shares concurrently with or shortly after the pricing of the Notes. The Option Counterparties or their respective affiliates may modify these initial hedge positions by entering into or unwinding various derivatives with respect to LivaNova's ordinary shares and/or purchasing or selling its ordinary shares or other of LivaNova's securities 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 or avoid an increase or decrease in the market price of LivaNova's ordinary shares at that time.

LivaNova is subject to counterparty risk with respect to the capped call transactions.

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

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

Risks Relating to Tax and LivaNova's Jurisdiction of Incorporation

LivaNova is incorporated in England and Wales and governed by their laws which may afford less protection to shareholders than under US laws.

LivaNova is a public limited company incorporated under the laws of England and Wales, and as such, the Company's shareholders may have more difficulty protecting their interests than would shareholders of a corporation incorporated in a jurisdiction of the US. It may be difficult to enforce court judgments obtained in the US and based on the civil liability provisions of US federal or state securities laws against LivaNova in the UK. In addition, there is also some uncertainty as to whether the UK courts would recognize or enforce judgments of US courts obtained against LivaNova or any of its directors or officers.

Changes in tax laws or exposure to additional income tax liabilities could have a material impact on LivaNova's results of operations and financial condition.

LivaNova is subject to income taxes as well as non-income-based taxes in the US, the UK, the EU and various other jurisdictions. Any material change in tax laws, regulations or policies, or their interpretation and enforcement, including with respect to the OECD's Pillar Two global minimum tax rules applicable to multinational groups with global revenue over €750 million, could result in a higher effective tax rate and have a material impact on LivaNova's consolidated statements of income (loss) or financial condition.

LivaNova continues to monitor the adoption of Pillar Two by the taxing jurisdictions in which it operates. The UK has enacted legislation providing for a minimum effective tax rate of 15% through a multinational top-up tax and a domestic top-up tax for accounting periods beginning on or after December 31, 2023. Draft UK legislation has also been published for an undertaxed profits rule to be introduced, although not before accounting periods beginning on or after December 31, 2024. A UTPR would be a backstop rule intended to ensure that amounts of multinational top-up tax that are not collected under foreign global minimum tax rules can in certain circumstances be collected instead in the UK. LivaNova is assessing the full implication on 2024 financial results and will continue to monitor legislative developments and related guidance in the UK and other jurisdictions that may impact LivaNova's operations. Any material changes in tax laws, regulations or policies, or their interpretation and enforcement, including with respect to Pillar Two, could result in a higher effective tax rate for LivaNova and have a material impact on its consolidated statements of income (loss) or financial condition. The content of any future legislation, the timing of additional guidance, and the reporting periods that may be impacted cannot be determined at this time.

LivaNova's actual effective tax rate may vary from its expectations or from historical trends and that variance may be material. LivaNova's effective tax rates could be affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities or changes in tax laws or their interpretation. LivaNova is also subject to ongoing tax audits in various non-US jurisdictions. Tax authorities may disagree with certain positions LivaNova has taken and assess additional taxes. LivaNova believes that its accruals reflect the probable outcome of known contingencies. However, there can be no assurance that LivaNova will accurately predict the outcomes of ongoing audits, and the actual outcomes of these audits could have a material impact on LivaNova's consolidated statements of income (loss) or financial condition.

As a public limited company incorporated under the laws of England and Wales, certain of LivaNova's capital structure decisions require shareholder approval, which may limit the Company's flexibility to manage its capital structure.

LivaNova is a public limited company incorporated under the laws of England and Wales. Under English law, LivaNova's Board of Directors may only allot shares with the prior authorization of shareholders. English law also generally provides shareholders with preemptive rights when new shares are issued for cash, which rights may be surrendered by shareholders. In addition, English law generally prohibits a public limited company from repurchasing its own shares without the prior approval

of shareholders. As a result, LivaNova's shareholders must approve these authorities at an annual general meeting of shareholders. If LivaNova does not receive shareholder approval of these matters, the Company may not be able to raise any required additional capital in a timely manner or at all. In addition, LivaNova may not be able to continue to grant equity awards to its directors, officers and employees under the relevant incentive plan.

Transfers of LivaNova's shares, other than those effected by means of the transfer of book-entry interests in DTC, may be subject to UK Stamp Duty or SDRT.

Transfers of LivaNova's shares effected by means of the transfer of book-entry interests in DTC are not subject to UK stamp duty or SDRT. However, if a shareholder holds LivaNova's shares directly rather than through DTC, any transfer of shares could be subject to UK stamp duty or SDRT at a rate of 0.5% of the consideration paid for the transfer. In addition, certain transfers of shares to depositories or into clearance services are charged at a rate of 1.5% of the consideration paid for the transfer, or 1.5% of the market value of the shares if there is no consideration. The transferee generally pays the UK stamp duty or SDRT. The potential for UK stamp duty or SDRT could adversely affect the trading price of LivaNova's shares.

If DTC determines at any time that LivaNova's shares are not eligible for continued deposit and clearance within its facilities, LivaNova believes that its shares would not be eligible for continued listing on a US securities exchange and trading in the Company's shares would be disrupted. While LivaNova would pursue alternative arrangements to preserve the listing and maintain trading, any such disruption could have a material adverse effect on the trading price of LivaNova's shares.

General Risk Factors

LivaNova's success depends on its ability to attract and retain key personnel needed to successfully operate its business and to plan for future executive transitions.

LivaNova's ability to compete effectively depends on its ability to attract and retain key employees and maintain robust succession planning for key positions. LivaNova's ability to recruit and retain key talent depends on many factors, including compensation and benefits, work location, work environment, industry-specific and general economic conditions and the hiring practices of competitors. If LivaNova fails to attract and retain key personnel in senior management and other positions, or if the Company's succession planning efforts are not effective, it could have a material adverse effect on LivaNova's business, financial condition and results of operations.

Increasing attention on sustainability matters, including environmental, social, and governance matters, may have a material impact on LivaNova's reputation and business operations and consume additional financial and management resources.

There is a heightened focus from stakeholders, including regulators and shareholders, on issues relating to sustainability, including environmental stewardship, social responsibility, diversity and inclusion, and corporate governance matters. Increasing attention on sustainability issues related to LivaNova's business requires the continuous monitoring of various and evolving laws, regulations, standards and expectations and the associated reporting requirements. A failure to adequately meet stakeholder expectations may result in noncompliance, reputational harm, the loss of business and access to capital, negative impact to the stock price and a diluted market valuation. In addition, the Company's adoption of certain standards or mandated compliance with certain requirements could necessitate additional investments that could impact LivaNova's profitability.

In addition, if LivaNova's sustainability initiatives fail to satisfy investors, customers, or other stakeholders, the Company's reputation, its ability to sell products and services to customers, and its attractiveness as an investment, business partner or acquirer could be negatively impacted. Similarly, LivaNova's failure, or perceived failure, to fulfill its sustainability goals or to satisfy various reporting standards could also have a similar negative impact on the Company's reputation, business and results of operations. Furthermore, environmental regulations are continuing to become more stringent and LivaNova may experience increased compliance burdens and costs to meet its regulatory obligations, as well as adverse impacts on raw material sourcing, manufacturing operations and the distribution of LivaNova's products.

The impact of pending or existing climate change resulting from increased concentrations of carbon dioxide and other greenhouse gases in the atmosphere could present major risks to LivaNova's future operations.

The physical impacts of natural disasters and extreme weather conditions, such as hurricanes, tornadoes, earthquakes, winter storms, wildfires or flooding could pose physical risks to LivaNova's facilities, temporarily reduce demand, reduce employee productivity, increase absenteeism, disrupt the Company's supply chain operations and its suppliers' operations, and negatively impact operational costs. Additionally, transitional climate risks such as changing customer behaviors and changing dynamics in raw materials and utility markets, could lead to lost revenue due to inability to meet changing customer requirements, increasing costs associated with product adjustments to meet changing customer preferences, increasing costs of inputs and raw materials and increasing cost of utilities. There continues to be a lack of consistent climate legislation, which creates economic

and regulatory uncertainty. Legal, regulatory and customer requirements and preferences designed to mitigate the effects of climate change on the environment are increasing, and they may impose obligations that may increase LivaNova's compliance burden and cost to meet these obligations. Individually or in aggregate, such risks could materially negatively impact LivaNova's future operations.

Public health crises have had, and may continue to have, an adverse effect on LivaNova's business, results of operations, cash flows and financial condition, the nature and extent of which are uncertain and unpredictable.

LivaNova's global operations and business interactions with healthcare systems, providers and patients around the world expose the Company to risks associated with public health crises, including epidemics and pandemics such as COVID-19. The COVID-19 pandemic caused significant disruption to the business and financial markets. LivaNova continues to monitor the potential effects of future health epidemics on the Company's business and operations. While the spread of COVID-19 has stabilized, LivaNova cannot guarantee that a future outbreak of this or any other widespread epidemic will not occur, which could have the effect of decreasing demand and/or increasing volatility in demand for LivaNova's products.

If LivaNova's business development and restructuring activities are unsuccessful, the Company may not realize the intended benefits.

LivaNova has sought, and in the future, may seek, to supplement its organic growth through strategic investments, alliances and acquisitions. Moreover, LivaNova has also sought, and in the future may seek, to divest or wind down certain assets deemed non-core to the Company's long-term strategic objectives. For example, as part of the 2024 Restructuring Plan, the Company will wind down the ACS segment, which is anticipated to be substantially complete by the end of 2024. Such transactions are inherently risky and require significant effort and management attention. The success of any investment, alliance, acquisition or divestiture may be affected by various factors, including LivaNova's ability to properly assess, finance, value and obtain relevant approvals for a potential business opportunity or to successfully integrate any business LivaNova may acquire. LivaNova cannot be certain that its investments, alliances and acquired businesses will achieve the financial projections supporting those investment decisions. In addition, if LivaNova's investments, alliances, divestitures, or acquisitions are not successful, the Company may incur costs in excess of what it anticipates, including those resulting from related litigation.

As a result of acquisitions, LivaNova may face risks due to the implementation, modification, or remediation of controls, procedures and policies relating to data privacy and cybersecurity at the acquired company. In addition, failure to manage and coordinate the growth of the combined company successfully could have an adverse impact on LivaNova's business.

Similarly, LivaNova may divest and has divested portions of its business, resulting in the migration of data and overlapping data obligations. As a result of such divestitures, LivaNova may face risks due to the migration or modification of controls, procedures and policies relating to data privacy and cybersecurity internally or enroute during migration. Any significant breakdown, intrusion, interruption, corruption or destruction of these systems, as well as any data breaches, could have a material adverse effect on LivaNova's business.

LivaNova may incur impairments of intangible assets, goodwill and other long-lived assets that may adversely affect the Company's financial results.

LivaNova reviews, when circumstances warrant, the carrying amounts of its intangible assets, goodwill and other long-lived assets to determine whether those carrying amounts continue to be recoverable in accordance with US GAAP. Significant negative industry or economic trends, disruptions to LivaNova's businesses, significant unexpected or unplanned changes in the use of assets, divestitures and market capitalization declines, among other events, may result in impairments to LivaNova's intangible assets, goodwill and other long-lived assets. Recent impairments have significantly affected LivaNova's financial results, as could future impairments.

Item 1B. *Unresolved Staff Comments*

None.

Item 1C. *Cybersecurity*

Cyber Risk Management and Strategy

LivaNova's enterprise risk management process consists of risk identification, evaluation, control and monitoring, and documentation. The LivaNova Board oversees risk management within the Company, and the CRO provides the framework to identify and reduce risks that may materially impact the Company's business. As part of the CRO's enterprise risk management

process, regular inquiries and discussions are held with the CISO, Chief Information Officer, Chief Privacy Officer, and their respective teams to review the cybersecurity risk landscape.

LivaNova's CISO has a Master of Science in Accountancy with a specialization in risk management, in addition to over 15 years of experience in the IT Risk Advisory sector. The CISO leads the Company's information security team, identifies cybersecurity threats, and implements countermeasures in the cybersecurity realm, considering both internal operations and the external landscape. As part of his duties, the CISO provides relevant information to the CRO in their regular discussions. The CISO also manages the Company's ISMS program. Guided by the principles of various industry-leading standards, such as the NIST cybersecurity framework and ISO 27001, the objective of the ISMS program is to continue to strengthen LivaNova's cyber resiliency in connection with its information systems.

As part of LivaNova's cyber resiliency strategy and in an effort to mitigate potential cybersecurity risks, the Company employs various measures, including employee training, systems monitoring, testing and maintenance of protective systems, and contingency plans. In addition, the CISO manages a structured cyber incident response program where periodic simulation exercises are performed to prepare and train the Company's cybersecurity incident responders. The Company deploys security tools to help bolster its defense detection capabilities, such as endpoint detection and response tools, security information and event management tools, and 24/7 monitoring. LivaNova regularly evaluates itself for appropriate business continuity and disaster recovery planning, with test scenarios that include simulations and penetration tests.

In addition, LivaNova routinely engages with third-party service providers to conduct evaluations of its security controls, whether through penetration testing or consulting on best practices to address new challenges. The Company receives threat intelligence from industry peers, government agencies, industry-specific information sharing and analysis centers, and cybersecurity associations. The Company relies heavily on its supply chain to deliver products and services to its customers, and a cybersecurity incident at a supplier, subcontractor, or service provider could materially adversely impact the Company. The Company assesses third-party cybersecurity controls through its information security program and includes security and privacy addendums to its contracts where applicable.

Historically, risks from cybersecurity threats have not materially affected the Company's business strategy, results of operations or financial condition. As previously reported, in November 2023, the Company initiated its cyber response protocol in response to a cybersecurity incident that resulted in a disruption of portions of its information technology systems. Promptly after detecting the issue and per LivaNova's cyber response protocol, the Company began an investigation with assistance from external cybersecurity consultants and coordinated with law enforcement. The Company continues to assess what information was impacted and to implement remediation measures to mitigate the impact of the incident.. While the Company has taken and will continue to take actions to enhance its information security framework, LivaNova cannot determine at this time the extent of the impact from this event on its business, results of operations, cash flows, or financial condition. For further information, please refer to "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Report. Additionally, for a description of the Company's evaluation of its disclosure controls and procedures, management's report on internal control over financial reporting and changes in internal control over financial reporting, see "Item 9A. Controls and Procedures."

Cyber Governance

On a quarterly basis, the CISO presents key security metrics to the Company's IT Advisory Council, which is composed of functional leaders across the Company and is responsible for IT governance oversight in the Company. Specifically, this IT Advisory Council is responsible for establishing program strategies in alignment with LivaNova's business objectives, as well as providing guidance on the implementation of appropriate and necessary security controls in alignment with the Information Security Policy. Among other things, the IT Advisory Council reviews summaries of information security incidents, audit findings, or other test reports, and ensures appropriate root-cause analyses are performed and corrective actions are taken. It also establishes year-over-year goals, security objectives, and priorities for the information security program.

On an annual basis, the CISO reviews the information security program achievements and reports to the Company's IS Executive Committee, which is a cross-functional group composed of the CEO, the CFO, the CLO, and other executive leaders of the Company. Among other things, the IS Executive Committee approves the information security policy and the allocation of budget and resources to information security program initiatives, performs the annual management review of the security program, and reviews corrective action to improve the program.

As codified in its charter, the Audit Committee is responsible for reviewing the processes by which cybersecurity risks are managed and reporting any issues that arise out of such reviews to the Board. The CISO provides key security metrics to the Audit Committee on a quarterly basis, and directly to the chair of the Audit Committee on a case-by-case basis, as needed, at any time during the quarter. The Audit Committee reviews these reports, which include, among other things, external events

impacting the Company, security incidents, user training statistics, and evaluations of user readiness to address cyber incidents. Notwithstanding the Company's approach to cybersecurity, the Company may not be successful in preventing or mitigating future cybersecurity incidents that could have a material adverse effect on the Company. While LivaNova maintains cybersecurity insurance, the costs related to cybersecurity threats or disruptions may not be fully insured. For more information on risks related to cybersecurity and data security, see Item 1A. "Risk Factors – Risks Relating to the Company's Business and Operations."

Item 2. ***Properties***

LivaNova's principal executive office is located in the UK and is leased by the Company. LivaNova's business segments are headquartered in the US for Neuromodulation and historically, ACS, and in Italy for Cardiopulmonary. LivaNova has manufacturing and research facilities located in the US, Italy, Germany, Australia, and Brazil. The Company's manufacturing and research facilities are approximately 1.0 million square feet. The manufacturing and research facilities located in the US, Italy and Brazil are substantially owned by LivaNova. Approximately 45% of the Company's manufacturing and research facilities by square feet are located within the US. Approximately 59% of LivaNova's manufacturing and research facilities by square feet are owned by the Company and the balance is leased.

LivaNova also maintains 31 primary administrative offices in 21 countries. Most of these locations are leased. LivaNova is using substantially all of the Company's currently available productive space to develop, manufacture and market LivaNova's products. LivaNova believes that all of its facilities are in good operating condition, suitable for their respective uses and adequate for current needs.

Item 3. ***Legal Proceedings***

Information pertaining to certain material pending legal and regulatory proceedings and settlements is incorporated herein by reference to "Note 13. Commitments and Contingencies" in LivaNova's consolidated financial statements and accompanying notes, beginning on page F-1 of this Report, and should be considered an integral part of "Item 3 of Part I" of this Report.

Item 4. ***Mine Safety Disclosures***

Not applicable.

PART II

Item 5. ***Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities***

LivaNova's ordinary shares are quoted on the Nasdaq Stock Market LLC under the symbol "LIVN."

As of February 23, 2024, according to data provided by LivaNova's transfer agent, there were 20 stockholders of record. A substantially greater number of holders of LivaNova's ordinary shares are "street name" or beneficial holders, whose shares of record are held by banks, brokers and other financial institutions.

Dividend Policy

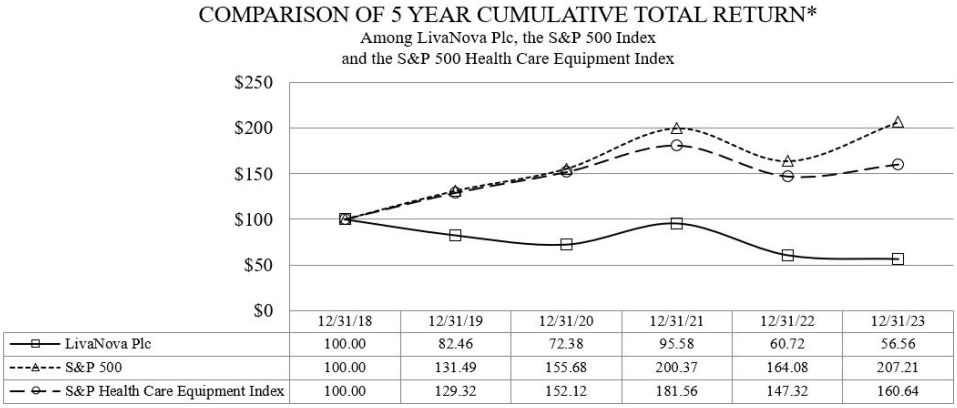
LivaNova currently has no intention to declare and pay dividends.

Issuer Purchases of Securities

None.

Stock Performance Graph

The following graph compares LivaNova's five-year cumulative total return with the five-year cumulative total return of the companies on the S&P 500 Index and the companies on the S&P Health Care Equipment Index. This graph assumes the investment of $100 on December 31, 2018 and the reinvestment of all dividends since that date.



	12/31/18	12/31/19	12/31/20	12/31/21	12/31/22	12/31/23
LivaNova Plc	100.00	82.46	72.38	95.58	60.72	56.56
S&P 500	100.00	131.49	155.68	200.37	164.08	207.21
S&P Health Care Equipment Index	100.00	129.32	152.12	181.56	147.32	160.64

*$100 invested on 12/31/18 in stock or index, including reinvestment of dividends.
Fiscal year ending December 31.

The information under the caption "Stock Performance Graph" above is not deemed to be "filed" as part of the Report and is not subject to the liability provisions of Section 18 of the Exchange Act. Such information will not be deemed incorporated by reference into any filing LivaNova makes under the Securities Act, unless LivaNova explicitly incorporates it into such filing at such time.

Item 6. [Reserved]

Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*

The following discussion and analysis should be read in conjunction with the consolidated financial statements and the corresponding notes included elsewhere in this Report. Certain percentages presented in this discussion and analysis are calculated from the underlying whole-dollar amounts and therefore may not tie to percentages recalculated from the rounded numbers used for disclosure purposes. The following discussion, analysis and comparisons generally focus on the operating results for 2023, 2022 and 2021.

LivaNova has elected to omit certain discussions on the earliest of the three years covered in this Report. Refer to Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations located in LivaNova's Annual Report on Form 10-K for the year ended December 31, 2022, filed on February 27, 2023, for reference to discussion of 2021, the earliest of the three fiscal years presented.

Description of the Business

LivaNova PLC is a market-leading global medical technology company. The Company designs, develops, manufactures, markets and sells products and therapies that are consistent with LivaNova's mission to provide hope for patients and their families through innovative medical technologies that deliver life-changing improvements. LivaNova is a public limited company organized under the laws of England and Wales and is headquartered in London, England. LivaNova's ordinary shares are listed for trading on the Nasdaq under the symbol "LIVN."

Macroeconomic Environment

The current macroeconomic environment, including foreign exchange volatility, inflationary pressures, geopolitical instability, and supply chain challenges, has impacted and may continue to impact LivaNova's business and profitability. Furthermore, LivaNova continues to experience supply chain delays and interruptions, labor shortages, inflationary pressures and logistical and capacity constraints, though, to date, the Company's supply of raw materials and the production and distribution of finished products have not been materially affected. Moreover, freight and labor costs at LivaNova's manufacturing facilities have increased substantially in the wake of inflation globally. The Company continues to respond to such challenges, and while LivaNova has business continuity plans in place, the impact of the ongoing challenges the Company is navigating, along with their potential escalation, may adversely affect its business. For further discussion on these macroeconomic pressures and potential implications, refer to "Item 1A. Risk Factors" of this Report.

Cybersecurity Incident

As previously disclosed, in November 2023, LivaNova detected a cybersecurity incident that resulted in a disruption of portions of the Company's information technology systems. Promptly after detecting the issue, LivaNova began an investigation with assistance from external cybersecurity experts and coordinated with law enforcement. LivaNova took action to remediate the issue by, for example, taking certain systems offline. As a result of these and other measures, the Company believes it has contained the cybersecurity threat, though its investigation and mitigation efforts are ongoing. At this time, all of LivaNova's manufacturing sites worldwide are operating at normal levels. The Company continues to assess the full impact of the cybersecurity event on its business, results of operations, cash flows and financial condition.

LivaNova incurred direct costs of approximately $2.6 million during the three and twelve months ended December 31, 2023, in connection with this incident. These costs primarily included external cybersecurity experts, legal counsel, and system restoration costs. These costs do not include business interruption or other non-direct costs, and the Company expects to incur additional costs related to this incident in the future. LivaNova maintains insurance, including cyber insurance, which is subject to certain retentions and policy limitations that may serve to limit the amount that the insurers may pay the Company when the Company makes a claim. LivaNova plans to file for reimbursement of covered costs related to this incident, but the Company's insurance coverage may be insufficient to cover all costs and expenses related to this cybersecurity incident, and the insurance carrier may not cover all submitted costs and expenses related to this cybersecurity incident.

Business Segments

For the periods presented herein, LivaNova was comprised of three reportable segments: Cardiopulmonary, Neuromodulation and ACS. "Other" includes non-allocated corporate expenses for the years ended December 31, 2022 and 2023. For the years ended December 31, 2021, "Other" also includes the results of LivaNova's Heart Valve business, which was divested on June 1, 2021.

Cardiopulmonary

LivaNova's Cardiopulmonary segment is engaged in the design, development, manufacture, marketing and selling of cardiopulmonary products, including HLMs, oxygenators, autotransfusion systems, perfusion tubing systems, cannulae and other related accessories. It includes the Essenz Perfusion System, the Company's next-generation HLM with an embedded patient monitor for tailored patient care strategies and sensing technology for data-driven decision making during CPB procedures.

In March 2023, LivaNova announced it had received FDA 510(k) clearance for its Essenz HLM, which enabled the commercial launch of Essenz in the US. In the same month, LivaNova also initiated a broad commercial release of Essenz in Europe following a successful limited commercial release that supported more than 200 adult, pediatric and neonatal patients in that region. Approvals in various other countries have followed.

In August 2023, LivaNova announced it had received FDA 510(k) clearance and CE Mark for its Essenz ILBM, which provides continuous measurement of essential blood parameters to perfusionists throughout CPB procedures. The ILBM is integrated into the Essenz Perfusion System, which enables perfusionists to access and manage reliable blood parameters without the need for additional monitors or holders.

Information on Cardiopulmonary that could potentially impact LivaNova's consolidated financial statements and related disclosures is incorporated by reference to "Note 13. Commitments and Contingencies: FDA Warning Letter" and "Note 13. Commitments and Contingencies: Product Liability Litigation" in LivaNova's consolidated financial statements included in this Report.

Neuromodulation

LivaNova's Neuromodulation segment is engaged in the design, development, manufacture, marketing and selling of devices that deliver neuromodulation therapy for treating DRE and DTD. It is also engaged in the development and management of clinical testing of LivaNova's aura6000 System for treating OSA. LivaNova's Neuromodulation segment also includes costs associated with the Company's former Heart Failure program, which the Company began winding down during the first quarter of 2023.

Epilepsy

LivaNova continues to make investments in R&D focused on improving the VNS Therapy System with an enhanced pulse generator, lead and programming software, and LivaNova is developing new products that provide additional features and functionality. LivaNova also supports studies for the Company's product development efforts and to build clinical evidence for the VNS Therapy System.

Peer reviewed evidence published in 2021 and 2022 continues to confirm the safety, efficacy and cost effectiveness of VNS Therapy in both the adult and pediatric patient population. In January 2022, the Journal of Neurology published a meta-analysis and systematic review that demonstrated benefits of VNS Therapy in adults with DRE that demonstrates that seizure frequency improves without an increase in the rate of serious adverse events or discontinuations. These data further support consideration of VNS Therapy for people who are not responding to ASMs and those unsuitable or unwilling to undergo surgery.

Depression and Obstructive Sleep Apnea

A discussion of Depression and Obstructive Sleep Apnea are incorporated by reference to the sections titled "Depression" and "Obstructive Sleep Apnea," respectively, included within "Part I., Item 1. Business" in this Report.

Advanced Circulatory Support

For the periods presented herein, LivaNova's ACS segment was engaged in the design, development, manufacture, marketing and selling of temporary life support products. ACS's products, which comprise the LifeSPARC and Hemolung systems, and standalone cannulae and accessories, including ProtekDuo and transseptal (TandemHeart) cannulae, simplify temporary extracorporeal cardiopulmonary life support solutions for critically ill patients.

On January 5, 2024, the Board of Directors of LivaNova PLC approved the 2024 Restructuring Plan to enhance the Company's focus on its core Cardiopulmonary and Neuromodulation segments. The main component of this plan is to wind down the ACS segment, which the Company anticipates will be substantially complete by the end of 2024. LivaNova recognized restructuring expense under the 2024 Restructuring Plan of $0.1 million in other operating expenses, and $12.6 million for inventory obsolescence in cost of sales on its consolidated statements of income (loss) during the year ended December 31, 2023. Additionally, the Company determined that it was more likely than not that the carrying amounts associated with the ACS segment, including the long-lived assets (asset group), may not be recoverable. This was determined to be a triggering event

occurring in the fourth quarter of 2023 requiring an impairment assessment, based on certain factors, including the results of an updated long-term financial outlook for the ACS segment. As such, LivaNova recorded impairments of the following long-lived assets during the year ended December 31, 2023, included within impairment of long-lived assets on its consolidated statements of income (loss) (in thousands):

	2023
Intangible assets:	
Developed technology	$ 78,067
Trade names	7,117
Property, plant and equipment	3,894
Operating lease assets	896
Total impairment of long-lived assets	$ 89,974

In connection with the 2024 Restructuring Plan, LivaNova expects to incur pre-tax restructuring charges in the range of approximately $15 million to $20 million. The anticipated charges are comprised of approximately $10 million to $12 million in severance expenses and retention bonuses and approximately $5 million to $8 million in other expenses, including lease termination, facilities remediation, and asset disposal expenses. LivaNova expects the majority of the severance expenses to be incurred in the first half of 2024. Retention bonuses will be earned over the period of service, which is expected to be over the full year of 2024. All future cash payments related to these restructuring charges are expected to be paid out during 2024. These estimates are subject to change.

During the first quarter of 2024, the Company reorganized its operating and reporting structure upon initiating the 2024 Restructuring Plan and transitioned all ACS standalone cannulae and accessories, including ProtekDuo and transseptal (TandemHeart) cannulae, into its Cardiopulmonary segment. Operations for other ACS products, including LifeSPARC and Hemolung systems, will be discontinued by the end of 2024.

LivaNova previously owned a 3% equity interest in ALung, a privately-held medical device company focused on creating advanced medical devices for treating respiratory failure. In May 2022, LivaNova acquired the remaining 97% of equity interests for a purchase price of up to $110.0 million, consisting of $10.0 million paid at closing, subject to customary adjustments, and contingent considerations of up to $100.0 million payable upon achievement of certain sales-based milestones beginning in 2023 and ending in 2027. Due to synergies anticipated between ALung and LivaNova's existing ACS business, the assets acquired, including goodwill, were recognized in the Company's ACS segment. The fair value of the contingent consideration liability as of May 2, 2022, the acquisition date, and December 31, 2023 was $16.8 million and $13.8 million, respectively. Goodwill recorded in the ACS reporting unit was fully impaired during the third quarter of 2022 in connection with a revised estimate of the reporting unit's fair value.

For additional information, please refer to "Note 4. Business Combinations," "Note 6. Restructuring" and "Note 7. Goodwill and Intangible Assets" in LivaNova's consolidated financial statements included in this Report.

Results of Operations

The following table summarizes LivaNova's consolidated results for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	2023	2022	2021
Net revenue	$ 1,153,545	$ 1,021,805	$ 1,035,365
Cost of sales	382,295	314,577	329,371
Gross profit	771,250	707,228	705,994
Operating expenses:			
Selling, general and administrative	518,129	469,243	471,904
Research and development	193,817	155,805	183,414
Impairment of goodwill	—	129,396	—
Impairment of long-lived assets	89,974	—	—
Other operating expenses	37,828	29,536	51,460
Operating loss	(68,498)	(76,752)	(784)
Interest expense	(58,853)	(48,250)	(50,151)
Loss on debt extinguishment	—	—	(60,238)
Foreign exchange and other income/(expense)	46,125	49,860	(13,299)
Loss before tax	(81,226)	(75,142)	(124,472)
Income tax (benefit) expense	(98,876)	11,051	11,198
Losses from equity method investments	(104)	(53)	(148)
Net income (loss)	$ 17,546	$ (86,246)	$ (135,818)

Net Revenue by Segment and Geographic Area:

The following table presents net revenue by operating segment and geographic region for the years ended December 31, 2023, 2022 and 2021 (in thousands, except for percentages):

				% Change	
	2023	2022	2021	2023 vs 2022	2022 vs 2021
Cardiopulmonary					
United States	$ 188,299	$ 159,489	$ 154,073	18.1 %	3.5 %
Europe [1]	156,606	127,064	134,562	23.2 %	(5.6)%
Rest of World	244,072	213,761	194,344	14.2 %	10.0 %
	588,977	500,314	482,979	17.7 %	3.6 %
Neuromodulation					
United States	407,493	374,542	358,476	8.8 %	4.5 %
Europe [1]	57,435	50,291	51,435	14.2 %	(2.2)%
Rest of World	54,782	52,160	46,261	5.0 %	12.8 %
	519,710	476,993	456,172	9.0 %	4.6 %
Advanced Circulatory Support					
United States	39,252	37,527	53,821	4.6 %	(30.3)%
Europe [1]	751	1,447	1,120	(48.1)%	29.2 %
Rest of World	319	327	518	(2.4)%	(36.9)%
	40,322	39,301	55,459	2.6 %	(29.1)%
Other Revenue [2]	4,536	5,197	40,755	(12.7)%	(87.2)%
Totals					
United States	635,044	571,558	571,299	11.1 %	0.0 %
Europe [1]	214,792	178,802	201,524	20.1 %	(11.3)%
Rest of World	303,709	271,445	262,542	11.9 %	3.4 %
Total	$ 1,153,545	$ 1,021,805	$ 1,035,365	12.9 %	(1.3)%

(1) Includes countries in Europe where the Company has a direct sales presence. Countries where sales are made through distributors are included in "Rest of World."

(2) Other revenue primarily includes rental income not allocated to segments. For the year ended December 31, 2021, other revenue also includes the net revenue of the Company's Heart Valve business, which was divested on June 1, 2021.

The following table presents segment income for the years ended December 31, 2023, 2022 and 2021 (in thousands):

				% Change	
	2023	2022	2021	2023 vs 2022	2022 vs 2021
Cardiopulmonary	$ 20,004	$ 11,247	$ (6,429)	77.9 %	NM
Neuromodulation	153,384	172,775	169,499	(11.2)%	1.9 %
Advanced Circulatory Support	(117,418)	(142,590)	2,195	NM	NM
Segment income [1]	$ 55,970	$ 41,432	$ 165,265	35.1 %	(74.9)%

(1) For a reconciliation of segment income to consolidated loss before tax, refer to "Note 19. Geographic and Segment Information" in LivaNova's consolidated financial statements included in this Report.

NM Indicates that variance as a percentage is not meaningful.

Cardiopulmonary

Cardiopulmonary net revenue for the year ended December 31, 2023 increased 17.7% to $589.0 million compared to the year ended December 31, 2022 with growth across all regions, driven by increased HLM sales, including from Essenz Perfusion System installations, and strong oxygenator demand.

Cardiopulmonary segment income for the year ended December 31, 2023 was $20.0 million, compared to segment income of $11.2 million for the year ended December 31, 2022. The increase in segment income was primarily due to the increase in net revenue, as described above, partially offset by an increase in sales and marketing expense associated with the launch of Essenz, as well as a $12.7 million increase in the litigation provision related to LivaNova's 3T Heater-Cooler device.

Neuromodulation

Neuromodulation net revenue for the year ended December 31, 2023 increased 9.0% to $519.7 million compared to the year ended December 31, 2022 with growth across all regions, including new and replacement implants in the US region.

Neuromodulation segment income for the year ended December 31, 2023 was $153.4 million compared to $172.8 million for the year ended December 31, 2022. The decrease in segment income was primarily due to a $29.0 million net unfavorable change in fair value of the sales-based and milestone-based contingent consideration arrangement associated with the acquisition of ImThera, as well as an increase in SG&A expense of $16.3 million driven by an increase in sales and marketing expense, and an increase in R&D expense of $12.5 million primarily associated with the Company's RECOVER clinical study and OSPREY clinical trial. These increases in expense were partially offset by the increase in net revenue, as described above.

Advanced Circulatory Support

ACS net revenue for the year ended December 31, 2023 increased 2.6% to $40.3 million compared to the year ended December 31, 2022 driven by an increase in case volumes.

ACS segment loss for the year ended December 31, 2023 was $117.4 million compared to $142.6 million for the year ended December 31, 2022. The decrease in segment loss was primarily due to the goodwill impairment of $129.4 million recorded in the year ended December 31, 2022 in connection with a revised estimate of the segment's fair value, partially offset by the impairment of long-lived assets of $90.0 million and the inventory obsolescence adjustment of $12.6 million recorded in the year ended December 31, 2023 associated with the wind down of the ACS segment, along with the favorable change in fair value of a regulatory milestone-based contingent consideration arrangement associated with the TandemLife acquisition of $11.6 million. For additional information, please refer to "Note 6. Restructuring," "Note 7. Goodwill and Intangible Assets" and "Note 9. Fair Value Measurements" in LivaNova's consolidated financial statements included in this Report.

Costs and Expenses

The following table presents costs and expenses as a percentage of net revenue for the years ended December 31, 2023, 2022 and 2021:

	2023	2022	2021
Cost of sales	33.1 %	30.8 %	31.8 %
Selling, general and administrative	44.9 %	45.9 %	45.6 %
Research and development	16.8 %	15.2 %	17.7 %
Impairment of goodwill	— %	12.7 %	— %
Impairment of long-lived assets	7.8 %	— %	— %
Other operating expenses	3.3 %	2.9 %	5.0 %

Cost of Sales

Cost of sales consists primarily of direct labor, allocated manufacturing overhead, and the acquisition cost of raw materials, and components.

Cost of sales as a percentage of net revenue was 33.1% for the year ended December 31, 2023, an increase of 2.3 percentage points compared to the year ended December 31, 2022. The increase was primarily due to the net impact of the change in fair value of sales-based contingent consideration arrangements totaling $14.2 million as well as an inventory obsolescence adjustment of $12.6 million during the year ended December 31, 2023 associated with the wind down of LivaNova's ACS segment.

SG&A

SG&A expenses are comprised of sales, marketing, general and administrative activities.

SG&A expenses as a percentage of net revenue was 44.9% for the year ended December 31, 2023, a decrease of 1.0 percentage points compared to the year ended December 31, 2022, primarily due to lower stock-based compensation expense of $6.2 million in 2023, driven by the forfeiture of share-based awards associated with the departure of the Company's former CEO, as well as recovery of legal costs associated with the Caisson litigation of $3.0 million in 2023. For additional information, please refer to "Note 13. Commitments and Contingencies" in LivaNova's consolidated financial statements included in this Report. These decreases were partially offset by the $2.6 million increase in costs associated with the previously mentioned November 2023 cybersecurity incident.

R&D Expenses

R&D expenses consist of product design and development efforts, clinical study programs and regulatory activities.

R&D expenses as a percentage of net revenue was 16.8% for the year ended December 31, 2023, an increase of 1.6 percentage points compared to the year ended December 31, 2022. The increase was primarily due to the net unfavorable change in the fair value of milestone-based contingent consideration arrangements totaling $27.8 million, as well as increased expenses associated with the Company's RECOVER clinical study and OSPREY clinical trial totaling $12.4 million.

Impairments of Goodwill and Long-Lived Assets

LivaNova tests goodwill for impairment on an annual basis on October 1, or when events or changes in circumstances indicate that a potential impairment exists.

On January 5, 2024, the Board of Directors of LivaNova PLC approved the 2024 Restructuring Plan to enhance the Company's focus on its core Cardiopulmonary and Neuromodulation segments. The main component of this plan is to wind down the ACS segment, which the Company anticipates will be substantially complete by the end of 2024. The Company determined that it was more likely than not that the carrying amounts associated with the ACS segment, including the long-lived assets (asset group), may not be recoverable. This was determined to be a triggering event occurring in the fourth quarter of 2023 requiring an impairment assessment, based on certain factors, including the results of an updated long-term financial outlook for the ACS segment. As such, LivaNova recorded impairments of the following long-lived assets during the year ended December 31, 2023 (in thousands):

	2023
Intangible assets:	
Developed technology	$ 78,067
Trade names	7,117
Property, plant and equipment	3,894
Operating lease assets	896
Total impairment of long-lived assets	$ 89,974

In addition, as part of LivaNova's third-quarter 2022 assessment, the Company considered that revenue for its ACS reporting unit during the nine months ended September 30, 2022 had declined by approximately 29% compared to the prior year period, primarily as a result of a reduction in severe COVID-19 cases, hospital-related challenges and product mix. As a result, the Company lowered its future revenue projections for the ACS reporting unit. Based on these circumstances, LivaNova concluded it was more likely than not that the goodwill of LivaNova's ACS reporting unit was impaired and performed a quantitative assessment of the goodwill as of September 30, 2022, using management's then current estimate of future cash flows. Based on the valuation performed, LivaNova determined that the fair value of the ACS reporting unit was less than the carrying value and recognized a goodwill impairment of $129.4 million.

Other Operating Expenses

Other operating expenses primarily consists of the provision for litigation involving LivaNova's 3T Heater-Cooler device, the Saluggia site remediation provision, restructuring expense, and merger and integration expense.

Other operating expenses as a percentage of net revenue was 3.3% for the year ended December 31, 2023, an increase of 0.4 percentage points compared to the year ended December 31, 2022. The increase was primarily due to an increase in the litigation provision related to LivaNova's 3T Heater-Cooler device of $12.7 million, partially offset by a reduction in restructuring expense of $5.7 million. For additional information, please refer to "Note 13. Commitments and Contingencies" and "Note 6. Restructuring" in LivaNova's consolidated financial statements included in this Report.

Interest Expense

LivaNova incurred interest expense of $58.9 million for the year ended December 31, 2023, compared to $48.3 million for the year ended December 31, 2022. The increase was primarily due to an increase in interest rates and average borrowings, partially offset by reduced amortization of debt issuance costs. For further information on the Company's debt refer to "Note 10. Financing Arrangements" in LivaNova's consolidated financial statements included in this Report.

Foreign Exchange and Other Income/(Expense)

Foreign exchange and other income/(expense) consists primarily of gains and losses arising from transactions denominated in a currency different from an entity's functional currency, FX derivative gains and losses, and changes in the fair value of embedded and capped call derivatives.

Foreign exchange and other income/(expense) was income of $46.1 million and $49.9 million for the years ended December 31, 2023 and 2022, respectively. For further details, refer to "Note 20. Supplemental Financial Information" in LivaNova's consolidated financial statements included in this Report.

Income Taxes

LivaNova PLC is resident in the UK. The Company's subsidiaries conduct operations and earn income in numerous countries and are subject to the varying laws and income tax rates of the taxing jurisdictions within those countries. As a result of changes in the overall level of the Company's taxable income, the mix of taxable income in various jurisdictions, changes in tax valuation allowances, and changes in tax laws, LivaNova's consolidated effective income tax rate may vary substantially from one reporting period to another.

LivaNova's effective income tax rate was (121.7%) and 14.7% for the years ended December 31, 2023 and 2022, respectively.

Compared with the year ended December 31, 2022, the effective tax rate benefit for 2023 was primarily attributable to the release of a $110.8 million UK valuation allowance, and changes in other valuation allowances, partially offset by other discrete items including the impairment of the ACS long-lived assets. For additional information, please refer to "Note 17. Income Taxes" in LivaNova's consolidated financial statements included in this Report.

Critical Accounting Estimates

LivaNova has adopted various accounting policies to prepare the consolidated financial statements in accordance with US GAAP. The Company's most significant accounting policies are disclosed in "Note 2. Basis of Presentation, Use of Accounting Estimates and Significant Accounting Policies" and "Note 3. Revenue Recognition" in LivaNova's consolidated financial statements included in this Report.

To prepare LivaNova's consolidated financial statements in conformity with US GAAP, management makes estimates and assumptions that may affect the reported amounts of the Company's assets and liabilities, the disclosure of contingent liabilities as of the date of its consolidated financial statements and the reported amounts of its revenue and expenses during the reporting period. LivaNova's actual results may differ from these estimates. LivaNova considers estimates to be critical if the Company is required to make assumptions about material matters that are uncertain at the time of estimation, or if materially different estimates could have been made or it is reasonably likely that the accounting estimate may change from period to period. The following are areas requiring management's judgment that LivaNova considers critical:

Goodwill and Long-Lived Assets

LivaNova allocates the purchase price consideration of an acquisition to the assets acquired and liabilities assumed based on their fair values at the date of acquisition, including property, plant and equipment, inventories, accounts receivable, long-term debt, and identifiable intangible assets which either arise from a contractual or legal right or are separable from goodwill. LivaNova allocates any excess purchase price over the fair value of the net tangible and identifiable intangible assets acquired to goodwill. LivaNova bases the fair value of identifiable intangible assets acquired in a business combination, including IPR&D, on valuations that use information and assumptions provided by management, which consider management's best estimates of inputs and assumptions that a market participant would use.

Intangible assets shown on the consolidated balance sheets consist of finite-lived and indefinite-lived assets expected to generate future economic benefits and are recorded at their respective fair values as of their acquisition date. Finite-lived intangible assets consist primarily of developed technology and technical capabilities, including patents, related know-how and licensed patent rights, trade names and customer relationships. Customer relationships consist of relationships with hospitals and surgeons in the countries where LivaNova operates. Indefinite-lived intangible assets other than goodwill are composed of IPR&D assets acquired in acquisitions.

Each reporting period, LivaNova reviews if there are circumstances that warrant an evaluation of the carrying amounts of LivaNova's property and equipment and its finite-lived intangible assets to determine whether such carrying amounts continue to be recoverable. Such changes in circumstance may include, among other items, an expectation of a sale or disposal of a long-lived asset or asset group, adverse changes in market or competitive conditions, an adverse change in legal factors or business climate in the markets in which LivaNova operates and operating or cash flow losses. Long-lived assets held and used are assessed for possible impairment by comparing their carrying values with their associated undiscounted, future cash flows. In

order to calculate the impairment charge, LivaNova generally measures fair value by considering sale prices for similar assets, discounted estimated future cash flows using an appropriate discount rate and/or estimated replacement cost.

LivaNova estimates the useful lives of its finite-lived intangible assets, which requires significant management judgment, and evaluates its intangible assets each reporting period to determine whether events and circumstances indicate a different useful life.

LivaNova evaluates the goodwill and indefinite-lived intangible assets for impairment annually on October 1st and whenever other facts and circumstances indicate that the carrying amounts of goodwill and other indefinite-lived intangible assets may not be recoverable. Estimating the fair value of goodwill and indefinite-lived intangible assets requires various assumptions, including revenue growth rates and discount rates. LivaNova performed a quantitative impairment assessment for its Cardiopulmonary and Neuromodulation reporting units as of October 1, 2023. The assessment was performed using management's current estimate of future cash flows. LivaNova concluded that the fair value of its Cardiopulmonary and Neuromodulation reporting units exceeded their carrying value by 23% and 528%, respectively. Therefore, LivaNova concluded that its Cardiopulmonary and Neuromodulation reporting units' goodwill and indefinite-lived intangible assets were not impaired on the October 1, 2023 test date. LivaNova also performed a sensitivity analysis of the revenue growth rate for the Company's Cardiopulmonary and Neuromodulation reporting units as of October 1, 2023, and determined that a 0.5% decrease in the Cardiopulmonary or Neuromodulation growth rate would not result in an impairment of goodwill for the respective reporting units or indefinite-lived intangible assets. Similarly, LivaNova performed a sensitivity analysis of the discount rate for the same reporting units as of October 1, 2023 and determined that a 0.5% increase in the Cardiopulmonary or Neuromodulation discount rate would not result in an impairment of goodwill for the respective reporting units or indefinite-lived intangible assets.

As part of LivaNova's third-quarter 2022 assessment, the Company considered that revenue for its ACS reporting unit during the nine months ended September 30, 2022, had declined by approximately 29% compared to the prior year period, primarily as a result of a reduction in severe COVID-19 cases, hospital-related challenges and product mix. As a result, the Company lowered its future revenue projections for the ACS reporting unit. Based on these circumstances, LivaNova concluded it was more likely than not that the goodwill of the Company's ACS reporting unit was impaired, and performed a quantitative assessment of the goodwill as of September 30, 2022, using management's then current estimate of future cash flows. Based on the valuation performed, LivaNova determined that the fair value of the ACS reporting unit was less than the carrying value and recognized a goodwill impairment of $129.4 million. For additional information, please refer to "Note 4. Business Combinations" and "Note 7. Goodwill and Intangible Assets" in LivaNova's consolidated financial statements included in this Report.

Income Taxes

LivaNova is a UK corporation, and operates through the Company's various subsidiaries in a number of countries throughout the world. LivaNova's provision for income taxes is based on the tax laws and rates applicable in the jurisdictions in which the Company operates and earns income. LivaNova uses significant judgment and estimates in accounting for the Company's income taxes. The Company recognizes deferred tax assets and liabilities for the anticipated future tax effects of temporary differences between the financial statements basis and the tax basis of LivaNova's assets and liabilities, which are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

LivaNova files federal and local tax returns in many jurisdictions throughout the world and is subject to income tax examinations for its fiscal year 2018 and subsequent years, with certain exceptions. While LivaNova believes that its tax return positions are fully supported, tax authorities may disagree with certain positions the Company has taken and assess additional taxes, and, as a result, LivaNova may establish reserves for uncertain tax positions, which require a significant degree of management judgment. LivaNova regularly assesses the likely outcomes of its tax positions in order to determine the appropriateness of the Company's reserves; however, the actual outcome of an audit can be significantly different than LivaNova's expectations, which could have a material impact on the Company's tax provision. The total amount of unrecognized tax benefit, as of December 31, 2023, if recognized, would reduce LivaNova's income tax expense by approximately $5.4 million.

LivaNova periodically assesses the recoverability of its deferred tax assets by considering whether it is more-likely-than-not that some or all of the actual benefit of those assets will be realized. To the extent that realization does not meet the "more-likely-than-not" criterion, the Company establishes a valuation allowance. LivaNova periodically reviews the adequacy and necessity of the valuation allowance by considering significant positive and negative evidence relative to its ability to recover deferred tax assets and to determine the timing and amount of valuation allowance that should be released. This evidence includes: profitability in the most recent quarters; internal profitability forecasts for the current and next two future years; the

amount of deferred tax asset relative to estimated profitability; the potential effects on future profitability from increasing competition, healthcare reforms and overall economic conditions; limitations and potential limitations on the use of LivaNova's net operating losses due to ownership changes, pursuant to IRC Section 382; and the implementation of prudent and feasible tax planning strategies, if any. For additional information, please refer to "Note 17. Income Taxes" in LivaNova's consolidated financial statements included in this Report.

Legal and Other Contingencies

Provisions for legal contingencies are recognized when the Company determines it is probable that a loss has been incurred and the amount is reasonably estimable, the determination of which requires significant judgment. Estimates are used in assessing the likelihood of a loss being incurred and when determining a reasonable estimate of the loss for each claim. Final settlement amounts may be materially different from the provision recorded. For additional information, please refer to "Note 13. Commitments and Contingencies" in LivaNova's consolidated financial statements included in this Report.

Contingent Consideration Liabilities

Contingent consideration liabilities result from acquisition agreements that include potential future payment of consideration that is contingent upon the achievement of performance milestones and/or sales-based earn-outs. Contingent consideration liabilities are measured at fair value each reporting period, the determination of which requires significant judgments and estimates. The fair value of contingent consideration is determined based on the consideration expected to be transferred based on estimated future cash flows of the acquired business, discounted to present value in accordance with accepted valuation methodologies. For additional information, please refer to "Note 9. Fair Value Measurements" in LivaNova's consolidated financial statements included in this Report.

Embedded Exchange Feature and Capped Call Derivatives

In June 2020, the Company issued the Notes and entered into related capped call transactions. The Notes include an embedded exchange feature that is bifurcated from the Notes. The embedded exchange feature derivative is measured at fair value using a binomial lattice model and estimated 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, including stock price, remaining contractual term, expected volatility, risk-free interest rate and expected dividend yield, as applicable. The Company uses historical volatility and implied volatility from options traded to determine expected stock price volatility which is an unobservable input that is significant to the valuation. For additional information, please refer to "Note 9. Fair Value Measurements" and "Note 10. Financing Arrangements" in LivaNova's consolidated financial statements included in this Report.

New Accounting Pronouncements

For a discussion of new accounting standards and disclosure requirements, please refer to "Note 21. New Accounting Pronouncements" in LivaNova's consolidated financial statements included in this Report.

Liquidity and Capital Resources

Based on LivaNova's current business plan, the Company believes that its sources of liquidity, which primarily consist of cash and cash equivalents, future cash generated from operations, and available borrowings under its revolving credit facility, will be sufficient to fund its uses of liquidity, primarily consisting of day-to-day operating expenses, working capital, capital expenditures, acquisition earn-outs and debt service requirements over the twelve-month period beginning from the issuance date of this Report. From time to time, LivaNova may access debt and/or equity markets to optimize its capital structure, raise additional capital, or increase liquidity as necessary. LivaNova's liquidity could be adversely affected by the factors affecting future operating results, including those referred to in "Item 1A. Risk Factors" above and by the contingencies referred to in "Note 13. Commitments and Contingencies" in LivaNova's consolidated financial statements included in this Report.

LivaNova's operating and working capital obligations primarily consist of liabilities arising from the normal course of business including inventory supply contracts, the future settlement of derivative instruments, and future payments of operating leases, as well as contingent consideration arrangements resulting from acquisitions, and obligations associated with legal and other accruals.

The following table presents selected financial information related to LivaNova's liquidity as of December 31, 2023 and 2022 (in thousands):

	2023	2022
Available Short-term Liquidity		
Cash and cash equivalents	$ 266,504	$ 214,172
Availability under the 2021 First Lien Credit Agreement	125,000	125,000
Availability under the Delayed Draw Term Facility [(1)]	—	50,000
	$ 391,504	$ 389,172
Working Capital		
Current assets	$ 988,158	$ 886,136
Current liabilities	334,983	297,398
	$ 653,175	$ 588,738
Debt Obligations		
Current portion of long-term debt	$ 17,484	$ 20,892
Short-term unsecured borrowing arrangements	627	2,542
Current debt obligations	18,111	23,434
Long-term debt obligations	568,543	518,067
Total debt obligations	$ 586,654	$ 541,501

(1) On April 6, 2023, LivaNova drew the full $50 million under the Delayed Draw Term Facility to be used for general corporate purposes.

Debt and Capital

LivaNova's capital structure consists of debt and equity. As of December 31, 2023, LivaNova's total debt of $586.7 million was 45.9% of its total equity of $1,277.6 million. As of December 31, 2022, LivaNova's total debt of $541.5 million was 44.8% of its total equity of $1,207.6 million.

During the year ended December 31, 2023, LivaNova received $50.0 million in proceeds from the issuance of long-term debt and repaid $21.6 million in long-term debt.

During the year ended December 31, 2022, LivaNova received $507.5 million in proceeds from the issuance of long-term debt and repaid $223.5 million in long-term debt.

On June 17, 2020, LivaNova's wholly-owned subsidiary, LivaNova USA, issued the Notes. Holders of the Notes are entitled to exchange the Notes at any time during specified periods, at their option. This includes the right to exchange the Notes during any calendar quarter, if the last reported sale price of LivaNova's ordinary shares, with a nominal value of £1.00 per share, is greater than or equal to 130% of the exchange price, or $79.27 per share for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter. The exchange condition was not satisfied on December 31, 2023. As a result, LivaNova has included its obligations from the Notes and the associated embedded exchange feature derivative as a long-term liability on the consolidated balance sheets as of December 31, 2023. The Notes are exchangeable solely into cash and 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. If holders elect to exchange their Notes during any future periods in the event an exchange condition is met, LivaNova would be required to settle its exchange obligation through the payment of cash, which could adversely affect the Company's liquidity.

The Company has also entered into privately negotiated capped call transactions with terms substantially similar to those applicable to the Notes. 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. If the Company's share price exceeds the cap price, the proceeds under the capped call transactions would not fully offset the excess principal amount due to the holders of the Notes. The capped call transactions expire on December 15, 2025 and must be settled in cash. If the capped call transactions are converted or redeemed early, settlement occurs at their termination value, which is equal to their fair value at the time of the conversion or redemption. The capped call transactions are included at their estimated fair value as of December 31, 2023 within long-term derivative assets on the consolidated balance sheets.

On August 6, 2021, the Company closed an offering and issued 4,181,818 ordinary shares, par value £1.00 per share, at an offering price of $82.50 per share. Net proceeds from the offering were approximately $322.6 million, after deducting underwriting discounts, commissions and offering expenses. Proceeds from the offering were used to repay the Company's $450 million 2020 senior secured term loan.

On August 13, 2021, LivaNova PLC and the Borrower entered into a First Lien Credit Agreement with the lenders and issuing banks party thereto and Goldman Sachs Bank USA, as First Lien Administrative Agent and First Lien Collateral Agent, relating to a $125 million senior secured multi-currency revolving credit facility to be made available to the Borrower. The 2021 First Lien Credit Agreement is available for working capital and other general corporate purposes and, if drawn, can be repaid at any time without premium or penalty. There were no outstanding borrowings under the 2021 First Lien Credit Agreement as of December 31, 2023.

On February 21, 2022, the Court of Appeal notified the Company that it granted the Company a suspension with respect to the payment of damages in the amount of €453.6 million (approximately $502.0 million at December 31, 2023) in the SNIA litigation until a decision has been reached on LivaNova's appeal to the Italian Supreme Court. This suspension was subject to LivaNova providing a first demand bank guarantee of €270.0 million (approximately $298.8 million at December 31, 2023) within 30 calendar days.

On February 24, 2022, LivaNova PLC and the Borrower entered into an Incremental Facility Amendment No. 1 to the 2021 First Lien Credit Agreement, relating to a €200 million bridge loan facility. On March 16, 2022, LivaNova entered into Amendment No. 2 to the 2021 First Lien Credit Agreement, which converted the available borrowings under the Bridge Loan Facility from €200 million to $220 million and converted the EURIBOR rate in the 2021 First Lien Credit Agreement to SOFR. LivaNova delivered a borrowing notice for $220 million in connection with the Bridge Loan Facility, which was funded on March 17, 2022. LivaNova used the proceeds of the Bridge Loan Facility to post a portion of the cash collateral supporting the SNIA Litigation Guarantee.

On March 18, 2022, LivaNova PLC, acting through its Italian branch, entered into an Indemnity Letter and an Account Pledge Agreement with Barclays, further to which Barclays issued the €270.0 million SNIA Litigation Guarantee. As security for the SNIA Litigation Guarantee, LivaNova is required to grant cash collateral to Barclays in USD in an amount equal to the USD equivalent of 105% of the amount of the SNIA Litigation Guarantee calibrated on a biweekly basis. On December 31, 2023, the cash collateral classified as restricted cash on the consolidated balance sheets was $311.4 million.

On March 21, 2022, LivaNova delivered the SNIA Litigation Guarantee as required by the Court of Appeal, thereby satisfying the condition to obtain the suspension for the payment of damages in connection with the SNIA litigation until review of such judgment by the Italian Supreme Court.

On July 6, 2022, LivaNova and the Borrower entered into Incremental Facility Amendment No. 2, which provides for the Borrower to, among other things, obtain commitments for term loan facilities from a syndicate of lenders in an aggregate principal amount of $350 million consisting of (i) the Initial Term Facility with an aggregate principal amount of $300 million and (ii) the Delayed Draw Term Facility with an additional aggregate principal amount of $50 million. On April 6, 2023, LivaNova drew $50 million under the Delayed Draw Term Facility for general corporate purposes.

Proceeds from the Initial Term Facility were used to repay in full the Bridge Loan Facility on July 6, 2022, with the remainder used for general corporate purposes of the Company. The Term Facilities have a maturity of the earlier of (i) five years or (ii) 91 days prior to December 15, 2025, the maturity date of the Notes, unless by that date LivaNova USA will have either redeemed or refinanced the Notes, or set aside an amount of cash equal to the then-outstanding principal amount of the Notes.

For additional information on LivaNova's debt and debt transactions, please refer to "Note 10. Financing Arrangements" in LivaNova's consolidated financial statements included in this Report.

Cash Flows

The following table presents 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 for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	2023	2022	2021
Operating activities	$ 74,914	$ 69,921	$ 102,544
Investing activities	(40,331)	(38,414)	36,904
Financing activities	21,484	280,130	(181,483)
Effect of exchange rate changes on cash and cash equivalents	6,187	(4,011)	(2,805)
Net increase (decrease)	$ 62,254	$ 307,626	$ (44,840)

Operating Activities

Cash provided by operating activities for the year ended December 31, 2023 increased $5.0 million compared to the prior year primarily resulting from improvements in working capital and an increase in net income adjusted for non-cash items, partially offset by an increase in 3T Heater-Cooler litigation payments of $24.8 million.

Investing Activities

Cash used in investing activities during the year ended December 31, 2023 increased $1.9 million compared to the prior year largely due to increases in purchases of property, plant and equipment and investments of $8.5 million and $3.6 million, respectively, partially offset by $8.9 million paid during the year ended December 31, 2022 associated with the acquisition of ALung.

Financing Activities

Cash provided by financing activities during the year ended December 31, 2023 decreased $258.6 million compared to the prior year. The decrease was primarily due to a reduction in proceeds from net long and short-term debt borrowings and repayments of $257.5 million.

Market Risk

LivaNova is exposed to certain market risks as part of its ongoing business operations, including risks from foreign currency exchange rates, interest rate risks and concentration of procurement suppliers, that could adversely affect LivaNova's consolidated financial position, results of operations or cash flows. LivaNova manages these risks through regular operating and financing activities and, at certain times, derivative financial instruments.

Foreign Currency Exchange Rate Risk

Due to the global nature of LivaNova's operations, the Company is exposed to FX fluctuations. Historically, LivaNova has maintained a foreign currency exchange rate risk management strategy that utilizes cash flow hedges and freestanding foreign currency derivatives to reduce the Company's exposure to unanticipated fluctuations in forecasted revenue and costs, inter-company debt, bank deposits, accounts receivable, and accounts payable caused by changes in foreign currency exchange rates. Upon the settlement of LivaNova's foreign currency cash flow hedges in the fourth quarter of 2022 and following an in-depth analysis of the utility of the Company's cash flow hedging program, LivaNova discontinued its foreign currency cash flow hedging program. LivaNova continues to use freestanding derivative forward contracts to offset exposure to the variability of the value associated with assets and liabilities denominated in a foreign currency.

LivaNova mitigates its credit risk relating to counterparties of its derivatives through a variety of techniques, including transacting with multiple, high-quality financial institutions, thereby limiting the Company's exposure to individual counterparties and by entering into ISDA Master Agreements, which include provisions for a legally enforceable master netting agreement, with almost all of LivaNova's derivative counterparties. The terms of the ISDA agreements may also include credit support requirements, cross default provisions, termination events, and set-off provisions. Legally enforceable master netting agreements reduce credit risk by providing protection in bankruptcy in certain circumstances and generally permitting the closeout and netting of transactions with the same counterparty upon the occurrence of certain events.

Interest Rate Risk

LivaNova is subject to interest rate risk on its investments and debt. Historically, LivaNova has entered into interest rate derivative instruments designated as cash flow hedges to manage the exposure to interest rate movements and to reduce the risk of increased borrowing costs by converting floating-rate debt into fixed-rate debt. Under these agreements, LivaNova agrees to exchange, at specified intervals, the difference between fixed and floating interest amounts calculated by reference to agreed-upon notional principal amounts. These interest rate swaps are structured to mirror the payment terms of the underlying loan. The Company's outstanding interest rate swaps expired on April 6, 2023. LivaNova elected not to renew the interest rate swaps as interest expense associated with the Initial Term Facility is principally offset by holding a significant portion of the Initial Term Facility in a depository account, which earns a floating rate of interest.

If interest rates associated with LivaNova's variable-rate financing arrangements were to increase/(decrease) by 100 basis points, the effect on interest expense within LivaNova's consolidated statement of income (loss) would be an increase/(decrease) of approximately $3.5 million, respectively. Conversely, if the interest rate associated with LivaNova's variable-rate depository account were to increase/(decrease) by 100 basis points, the effect on foreign exchange and other income/(expense) within LivaNova's consolidated statements of income (loss) would be an increase/(decrease) of approximately $3.5 million, respectively.

Concentration of Credit Risk

LivaNova's trade accounts receivable represent potential concentrations of credit risk. This risk is limited due to the large number of customers and their dispersion across a number of geographic areas, as well as LivaNova's efforts to control its exposure to credit risk by monitoring its receivables and the use of credit approvals and credit limits. In addition, LivaNova has historically had strong collections and minimal write-offs. While LivaNova believes that its reserves for credit losses are adequate, essentially all of the Company's trade receivables are concentrated in the hospital and healthcare sectors worldwide, and accordingly, LivaNova is exposed to their respective business, economic and country-specific variables. Although LivaNova does not currently foresee a concentrated credit risk associated with these receivables, repayment is dependent on the financial stability of these industry sectors and the respective countries' national economies and healthcare systems.

Factors Affecting Future Operating Results and Share Price

The material factors affecting LivaNova's future operating results and share prices are disclosed in "Item 1A. Risk Factors" of this Report.

Item 7A. ***Quantitative and Qualitative Disclosures About Market Risk***

The information required under 7A. has been incorporated by reference to the information contained in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Report under the section entitled "*Market Risk."*

Item 8. ***Financial Statements and Supplementary Data***

LivaNova's audited consolidated financial statements and notes thereto included in "Item 15. Exhibits, Financial Statement Schedules" of this Report, beginning on page F-1 of this Report, are incorporated herein by reference.

Item 9. ***Changes in and Disagreements with Accountants on Accounting and Financial Disclosure***

None.

Item 9A. ***Controls and Procedures***

Disclosure Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

LivaNova maintains a system of disclosure controls and procedures, as defined in Rule 13a-15(e) under the Exchange Act, that are designed to ensure that information required to be disclosed in the Company's reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information is accumulated and communicated to management, including LivaNova's CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure. LivaNova's management, under the supervision and with the participation of the Company's CEO and CFO, evaluated the effectiveness of the design and operation of LivaNova's disclosure controls and procedures as of the end of the period covered by this Report. Based on that evaluation, LivaNova's CEO and CFO concluded that LivaNova's disclosure controls and procedures were effective as of December 31, 2023.

(b) Management's Report on Internal Control Over Financial Reporting

LivaNova's management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) under the Exchange Act. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of LivaNova's internal control over financial reporting as of December 31, 2023 using the criteria set forth in the *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, LivaNova concluded that the Company's internal control over financial reporting was effective as of December 31, 2023.

The effectiveness of LivaNova's internal control over financial reporting as of December 31, 2023 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm. Their report is included after "Item 16. Form 10-K Summary" in this Report.

(c) Changes in Internal Control Over Financial Reporting

During the fourth quarter of 2023, there were no changes to LivaNova's internal control over financial reporting (as defined in Rules 13a-15(f) under the Exchange Act) that have materially affected, or that are reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. ***Other Information***

During the three months ended December 31, 2023, none of the Company's directors or officers (as defined in Rule 16a-1(f) of the Securities Exchange Act of 1934) adopted, terminated or modified a Rule 10b5-1 trading arrangement or non-Rule 10b5-1 trading arrangement (as such terms are defined in Item 408 of Regulation S-K of the Securities Act).

Item 9C. ***Disclosure Regarding Foreign Jurisdictions that Prevent Inspections***

Not applicable.

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance***

The information required for this Item 10 is incorporated by reference from LivaNova's 2024 Proxy Statement, which the Company anticipates filing within 120 days of December 31, 2023.

LivaNova has adopted a Code of Conduct that applies to all employees, officers and directors of the Company. A copy of the Code of Conduct is publicly available on the Company's website, *www.livanova.com.* LivaNova intends to post any amendments to the Code of Conduct or any grant of a waiver from a provision of the Code of Conduct requiring disclosure under applicable SEC rules on the Company's website.

Item 11. ***Executive Compensation***

The information required for this Item 11 is incorporated by reference from LivaNova's 2024 Proxy Statement except as to information required pursuant to Item 402(v) of the SEC Regulation S-K relating to pay versus performance. The Company anticipates filing LivaNova's 2024 Proxy Statement within 120 days of December 31, 2023.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters***

The information required for this Item 12 is incorporated by reference from LivaNova's 2024 Proxy Statement, which the Company anticipates filing within 120 days of December 31, 2023.

Item 13. ***Certain Relationships and Related Transactions, and Director Independence***

The information required for this Item 13 is incorporated by reference from LivaNova's 2024 Proxy Statement, which the Company anticipates filing within 120 days of December 31, 2023.

Item 14. ***Principal Accounting Fees and Services***

The information required for this Item 14 is incorporated by reference from LivaNova's 2024 Proxy Statement, which the Company anticipates filing within 120 days of December 31, 2023.

PART IV

Item 15. ***Exhibits and Financial Statement Schedules***

(1) Financial Statements

The Consolidated Financial Statements of LivaNova PLC and its subsidiaries and the Report of Independent Registered Public Accounting Firms are included in this Report beginning on page F-1:

(2) Financial Statement Schedules

All schedules required by Regulation S-X have been omitted as not applicable or not required, or the information required has been included in the notes to the consolidated financial statements.

(3) Index to Exhibits

The exhibits marked with the asterisk symbol (*) are filed or furnished (in the case of Exhibit 32.1) with this Form 10-K. 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
2.1	Share and Asset Purchase Agreement, dated as of December 2, 2020, by and between LivaNova PLC and Mitral Holdco S.à.r.l., incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K, filed on December 3, 2020
2.2	Amended and Restated Share and Asset Purchase Agreement, dated as of April 9, 2021, by and between LivaNova PLC and Mitral Holdco S.à.r.l., incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K, filed on April 15, 2021
3.1	Amended Articles of Association, incorporated by reference to Exhibit 3.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020
4.1*	Description of Securities Registered Under Section 12 of the Securities Exchange Act of 1934, as amended
4.2	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
4.3	Form of 3.00% Cash Exchangeable Senior Notes due 2025 (included in Exhibit 4.1 of the Company's current Report on Form 8-K, filed on June 17, 2020)
10.1†	Form of Deed of Indemnification (Directors), each effective October 19, 2015, incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K, filed on October 19, 2015
10.2†	Form of Deed of Indemnification (Officers), each effective October 19, 2015, incorporated by reference to Exhibit 10.4 of the Company's Current Report on Form 8-K, filed on October 19, 2015
10.3†	2015 Incentive Award Plan and related Sub-Plan for UK Participants, adopted on October 16, 2015, incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed on October 19, 2015
10.4†	Cyberonics, Inc. 2009 Stock Plan, as amended, incorporated by reference to Appendix A to Cyberonics, Inc.'s Proxy Statement on Schedule 14A, filed on August 2, 2012
10.5†	Amended and Restated Cyberonics, Inc. New Employee Equity Inducement Plan, as amended, incorporated by reference to Exhibit 10.3 of Cyberonics, Inc.'s Quarterly Report on Form 10-Q for the fiscal quarter ended October 24, 2008

10.6†	Form of Stock Option Award Notification and Agreement under the Cyberonics, Inc. 2009 Stock Plan, as amended, incorporated by reference to Exhibit 10.6 of the Company's Annual Report on Form 10-K for the year ended December 31, 2022
10.7†	CEO Employment Agreement effective January 1, 2017 between the Company and Damien McDonald, incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K, filed on February 28, 2017
10.8†	Side Letter dated January 1, 2017 between the Company and Damien McDonald, incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K, filed on February 28, 2017
10.9†	Damien McDonald Settlement Agreement, dated April 14, 2023, incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2023
10.10†	Description of 2018 Long Term Incentive Plan, incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed on March 16, 2018
10.11†	Form of 2018 Long Term Incentive Plan SAR Award Agreement, incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K, filed on March 16, 2018
10.12†	General Provisions of the Company's Global Employee Share Purchase Plan dated 12 June 2018, incorporated by reference to Exhibit 10.4 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018
10.13†	Description of 2019 Long Term Incentive Plan approved March 29, 2019, incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed on April 1, 2019
10.14†	Form of the Company's 2019 Long Term Incentive Plan RSU Award Agreement, incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K, filed on April 1, 2019
10.15†	Form of the Company's 2019 Long Term Incentive Plan SAR Award Agreement, incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K, filed on April 1, 2019
10.16†	Form of the Company's 2019 Long Term Incentive Plan PSU Award Agreement (rTSR condition), incorporated by reference to Exhibit 10.4 of the Company's Current Report on Form 8-K, filed on April 1, 2019
10.17†	Form of the Company's 2019 Long Term Incentive Plan PSU Award Agreement (FCF condition), incorporated by reference to Exhibit 10.5 of the Company's Current Report on Form 8-K, filed on April 1, 2019
10.18†	Service Agreement, dated January 2, 2019, between Trui Hebbelinck and LivaNova PLC, incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019
10.19	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
10.20†	Amendment to Outstanding 2019 and 2020 Restricted Stock Unit Awards under the LivaNova PLC 2015 Incentive Award Plan, dated June 15, 2020, incorporated by reference to Exhibit 10.10 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020
10.21†	Amendment to Outstanding 2018 Restricted Stock Unit Awards under the LivaNova PLC 2015 Incentive Award Plan dated June 15, 2020, incorporated by reference to Exhibit 10.11 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020
10.22†	Amendment to Outstanding 2018, 2019 and 2020 Performance Stock Unit Awards under the LivaNova PLC 2015 Incentive Award Plan, dated June 15, 2020, incorporated by reference to Exhibit 10.12 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020
10.23†	Form of Long Term Incentive Plan Restricted Stock Unit Award Agreement, incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020
10.24†	Form of Long Term Incentive Plan Performance Stock Unit Award Agreement, incorporated by reference to Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020
10.25†	Form of Long Term Incentive Plan Stock Appreciation Right Award Agreement, incorporated by reference to Exhibit 10.3 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020
10.26†	Form of Director Restricted Stock Unit Award Grant Notice, dated June 2020 and Director Restricted Stock Unit Award Agreement under the Company's 2015 Incentive Award Plan (Non-Employee Directors), incorporated by reference to Exhibit 10.42 of the Company's Annual Report on Form 10-K for the year ended December 31, 2020
10.27†	Form of Non-Executive Director Appointment Letter incorporated by reference to Exhibit 10.43 of the Company's Annual Report on Form 10-K for the year ended December 31, 2020
10.28†	Alex Shvartsburg offer of employment in the role of Vice President Strategy and Innovation, dated 21 September 2017 incorporated by reference to Exhibit 10.44 of the Company's Annual Report on Form 10-K for the year ended December 31, 2020
10.29†	Alex Shvartsburg letter, dated January 2019, regarding compensation increase incorporated by reference to Exhibit 10.45 of the Company's Annual Report on Form 10-K for the year ended December 31, 2020
10.30†	Alex Shvartsburg letter, dated October 2020, regarding additive compensation package for interim CFO position incorporated by reference to Exhibit 10.46 of the Company's Annual Report on Form 10-K for the year ended December 31, 2020
10.31†	Service Agreement, effective August 1, 2021, between the Company and Alex Shvartsburg, incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021

10.32†	Letter, dated December 14, 2022, to Alex Shvartsburg regarding an increase in gross annual base salary, effective January 1, 2023, incorporated by reference to Exhibit 10.50 of the Company's Annual Report on Form 10-K for the year ended December 31, 2022
10.33†	Marco Dolci Confirmation Letter, effective January 1, 2020, as SVP Global Operations & Global Research and Development, incorporated by reference to Exhibit 10.2 of the Company Quarterly Report on Form 10-Q for the quarter ended June 30, 2020
10.34†	Executive Employment Contract between Sorin Group Italia S.r.l. and Marco Dolci, effective April 20, 2017, incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021
10.35†	Marco Dolci Retirement Agreement, dated September 18, 2023 incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2023
10.36	First Lien Credit Agreement dated as of August 13, 2021 among LivaNova PLC, LivaNova USA, Inc., the lenders and issuing banks party thereto and Goldman Sachs Bank USA as First Lien Administrative Agent and First Lien Collateral Agent, incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed on August 16, 2021
10.37	Incremental Facility Amendment No. 1 to Credit Agreement, dated as of February 24, 2022, by and among LivaNova Plc, LivaNova USA, Inc., the lenders and issuing banks party thereto and Goldman Sachs Bank USA as First Lien Administrative Agent, incorporated by reference to Exhibit 10.51 of the Company's Annual Report on Form 10-K for the year ended December 31, 2021
10.38	Letter of indemnity in respect of the issuance of Trade Finance guarantee by Barclays Bank Ireland PLC, Italy Branch dated March 18, 2022, by and among LivaNova PLC Italian Branch and Barclays Bank Ireland PLC, Italy Branch, incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed on March 21, 2022
10.39	Pledge Agreement dated as of March 18, 2022, among LivaNova PLC Italian Branch and Barclays Bank Ireland PLC, Italy Branch, incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K, filed on March 21, 2022
10.40	Amendment 2 to the Credit Agreement, dated as of March 16, 2022, by and among LivaNova PLC, LivaNova USA, Inc., the Lenders and Goldman Sachs Bank USA as First Lien Administrative Agent, incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q, filed on May 4, 2022
10.41	Incremental Facility Amendment No. 2 to Credit Agreement, dated as of July 6, 2022, by and among LivaNova Plc, LivaNova USA, Inc., the Second Incremental Term Lenders, Delayed Draw Incremental Leaders, Goldman Sachs Bank USA, the Revolving Lenders and Issuing Banks, and for purposes of Sections 8 and 10 only, the other Loan Parties as of the date hereof., incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed on July 6, 2022
10.42†	Amendment to the LivaNova Plc 2015 Incentive Award Plan, dated 13 June 2022, incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q, filed on August 3, 2022
10.43†	Form of LivaNova Plc 2022 Incentive Award Plan Stock Appreciation Right Grant Notice and Agreement, incorporated by reference to Exhibit 10.3 of the Company's Quarterly Report on Form 10-Q, filed on August 3, 2022
10.44†	Form of LivaNova Plc 2022 Incentive Award Plan Restricted Stock Unit Award Grant Notice and Agreement, incorporated by reference to Exhibit 10.4 of the Company's Quarterly Report on Form 10-Q, filed on August 3, 2022
10.45†	Form of LivaNova Plc 2022 Incentive Award Plan Performance Stock Unit Award Grant Notice and Agreement, incorporated by reference to Exhibit 10.5 of the Company's Quarterly Report on Form 10-Q, filed on August 3, 2022
10.46†	Amendment to Outstanding 2021 and 2022 Performance Stock Unit Awards under the LivaNova PLC 2015 Incentive Award Plan, incorporated by reference to Exhibit 10.7 of the Company's Quarterly Report on Form 10-Q, filed on August 3, 2022
10.47†	Amendment to relevant 2020, 2021, and 2022 Restricted Stock Unit Awards under the LivaNova PLC 2015 Incentive Award Plan, incorporated by reference to Exhibit 10.8 of the Company's Quarterly Report on Form 10-Q, filed on August 3, 2022
10.48†	Form of LivaNova PLC 2022 Incentive Award Plan Stock Appreciation Right Grant Notice and Agreement, effective February 2023, incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2023
10.49†	Form of LivaNova PLC 2022 Incentive Award Plan Restricted Stock Unit Award Grant Notice and Agreement, effective February 2023, incorporated by reference to Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2023

10.50†	Form of LivaNova PLC 2022 Incentive Award Plan Performance Stock Unit Award Grant Notice and Agreement, effective February 2023, incorporated by reference to Exhibit 10.3 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2023
10.51†	Amendment to Form of LivaNova Plc 2022 Incentive Award Plan Stock Appreciation Right Grant Notice and Agreement, incorporated by reference to Exhibit 10.51 of the Company's Annual Report on Form 10-K for the year ended December 31, 2022
10.52†	Amendment to Form of LivaNova Plc 2022 Incentive Award Plan Restricted Stock Unit Award Grant Notice and Agreement, incorporated by reference to Exhibit 10.52 of the Company's Annual Report on Form 10-K for the year ended December 31, 2022
10.53†	Amendment to Form of LivaNova Plc 2022 Incentive Award Plan Performance Stock Unit Award Grant Notice and Agreement, incorporated by reference to Exhibit 10.53 of the Company's Annual Report on Form 10-K for the year ended December 31, 2022
10.54†	Amended and Restated LivaNova PLC 2022 Incentive Award Plan, incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed on June 16, 2023
10.55*†	Michael Hutchinson Employment Agreement, dated November 2, 2022
10.56†	William Kozy Offer Letter, dated April 19, 2023, incorporated by reference to Exhibit 10.26 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2023
21.1*	List of Subsidiaries of LivaNova PLC
23.1*	Consent of PricewaterhouseCoopers LLP
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 of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
97.1*	LivaNova Incentive Clawback Policy, dated July 19, 2023
101*	Interactive Data Files Pursuant to Rule 405 of Regulation S-T formatted in Inline XBRL: (i) the Consolidated Statements of Income (Loss) for the years ended December 31, 2023, December 31, 2022 and December 31, 2021, (ii) the Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2023, December 31, 2022 and December 31, 2021, (iii) the Consolidated Balance Sheets as of December 31, 2023 and December 31, 2022, (iv) the Consolidated Statements of Stockholders' Equity for the years ended December 31, 2023, December 31, 2022 and December 31, 2021, (v) the Consolidated Statements of Cash Flows for the years ended December 31, 2023, December 31, 2022 and December 31, 2021, and (vi) the Notes to the Consolidated Financial Statements.
104*	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

The agreements and other documents filed as exhibits to this report are not intended to provide factual information or other disclosure other than the terms of the agreements or other documents themselves, and you should not rely on them for that purpose. In particular, any representations and warranties made by the Company in these agreements or other documents were made solely within the specific context of the relevant agreement or document and may not describe the actual state of affairs at the date they were made or at any other time.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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

By: /s/ WILLIAM A. KOZY
William A. Kozy
Interim Chief Executive Officer and Chair of the Board of Directors
(Principal Executive Officer)

LIVANOVA PLC

By: /s/ ALEX SHVARTSBURG
Alex Shvartsburg
Chief Financial Officer
(Principal Accounting and Financial Officer)

Date: February 29, 2024

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

Signature	Title	Date
/s/ WILLIAM A. KOZY William A. Kozy	Interim Chief Executive Officer and Chair of the Board of Directors *(Principal Executive Officer)*	February 29, 2024
/s/ ALEX SHVARTSBURG Alex Shvartsburg	Chief Financial Officer *(Principal Accounting and Financial Officer)*	February 29, 2024
/s/ J. CHRISTOPHER BARRY J. Christopher Barry	Director	February 29, 2024
/s/ FRANCESCO BIANCHI Francesco Bianchi	Director	February 29, 2024
/s/ STACY ENXING SENG Stacy Enxing Seng	Director	February 29, 2024
/s/ DANIEL J. MOORE Daniel J. Moore	Director	February 29, 2024
/s/ SHARON O'KANE Sharon O'Kane, Ph.D.	Director	February 29, 2024
/s/ TODD C. SCHERMERHORN Todd C. Schermerhorn	Director	February 29, 2024
/s/ BROOKE STORY Brooke Story	Director	February 29, 2024
/s/ PETER M. WILVER Peter M. Wilver	Director	February 29, 2024

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of LivaNova PLC

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of LivaNova PLC and its subsidiaries (the "Company") as of December 31, 2023 and 2022, and the related consolidated statements of income (loss), of comprehensive income (loss), of stockholders' equity and of cash flows for each of the three years in the period ended December 31, 2023, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Goodwill Impairment Assessment – Cardiopulmonary (CP) Reporting Unit

As described in Notes 2 and 7 to the consolidated financial statements, the Company's consolidated goodwill balance was $782.9 million as of December 31, 2023, and the amount of goodwill associated with the CP reporting unit was $384.2 million. Management conducts impairment testing of goodwill on October 1st each year. If management determines that goodwill is more-likely-than-not impaired, management compares the fair value of the reporting unit to its carrying amount, including goodwill. Fair value refers to the price that would be received if management were to sell the unit as a whole in an orderly transaction. Fair value is estimated using a discounted cash flow model and requires various assumptions, including revenue growth rates and discount rates.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment of the CP reporting unit is a critical audit matter are (i) the significant judgment by management when developing the fair value estimate of the CP reporting unit; (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions relating to revenue growth rates and the discount rate; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the valuation of the CP reporting unit. These procedures also included, among others (i) testing management's process for developing the fair value estimate of the reporting unit; (ii) evaluating the appropriateness of the discounted cash flow model; (iii) testing the completeness and accuracy of underlying data used in the discounted cash flow model; and (iv) evaluating the reasonableness of the significant assumptions used by management related to revenue growth rates and the discount rate. Evaluating management's assumptions related to revenue growth rates involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting unit; (ii) the consistency with external market and industry data; and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluating (i) the appropriateness of the discounted cash flow model and (ii) the reasonableness of the discount rate assumption.

/s/ PricewaterhouseCoopers LLP
Houston, Texas
February 29, 2024

We have served as the Company's auditor since 2018.

LIVANOVA PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME (LOSS)

(In thousands, except per share amounts)

	Year Ended December 31,		
	2023	**2022**	**2021**
Net revenue	$ 1,153,545	$ 1,021,805	$ 1,035,365
Cost of sales	382,295	314,577	329,371
Gross profit	771,250	707,228	705,994
Operating expenses:			
Selling, general and administrative	518,129	469,243	471,904
Research and development	193,817	155,805	183,414
Impairment of goodwill	—	129,396	—
Impairment of long-lived assets	89,974	—	—
Other operating expenses	37,828	29,536	51,460
Operating loss	(68,498)	(76,752)	(784)
Interest expense	(58,853)	(48,250)	(50,151)
Loss on debt extinguishment	—	—	(60,238)
Foreign exchange and other income/(expense)	46,125	49,860	(13,299)
Loss before tax	(81,226)	(75,142)	(124,472)
Income tax (benefit) expense	(98,876)	11,051	11,198
Losses from equity method investments	(104)	(53)	(148)
Net income (loss)	$ 17,546	$ (86,246)	$ (135,818)
Basic income (loss) per share	$ 0.33	$ (1.61)	$ (2.68)
Diluted income (loss) per share	$ 0.32	$ (1.61)	$ (2.68)
Shares used in computing basic income (loss) per share	53,939	53,472	50,633
Shares used in computing diluted income (loss) per share	54,212	53,472	50,633

See accompanying notes to the consolidated financial statements

LIVANOVA PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(In thousands)

	Year Ended December 31,		
	2023	**2022**	**2021**
Net income (loss)	$ 17,546	$ (86,246)	$ (135,818)
Other comprehensive income (loss):			
Net change in unrealized (loss) gain on derivatives	(966)	1,911	(3,997)
Tax effect	—	—	733
Net of tax	(966)	1,911	(3,264)
Foreign currency translation adjustment, net of tax	21,202	(42,853)	(31,722)
Total other comprehensive income (loss)	20,236	(40,942)	(34,986)
Total comprehensive income (loss)	$ 37,782	$ (127,188)	$ (170,804)

See accompanying notes to the consolidated financial statements

LIVANOVA PLC AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
December 31, 2023 and 2022
(In thousands, except share data)

ASSETS	**2023**	**2022**
Current Assets:		
Cash and cash equivalents	$ 266,504	$ 214,172
Restricted cash	311,368	301,446
Accounts receivable, net of allowance of $12,019 at December 31, 2023 and $11,862 at December 31, 2022	215,072	183,110
Inventories	147,887	129,379
Prepaid and refundable taxes	20,145	31,708
Prepaid expenses and other current assets	27,182	26,321
Total Current Assets	988,158	886,136
Property, plant and equipment, net	154,181	147,187
Goodwill	782,941	768,787
Intangible assets, net	261,178	368,559
Operating lease assets	50,845	35,830
Investments	22,843	16,266
Deferred tax assets	118,858	1,384
Long-term derivative assets	38,496	54,393
Other assets	12,063	16,231
Total Assets	$ 2,429,563	$ 2,294,773
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Current debt obligations	$ 18,111	$ 23,434
Accounts payable	80,845	74,310
Accrued liabilities and other	107,301	81,481
Current litigation provision liability	10,756	29,481
Taxes payable	23,340	16,505
Accrued employee compensation and related benefits	94,630	72,187
Total Current Liabilities	334,983	297,398
Long-term debt obligations	568,543	518,067
Contingent consideration	80,902	85,292
Deferred tax liabilities	11,567	8,516
Long-term operating lease liabilities	45,388	29,548
Long-term employee compensation and related benefits	17,254	16,804
Long-term derivative liabilities	45,569	85,675
Other long-term liabilities	47,729	45,849
Total Liabilities	1,151,935	1,087,149
Commitments and contingencies (Note 13)		
Stockholders' Equity:		
Ordinary Shares, £1.00 par value: unlimited shares authorized; 53,942,151 shares issued and 53,918,222 shares outstanding at December 31, 2023; 53,851,979 shares issued and 53,564,664 shares outstanding at December 31, 2022	82,533	82,424
Additional paid-in capital	2,189,517	2,157,724
Accumulated other comprehensive loss	(27,883)	(48,119)
Accumulated deficit	(966,484)	(984,030)
Treasury stock at cost, 23,929 ordinary shares at December 31, 2023, 287,315 ordinary shares at December 31, 2022	(55)	(375)
Total Stockholders' Equity	1,277,628	1,207,624
Total Liabilities and Stockholders' Equity	$ 2,429,563	$ 2,294,773

See accompanying notes to the consolidated financial statements

LIVANOVA PLC AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands)

	Ordinary Shares	Ordinary Shares - Amount	Additional Paid-In Capital	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
December 31, 2020	49,447	$ 76,300	$ 1,768,156	$ (1,034)	$ 27,809	$ (761,966)	$ 1,109,265
Issuance of shares	4,182	5,808	316,733	—	—	—	322,541
Stock-based compensation plans	133	187	33,072	384	—	—	33,643
Net loss	—	—	—	—	—	(135,818)	(135,818)
Other comprehensive loss	—	—	—	—	(34,986)	—	(34,986)
December 31, 2021	53,762	82,295	2,117,961	(650)	(7,177)	(897,784)	1,294,645
Stock-based compensation plans	90	129	39,763	275	—	—	40,167
Net loss	—	—	—	—	—	(86,246)	(86,246)
Other comprehensive loss	—	—	—	—	(40,942)	—	(40,942)
December 31, 2022	53,852	82,424	2,157,724	(375)	(48,119)	(984,030)	1,207,624
Stock-based compensation plans	90	109	31,793	320	—	—	32,222
Net income	—	—	—	—	—	17,546	17,546
Other comprehensive income	—	—	—	—	20,236	—	20,236
December 31, 2023	53,942	$ 82,533	$ 2,189,517	$ (55)	$ (27,883)	$ (966,484)	$ 1,277,628

See accompanying notes to the consolidated financial statements

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

	Year Ended December 31,		
Operating Activities:	**2023**	**2022**	**2021**
Net income (loss)	$ 17,546	$ (86,246)	$ (135,818)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Deferred tax expense	(114,428)	1,409	2,852
Impairment of long-lived assets	89,974	—	—
Stock-based compensation	36,352	44,809	40,564
Amortization	25,472	25,198	26,517
Depreciation	24,737	22,373	24,536
Remeasurement of derivative instruments	(22,911)	(38,656)	17,618
Amortization of debt issuance costs	19,053	21,334	16,657
ACS inventory obsolescence adjustment	12,621	—	—
Amortization of operating lease assets	10,647	10,225	16,935
Remeasurement of contingent consideration to fair value	9,360	(29,881)	564
Impairment of goodwill	—	129,396	—
Loss on debt extinguishment	—	—	60,238
Impairment of disposal group and loss on sale	—	—	1,942
Other	1,111	1,653	717
Changes in operating assets and liabilities:			
Accounts receivable, net	(28,864)	(4,810)	(15,745)
Inventories	(28,478)	(25,679)	4,484
Other current and non-current assets	15,302	7,486	24,127
Accounts payable and accrued current and non-current liabilities	19,190	(3,510)	12,993
Taxes payable	7,361	1,378	103
Litigation provision liability	(19,131)	(6,558)	3,260
Net cash provided by operating activities	**74,914**	**69,921**	**102,544**
Investing Activities:			
Purchases of property, plant and equipment	(34,981)	(26,517)	(25,478)
Purchase of investments	(6,504)	(2,952)	(3,653)
Acquisitions, net of cash acquired	—	(8,857)	(1,694)
Proceeds from sale of Heart Valves, net of cash disposed	—	—	42,945
Proceeds from sale of Respicardia investment and loan	—	—	23,057
Other	1,154	(88)	1,727
Net cash (used in) provided by investing activities	**(40,331)**	**(38,414)**	**36,904**
Financing Activities:			
Proceeds from long-term debt obligations	50,000	507,547	—
Repayment of long-term debt obligations	(21,624)	(223,541)	(452,256)
Shares repurchased from employees for minimum tax withholding	(7,503)	(8,671)	(12,942)
Repayments of short-term borrowings (maturities greater than 90 days)	(1,974)	—	—
Proceeds from deferred consideration from sale of Heart Valves, net of working capital adjustments	—	4,596	—
Debt issuance costs	—	(3,292)	(2,450)
Proceeds from issuance of ordinary shares, net	—	—	322,557
Payment of make-whole premium on long-term debt obligations	—	—	(35,594)
Payment of contingent consideration	—	—	(5,249)
Other	2,585	3,491	4,451
Net cash provided by (used in) financing activities	**21,484**	**280,130**	**(181,483)**
Effect of exchange rate changes on cash, cash equivalents and restricted cash	6,187	(4,011)	(2,805)
Net increase (decrease) in cash, cash equivalents and restricted cash	**62,254**	**307,626**	**(44,840)**
Cash, cash equivalents and restricted cash at beginning of period	515,618	207,992	252,832
Cash, cash equivalents and restricted cash at end of period	**$ 577,872**	**$ 515,618**	**$ 207,992**
Supplementary Disclosures of Cash Flow Information:			
Cash paid for interest	$ 36,910	$ 19,044	$ 32,569
Cash paid for income taxes, net	(1,620)	1,221	(13,583)

See accompanying notes to the consolidated financial statements

Note 1. Nature of Operations

Description of the Business

LivaNova PLC is a market-leading global medical technology company. The Company designs, develops, manufactures, markets and sells products and therapies that are consistent with LivaNova's mission to provide hope for patients and their families through innovative medical technologies that deliver life-changing improvements. LivaNova is a public limited company organized under the laws of England and Wales and is headquartered in London, England. LivaNova's ordinary shares are listed for trading on the Nasdaq under the symbol "LIVN."

Business Segments

For the periods presented herein, LivaNova was comprised of three reportable segments: Cardiopulmonary, Neuromodulation and ACS. For additional information, please refer to "Note 22. Subsequent Event."

Macroeconomic Environment

The current macroeconomic environment, including foreign exchange volatility, inflationary pressures, geopolitical instability, and supply chain challenges, has impacted and may continue to impact LivaNova's business and profitability. Furthermore, LivaNova continues to experience supply chain delays and interruptions, labor shortages, inflationary pressures and logistical and capacity constraints, though, to date, the Company's supply of raw materials and the production and distribution of finished products have not been materially affected. Moreover, freight and labor costs at LivaNova's manufacturing facilities have increased substantially in the wake of inflation globally. The Company continues to respond to such challenges, and while LivaNova has business continuity plans in place, the impact of the ongoing challenges the Company is navigating, along with their potential escalation, may adversely affect its business.

Cybersecurity Incident

As previously disclosed, in November 2023, LivaNova detected a cybersecurity incident that resulted in a disruption of portions of the Company's information technology systems. Promptly after detecting the issue, LivaNova began an investigation with assistance from external cybersecurity experts and coordinated with law enforcement. LivaNova took action to remediate the issue by, for example, taking certain systems offline. As a result of these and other measures, the Company believes it has contained the cybersecurity threat, though its investigation and mitigation efforts are ongoing. At this time, all of LivaNova's manufacturing sites worldwide are operating at normal levels. The Company continues to assess the full impact of the cybersecurity event on its business, results of operations, cash flows and financial condition.

LivaNova incurred direct costs of approximately $2.6 million during the three and twelve months ended December 31, 2023, in connection with this incident. These costs primarily included external cybersecurity experts, legal counsel, and system restoration costs. These costs do not include business interruption or other non-direct costs, and the Company expects to incur additional costs related to this incident in the future. LivaNova maintains insurance, including cyber insurance, which is subject to certain retentions and policy limitations that may serve to limit the amount that the insurers may pay the Company when the Company makes a claim. LivaNova plans to file for reimbursement of covered costs related to this incident, but the Company's insurance coverage may be insufficient to cover all costs and expenses related to this cybersecurity incident, and the insurance carrier may not cover all submitted costs and expenses related to this cybersecurity incident.

Note 2. Basis of Presentation, Use of Accounting Estimates and Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements of LivaNova have been prepared in accordance with US GAAP.

Consolidation

The accompanying consolidated financial statements for LivaNova include LivaNova's wholly owned subsidiaries and the Trust. All intercompany accounts and transactions have been eliminated.

Use of Estimates

The preparation of LivaNova's consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the amounts reported in such financial statements and accompanying notes. These estimates are based on management's best knowledge of current events and actions that LivaNova may undertake in the future. Estimates are used in accounting for, among other items, valuation and amortization of intangible assets, goodwill, other long-lived assets (asset group), measurement of deferred tax assets and liabilities, uncertain income tax positions, contingent consideration arrangements, legal and other contingencies, stock-based compensation, obsolete and slow-moving inventories, models, such as an impairment analysis, and in general, allocations to provisions and the fair value of assets and liabilities recorded in a business combination. Actual results could differ materially from those estimates.

Reclassifications

The Company has reclassified certain prior period amounts on the consolidated balance sheets for comparative purposes. These reclassifications had no impact on LivaNova's financial condition.

Cash and Cash Equivalents

LivaNova considers all highly liquid investments with an original maturity of three months or less, consisting of demand deposit accounts and money market mutual funds, to be cash equivalents. Cash equivalents are carried on the consolidated balance sheets at cost, which approximates their fair value.

Restricted Cash

The Company classifies cash that is not available for use in its operations as restricted cash within current assets on the consolidated balance sheets. As of December 31, 2023, LivaNova's restricted cash balance totaled $311.4 million and was comprised of cash deposits with Barclays held as collateral for the SNIA Litigation Guarantee. As security for the SNIA Litigation Guarantee, LivaNova is required to grant cash collateral to Barclays in USD in an amount equal to the USD equivalent of 105% of the amount of the SNIA Litigation Guarantee calibrated on a biweekly basis. For additional information regarding the SNIA litigation, please refer to "Note 13. Commitments and Contingencies."

Accounts Receivable

Accounts receivable consists of trade receivables from direct customers and distributors. The Company maintains an allowance for doubtful accounts for potential credit losses based on its estimates of the ability of customers to make required payments, historical credit experience, existing economic conditions and expected future trends. LivaNova writes off uncollectible accounts against the allowance when all reasonable collection efforts have been exhausted.

Inventories

LivaNova states its inventories at the lower of cost, using the FIFO method, or net realizable value. The Company's calculation of cost includes the acquisition cost of raw materials and components, direct labor and overhead, including depreciation of manufacturing related assets. LivaNova reduces the carrying value of inventories for those items that are potentially excess, obsolete or slow moving based on changes in customer demand, technology developments or other economic factors.

PP&E

PP&E is carried at cost, less accumulated depreciation. Maintenance, repairs and minor replacements are charged to expense as incurred, while significant renewals and improvements are capitalized. LivaNova computes depreciation using the straight-line method over estimated useful lives. Leasehold improvements are depreciated over the shorter of the following terms: the useful life of the asset or a term that includes required lease periods and renewals that are deemed to be reasonably assured at the date the leasehold improvements are purchased. Capital improvements to the building are added as building components and depreciated over the useful life of the improvement or the building, whichever is less.

Goodwill

LivaNova allocates the amounts the Company pays for an acquisition to the assets acquired and liabilities assumed based on their fair values at the date of acquisition, including property, plant and equipment, inventories, accounts receivable, long-term debt, and identifiable intangible assets which either arise from a contractual or legal right or are separable from goodwill. The Company bases the fair value of identifiable intangible assets acquired in a business combination, including IPR&D, on valuations that use information and assumptions provided by management, which consider management's best estimates of inputs and assumptions that a market participant would use. LivaNova allocates any excess purchase price over the fair value of the net tangible and identifiable intangible assets acquired to goodwill. Transaction costs associated with these acquisitions are

expensed as incurred and are reported in SG&A on the consolidated statements of income (loss). LivaNova recognizes adjustments to the provisional amounts identified during the measurement period with a corresponding adjustment to goodwill in the reporting period in which the adjustment amounts are determined. The effect on earnings of changes in depreciation, amortization or other income effects, if any, as a result of the change to the provisional amounts are recorded in the same period's consolidated financial statements, calculated as if the accounting had been completed at the acquisition date.

Intangible Assets, Other than Goodwill

Intangible assets shown on the consolidated balance sheets consist of finite-lived and indefinite-lived assets expected to generate future economic benefits and are recorded at their respective fair values as of their acquisition date. Finite-lived intangible assets consist primarily of developed technology and technical capabilities, including patents, related know-how and licensed patent rights, as well as trade names and customer relationships. Customer relationships consist of relationships with hospitals and surgeons in the countries where LivaNova operates. Indefinite-lived intangible assets other than goodwill are composed of IPR&D assets acquired in acquisitions. LivaNova amortizes its finite-lived intangible assets over their useful lives using the straight-line method. Estimating the useful lives of intangible assets requires LivaNova to apply significant judgment.

Amortization expense is included on LivaNova's consolidated statements of income (loss) within cost of sales or SG&A based on the nature of the underlying intangible asset. LivaNova evaluates its intangible assets each reporting period to determine whether events and circumstances indicate either a different useful life or impairment. If LivaNova changes its estimate of the useful life of an asset, the Company amortizes the carrying amount over the revised remaining useful life.

Impairments of Long-lived Assets and Goodwill

Long-lived Assets Impairment

Assets Held and Used

LivaNova evaluates the carrying value of its long-lived assets and investments for impairment when events or changes in circumstances indicate that the carrying value of such assets may not be recoverable. Such changes in circumstance may include, among other items, (i) an expectation of a sale, discontinuation or disposal of a long-lived asset or asset group, (ii) adverse changes in market or competitive conditions, (iii) an adverse change in legal factors or business climate in the markets in which LivaNova operates and (iv) operating or cash flow losses.

For PP&E and intangible assets used in LivaNova's operations, recoverability generally is determined by comparing the carrying value of an asset or group of assets to their expected undiscounted future cash flows. If the carrying value of an asset, or group of assets is not recoverable, the amount of impairment loss is measured as the difference between the carrying value of the asset or group of assets and its estimated fair value. The asset grouping as well as the determination of expected undiscounted cash flow amounts requires significant judgments, estimates, and assumptions, including with regard to cash flows generated upon disposition. LivaNova measures fair value as the price that would be received if the Company were to sell the assets in an orderly transaction. Assets to be disposed of are carried at the lower of their financial statement carrying amount or fair value less costs to sell.

LivaNova conducts impairment testing of its indefinite-lived intangible assets on October 1st each year. LivaNova tests indefinite-lived intangible assets for impairment between annual tests if an event occurs or circumstances change that would indicate the carrying amount may be impaired. An impairment loss is recognized when the asset's carrying value exceeds its fair value.

Goodwill Impairment

LivaNova conducts impairment testing of its goodwill on October 1st each year. Testing is performed at the reporting unit level, which is defined as an operating segment or a component of an operating segment that constitutes a business for which financial information is available and is regularly viewed by management. LivaNova's operating segments are deemed to be its reporting units for purposes of goodwill impairment testing. LivaNova tests goodwill for impairment between annual tests if an event occurs or circumstances change that would more-likely-than-not reduce the fair value of a reporting unit below its carrying amount.

If LivaNova determines that goodwill is more-likely-than-not impaired, the Company compares the fair value of the reporting unit to its carrying amount, including goodwill. Fair value refers to the price that would be received if LivaNova were to sell the unit as a whole in an orderly transaction. Fair value is estimated using a discounted cash flow model and requires various assumptions, including revenue growth rates and discount rates. If the carrying amount of the Company's reporting unit is greater than zero and its fair value exceeds its carrying amount, goodwill of the reporting unit is considered not impaired. An

impairment loss is recognized when the carrying amount of the reporting unit's net assets exceeds the estimated fair value of the reporting unit, up to and including the carrying amount of the goodwill.

If the aggregate fair value of LivaNova's reporting units exceeds its market capitalization, the Company evaluates the reasonableness of the implied control premium which includes a comparison to implied control premiums from recent market transactions within its industry or other relevant benchmark data.

Goodwill impairment evaluations are highly subjective. In most instances, they involve expectations of future cash flows that reflect LivaNova's judgments and assumptions regarding future industry conditions and operations. The estimates, judgments and assumptions used in the application of LivaNova's goodwill impairment policies reflect both historical experience and an assessment of current operational, industry, market, economic and political environments. The use of different estimates, judgments, assumptions and expectations regarding future industry and market conditions and operations could result in materially different asset carrying values and operating results.

Quantitative factors used to determine the fair value of the reporting units reflect LivaNova's best estimates, and the Company believes they are reasonable. Future declines in the reporting units' operating performance or LivaNova's anticipated business outlook may reduce the estimated fair value of the Company's reporting units and result in an impairment in the future. Factors that could have a negative impact on the fair value of the reporting units include, but are not limited to:

- decreases in revenue as a result of the inability of LivaNova's sales force to effectively market and promote the Company's products;
- increased competition, patent expirations or new technologies or treatments commercialized by competitors;
- declines in anticipated growth rates;
- the outcome of litigation, legal proceedings, investigations or other claims resulting in significant cash outflows; and
- increases in the market-participant risk-adjusted WACC.

Derivatives and Risk Management

US GAAP requires companies to recognize all derivatives as assets and liabilities on the balance sheet and to measure the instruments at fair value through earnings unless the derivative qualifies for hedge accounting. If the derivative qualifies for hedge accounting, depending on the nature of the hedge and hedge effectiveness, changes in the fair value of the derivative will either be recognized immediately in earnings or recorded in OCI until the hedged item is recognized in earnings. The changes in the fair value of the derivative are intended to offset the change in fair value of the hedged asset, liability or probable commitment. LivaNova evaluates hedge effectiveness at inception. Cash flows from derivative contracts are reported as operating activities on the consolidated statements of cash flows.

LivaNova uses currency exchange rate derivative contracts to manage the impact of currency exchange on earnings and cash flows. Forward currency exchange rate contracts are designed to hedge anticipated foreign currency transactions and changes in the value of specific assets and liabilities. At inception of the forward contract, the derivative is designated as either a freestanding derivative or a cash flow hedge. LivaNova does not enter into derivative contracts for speculative purposes. All derivative instruments are recorded at fair value on the consolidated balance sheets, as assets or liabilities (current or non-current) depending upon the gain or loss position of the contract and contract maturity date.

Forward contracts designated as cash flow hedges are designed to hedge the variability of cash flows associated with forecasted transactions denominated in a foreign currency that will take place in the future. For derivative instruments that are designated and qualify as a cash flow hedge, the gain or loss on the derivative instrument is reported as a component of AOCI and reclassified into earnings to offset exchange differences originated by the hedged item or the current earnings effect of the hedged item.

Upon the settlement of LivaNova's foreign currency cash flow hedges in the fourth quarter of 2022 and following an in-depth analysis of the utility of the Company's cash flow hedging program, LivaNova discontinued its foreign currency cash flow hedging program. LivaNova continues to use freestanding derivative forward contracts to offset exposure to the variability of the value associated with assets and liabilities denominated in a foreign currency. These derivatives are not designated as hedges, and therefore changes in the value of these forward contracts are recognized in earnings, thereby offsetting the current earnings effect of the related change in value of foreign currency denominated assets and liabilities.

Historically, LivaNova has entered into interest rate derivative instruments designated as cash flow hedges to manage the exposure to interest rate movements and to reduce the risk of increased borrowing costs by converting floating-rate debt into fixed-rate debt. Under these agreements, LivaNova agrees to exchange, at specified intervals, the difference between fixed and floating interest amounts calculated by reference to agreed-upon notional principal amounts. These interest rate swaps are structured to mirror the payment terms of the underlying loan. The fair value of the interest rate swaps is reported on the

consolidated balance sheets as assets or liabilities (current or non-current) depending upon the gain or loss position of the contract and the maturity of the future cash flows of each contract. The gain or loss on these derivatives is reported as a component of AOCI and reclassified to interest expense during the period of the respective interest payment. The Company's interest rate swaps expired on April 6, 2023. LivaNova elected not to renew the interest rate swaps as interest expense associated with the Initial Term Facility is principally offset by holding a significant portion of the Initial Term Facility in a depository account, which earns a floating rate of interest.

Fair Value Measurements

LivaNova follows the authoritative guidance on fair value measurements and disclosures with respect to assets and liabilities that are measured at fair value on both a recurring and nonrecurring basis. Under this guidance, fair value is defined as the exit price, or the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The authoritative guidance also establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs market participants would use in valuing the asset or liability, based on market data obtained from sources independent of LivaNova. Unobservable inputs are inputs that reflect LivaNova's assumptions about the factors market participants would use in valuing the asset or liability developed based upon the best information available in the circumstances. The categorization of financial assets and financial liabilities within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The hierarchy is broken down into three levels defined as follows:

- Level 1 - Inputs are quoted prices in active markets for identical assets or liabilities;
- Level 2 - Inputs include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and inputs (other than quoted prices) that are observable for the asset or liability, either directly or indirectly; and
- Level 3 - Inputs are unobservable for the asset or liability.

LivaNova's financial assets and liabilities classified as Level 2 include derivative instruments, primarily forward and option currency contracts and interest rate swap contracts, which are valued using standard calculations and models that use readily observable market data as their basis.

LivaNova's financial assets and liabilities classified as Level 3 include contingent consideration liability arrangements, derivative and embedded derivative instruments and convertible notes receivable.

Contingent consideration liabilities result from acquisition agreements that include potential future payment of consideration that is contingent upon the achievement of performance milestones and/or sales-based earn-outs. Contingent consideration is recognized at fair value at the date of acquisition based on the consideration expected to be transferred and estimated as the probability of future cash flows, discounted to present value in accordance with accepted valuation methodologies. The discount rate used is determined at the time of measurement. Contingent consideration is remeasured each reporting period with the change in fair value, including accretion for the passage of time, recorded in earnings. The change in fair value of contingent consideration based on the achievement of regulatory milestones is recorded as research and development expense while the change in fair value of sales-based earnout contingent consideration is recorded as cost of sales. Contingent consideration payments made soon after the acquisition date are classified as an investing activity. Contingent consideration payments that are not made soon after the acquisition date are classified as a financing activity up to the amount of the contingent consideration liability recognized at the acquisition date, with any excess classified as an operating activity. For further information on LivaNova's Level 3 contingent consideration liability arrangements, please refer to "Note 9. Fair Value Measurements." For further information on LivaNova's Level 3 derivative and embedded derivative instruments, please refer to "Note 10. Financing Arrangements" and "Note 9. Fair Value Measurements." For further information on LivaNova's Level 3 convertible notes receivable, please refer to "Note 8. Investments."

Investments in Equity Securities

LivaNova's investments in equity securities, and related loans, comprise investments in affiliates that are not publicly traded and are in various stages of development. The Company's equity investments are reported in investments, and related loans are reported in other assets, on the consolidated balance sheets.

LivaNova elects to measure investments that do not have readily determinable fair values, at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for an identical or a similar investment of the same issuer.

LivaNova's investments in affiliates in which the Company has significant influence but not control are accounted for using the equity method. LivaNova's share of net income or loss is reflected as one line item on the Company's consolidated statements of income (loss) under losses from equity-method investments and will increase or decrease, as applicable, the carrying value of the Company's equity method investments reported under investments on the consolidated balance sheets. LivaNova regularly reviews its investments for changes in circumstance or the occurrence of events that suggest its investments may not be recoverable, and if an impairment is considered to be other-than-temporary, the loss is recognized on the consolidated statements of income (loss) in the period the determination is made and reported as losses from equity-method investments.

Warranty Obligation

LivaNova offers a warranty on various products. The Company estimates the costs that may be incurred under warranties and records a liability in the amount of such costs at the time the product is sold. The amount of the reserve recorded is equal to the estimated net costs to repair or otherwise satisfy the claim. LivaNova includes the warranty obligation in accrued liabilities and other on the consolidated balance sheets. Warranty expense is recorded to cost of goods sold on LivaNova's consolidated statements of income (loss).

Retirement Benefit Plan Assumptions

LivaNova sponsors various retirement benefit plans, including defined benefit pension plans (pension benefits), defined contribution savings plans and termination indemnity plans, covering substantially all US employees and employees outside the US. Pension benefit costs include assumptions for the discount rate, retirement age, compensation rate increases and the expected return on plan assets.

Product Liability Accruals

Accruals for product liability claims are recorded when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated based on existing information. Accruals for product liability claims are adjusted periodically as additional information becomes available.

Revenue Recognition

Refer to "Note 3. Revenue Recognition."

Research and Development

All R&D costs are expensed as incurred. R&D includes costs of basic research activities as well as engineering and technical effort required to develop a new product or make significant improvements to an existing product or manufacturing process. R&D costs also include regulatory and clinical study expenses, including post-market clinical studies.

Leases

LivaNova determines if an arrangement is or contains a lease at its inception. For operating leases with a term greater than 12 months, LivaNova recognizes operating lease assets and operating lease liabilities based on the present value of the future minimum lease payments over the lease term at the latter of the Company's lease standard adoption date of January 1, 2019, or the lease commencement date. LivaNova does not record an operating lease asset and corresponding liability for leases with terms of 12 months or less. The Company recognizes the lease payments for such short-term leases within profit and loss on a straight-line basis over the lease term. Variable lease payments, such as common area rent, maintenance charges, and rent escalations not known upon lease commencement, are not included in the determination of the minimum lease payments and are expensed in the period in which the obligation for those payments is incurred. Operating lease assets also includes any lease payments made in advance and excludes lease incentives. LivaNova's lease terms may include options to extend or terminate a lease when it is reasonably certain that the Company will exercise that option. Lease expense for minimum lease payments is recognized on a straight-line basis over the lease term.

As most of LivaNova's leases do not provide a readily determinable implicit rate, LivaNova uses its IBR based on the information available at the lease commencement date in determining the present value of future payments. LivaNova's IBR represents an estimate of the interest rate the Company would incur at lease commencement to borrow an amount equal to the lease payments on a collateralized basis over the lease term within a particular currency environment. LivaNova used the IBR available nearest to the Company's adoption date for leases that commenced prior to that date.

Additionally, LivaNova monitors for events or changes in circumstances that may require a reassessment of the Company's leases to determine if a remeasurement is required. For additional information, refer to "Note 12. Leases."

Stock-Based Compensation

Stock-Based Awards

LivaNova may grant stock-based awards to directors, officers and key employees. The Company measures the cost of services received in exchange for an award of equity instruments based on the grant date fair market value of the award. LivaNova recognizes equity-based compensation expense ratably over the period that services are provided in exchange for the entire award (all vesting periods). LivaNova issues treasury shares for vesting of RSUs and the exercise of SARs and new shares upon stock option exercises. The Company has the right to elect to pay the cash value of vested restricted stock units in lieu of the issuance of new shares.

SARs

LivaNova may grant SARs that confer upon the grantee the contractual right to receive an amount of cash, stock, or a combination of both, that equals the appreciation in the company's stock from the award's grant date to the exercise date. SARs may be exercised at the grantee's discretion during the exercise period and do not give the grantee an ownership right in the underlying stock. SARs do not involve payment of an exercise price. LivaNova uses the Black-Scholes option pricing methodology to calculate the grant date fair market value of SARs and compensation is expensed ratably over the service period. The Company determines the expected volatility of the awards based on historical volatility. Calculation of compensation for SAR stock awards requires the Company to estimate historical volatility and forfeiture rates.

RSUs

LivaNova may grant service-based RSUs at no purchase cost to the grantee. The grantees of unvested units have no voting rights or rights to dividends. Sale or transfer of the stock and stock units is restricted until they are vested. The fair market value of service-based RSUs is determined using the market closing price on the grant date, and compensation is expensed ratably over the service period. Calculation of compensation for RSU stock awards requires the Company to estimate forfeiture rates.

Market Performance-Based RSU's

LivaNova may grant market performance-based RSUs at no purchase cost to the grantee. The grantees of unvested units have no voting rights or rights to dividends and sale or transfer of the units is restricted until they are vested. The number of shares that are ultimately transferred to the grantee is dependent upon the Company's percentile rank of total shareholder return relative to a peer group. The fair market value of market performance-based RSUs is determined utilizing a Monte Carlo simulation on the grant date and compensation is then expensed ratably over the service period. Calculation of compensation for market performance-based stock awards requires the Company to estimate historical volatility and forfeiture rates.

Operating Performance-Based Awards RSU's

LivaNova may grant operating performance-based RSUs at no purchase cost to the grantee. The grantees of unvested units have no voting rights or rights to dividends and sale or transfer of the units is restricted until they are vested. The number of shares that are ultimately transferred to the grantee is dependent upon the Company's percent achievement of certain targets for cumulative adjusted free cash flow and adjusted return on invested capital. The fair market value of operating performance-based RSUs is determined using the market closing price on the grant date. Compensation is expensed ratably over the service period and is adjusted based upon the estimated and actual percent achievement of cumulative adjusted free cash flow and return on invested capital as compared to target.

Income Taxes

LivaNova is a UK corporation and operates through the Company's various subsidiaries in a number of countries throughout the world. LivaNova's provision for income taxes is based on the tax laws and rates applicable in the jurisdictions in which the Company operates and earns income. LivaNova uses significant judgment and estimates in accounting for its income taxes. The Company recognizes deferred tax assets and liabilities for the anticipated future tax effects of temporary differences between the financial statement basis and the tax basis of LivaNova's assets and liabilities, which are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

LivaNova periodically assesses the recoverability of its deferred tax assets by considering whether it is more-likely-than-not that some or all of the actual benefit of those assets will be realized. To the extent that realization does not meet the "more-likely-than-not" criterion, the Company establishes a valuation allowance. LivaNova periodically reviews the adequacy and necessity of the valuation allowance by considering significant positive and negative evidence relative to its ability to recover deferred tax assets and to determine the timing and amount of valuation allowance that should be released. This evidence includes: profitability in the most recent quarters; internal profitability forecasts for the current and next two future years; the

amount of deferred tax asset relative to estimated profitability; the potential effects on future profitability from increasing competition, healthcare reforms and overall economic conditions; limitations and potential limitations on the use of LivaNova's net operating losses due to ownership changes, pursuant to IRC Section 382; and the implementation of prudent and feasible tax planning strategies, if any.

LivaNova files federal and local tax returns in many jurisdictions throughout the world and is subject to income tax examinations for its fiscal year 2018 and subsequent years, with certain exceptions. While LivaNova believes that its tax return positions are fully supported, tax authorities may disagree with certain positions the Company has taken and assess additional taxes, and as a result, LivaNova may establish reserves for uncertain tax positions, which require a significant degree of management judgment. LivaNova regularly assesses the likely outcomes of its tax positions in order to determine the appropriateness of the Company's reserves; however, the actual outcome of an audit can be significantly different than LivaNova's expectations, which could have a material impact on the Company's tax provision. LivaNova's tax positions are evaluated for recognition using a more-likely-than-not threshold. Uncertain tax positions requiring recognition are measured as the largest amount of tax benefit that has a greater than 50% likelihood of being realized upon effective settlement with a taxing authority that has full knowledge of all relevant information. Some of the reasons a reserve for an uncertain tax benefit may be reversed are: completion of a tax audit; a change in applicable tax law including a tax case or legislative guidance; or an expiration of the statute of limitations. LivaNova recognizes interest and penalties associated with unrecognized tax benefits and records interest in interest expense, and penalties in SG&A, on LivaNova's consolidated statements of income (loss).

Foreign Currency

LivaNova's reporting currency is the USD; however, a portion of the revenues earned and expenses incurred by certain of LivaNova's subsidiaries are denominated in currencies other than the USD. LivaNova determines the functional currency of its subsidiaries that exist and operate in different economic and currency environments based on the primary economic environment in which the subsidiary operates, that is, the currency of the environment in which an entity primarily generates and expends cash. LivaNova's significant foreign subsidiaries are located in Europe and the US. The functional currency of LivaNova's significant European subsidiaries is the Euro, and the functional currency of LivaNova's significant US subsidiaries is the USD.

Assets and liabilities of subsidiaries whose functional currency is not the USD are translated into USD based on a combination of both current and historical exchange rates, while their revenues earned and expenses incurred are translated into USD at average period exchange rates. Translation adjustments are included in AOCI on LivaNova's consolidated balance sheets. Gains and losses arising from transactions denominated in a currency different from an entity's functional currency are included in foreign exchange and other income/(expense) on LivaNova's consolidated statements of income (loss). Taxes are not provided on cumulative translation adjustments, as substantially all translation adjustments are related to earnings which are intended to be indefinitely reinvested in the countries where earned.

Contingencies

LivaNova is subject to product liability claims, environmental obligations, government investigations and other legal proceedings in the ordinary course of business. Legal fees and other expenses related to litigation are expensed as incurred and included in SG&A on LivaNova's consolidated statements of income (loss). Contingent liabilities are recorded when LivaNova determines that a loss is both probable and reasonably estimable. Due to the fact that legal proceedings and other contingencies are inherently unpredictable, LivaNova's assessments involve significant judgment regarding future events.

Note 3. Revenue Recognition

LivaNova generates revenue through contracts with customers consisting primarily of hospitals, healthcare institutions and distributors. Revenue is measured based on consideration specified in customer contracts and excludes amounts collected on behalf of third parties. The Company measures the consideration based upon the estimated amount to be received. The amount of consideration LivaNova ultimately receives varies depending upon the return terms, sales rebates, discounts, and other incentives the Company may offer, which are accounted for as variable consideration when estimating the amount of revenue to recognize. The estimate of variable consideration requires significant judgment.

LivaNova has historically experienced a low rate of product returns, and the total dollar value of product returns has not been significant to the Company's consolidated financial statements.

LivaNova recognizes revenue when a performance obligation is satisfied by transferring the control of a product or providing service to a customer. Some of LivaNova's contracts include the purchase of multiple products and/or services. In such cases, LivaNova allocates the transaction price based upon the relative estimated stand-alone price of each product and/or service sold.

LivaNova records state and local sales taxes net; that is, the Company excludes sales tax from revenue. Typically, LivaNova's contracts do not have a significant financing component.

LivaNova incurs incremental commission fees paid to the sales force associated with the sale of products. LivaNova applies the practical expedient within ASC 606-10-50-22 and has elected to recognize the incremental costs of obtaining a contract as an expense when incurred if the amortization period of the asset the entity would otherwise recognize is one year or less. As a result, no commissions have been capitalized as contract costs since adoption of ASC 606. The following is a description of the principal activities (separated by reportable segments) from which LivaNova generates its revenue. For more detailed information about LivaNova's reportable segments including disaggregated revenue results by major product line and primary geographic markets, see "Note 19. Geographic and Segment Information."

Cardiopulmonary Products and Services

Cardiopulmonary products include HLMs, oxygenators, autotransfusion systems, perfusion tubing systems, cannulae and other related accessories.

Cardiopulmonary products may include performance obligations associated with assembly and installation of equipment. Accordingly, LivaNova allocates a portion of the sales prices to installation obligations and recognizes that revenue when the service is provided. LivaNova recognizes revenue for equipment and accessory product sales when control of the equipment or product passes to the customer.

Technical services include installation, repair and maintenance of cardiopulmonary equipment under service contracts or upon customer request. Technical service agreements generally provide for upfront payments in advance of rendering services or periodic billing over the contract term. Amounts billed in advance are deferred and recognized as revenue when the performance obligation is satisfied. Technical services are not a significant component of Cardiopulmonary revenue and have been presented with the related equipment and accessories revenue.

Neuromodulation Products

Neuromodulation products are comprised of neuromodulation therapy systems for the treatment of DRE and DTD. LivaNova's Neuromodulation product line includes the VNS Therapy System, which consists of an implantable pulse generator, a lead that connects the generator to the vagus nerve, and other accessories. LivaNova recognizes revenue for Neuromodulation product sales when control passes to the customer.

Advanced Circulatory Support Products

LivaNova's ACS segment was engaged in the design, development, manufacture, marketing and selling of temporary life support products. ACS's products, which comprise the LifeSPARC and Hemolung systems, and standalone cannulae and accessories, including ProtekDuo and transseptal (TandemHeart) cannulae, simplify temporary extracorporeal cardiopulmonary life support solutions for critically ill patients.

ACS products are comprised of temporary life support products, including the LifeSPARC platform, ProtekDuo cannulae kits and the Hemolung RAS. ACS revenue is recognized when control passes to the customer, usually at the point of shipment.

During the first quarter of 2024, LivaNova transitioned all ACS standalone cannulae and accessories, including ProtekDuo and transseptal (TandemHeart) cannulae, into its Cardiopulmonary segment. Further sales of the LifeSPARC and Hemolung Systems were discontinued during the first quarter of 2024.

Contract Balances

Due to the nature of LivaNova's products and services, revenue producing activities may result in contract assets and contract liabilities. These activities relate primarily to Cardiopulmonary technical services contracts for short-term and multi-year service agreements. Contract assets are primarily comprised of unbilled revenues, which occur when a performance obligation has been completed, but not billed to the customer. Contract liabilities are made up of deferred revenue, which occurs when a customer pays for a service, before a performance obligation has been completed. Contract assets are included within prepaid expenses and other current assets on the consolidated balance sheets and were insignificant as of December 31, 2023 and 2022. As of December 31, 2023 and 2022, contract liabilities of $15.3 million and $14.1 million, respectively, were included within accrued liabilities and other and other long-term liabilities on LivaNova's consolidated balance sheets.

Note 4. Business Combinations

As of December 31, 2021, LivaNova owned a 3% investment in ALung, a privately held medical device company focused on creating advanced medical devices for treating respiratory failure. On May 2, 2022, LivaNova acquired the remaining 97% of equity interests in ALung for a purchase price of up to $110.0 million, consisting of $10.0 million paid at closing, subject to

customary adjustments, and contingent consideration of up to $100.0 million payable upon achievement of certain sales-based milestones beginning in 2023 and ending in 2027. Total consideration included approximately $5.5 million of non-cash consideration.

The following table presents the acquisition date fair value of the consideration transferred and the fair value of LivaNova's interest in ALung prior to the acquisition, including certain measurement period adjustments (in thousands):

	Initial Fair Value of Consideration	Measurement Period Adjustments[1]	Adjusted Fair Value of Consideration
Cash and other considerations	$ 15,586	$ —	$ 15,586
Contingent consideration	26,369	(9,578)	16,791
Fair value of consideration transferred	$ 41,955	$ (9,578)	$ 32,377

(1) During the third quarter of 2022, measurement period adjustments were recorded based on information obtained about facts and circumstances that existed as of the acquisition date.

The purchase price allocation at fair value for the ALung acquisition was finalized during the second quarter of 2023 and is presented in the following table, which includes certain measurement period adjustments (in thousands):

	Initial Purchase Price Allocation	Measurement Period Adjustments[1]	Adjusted Purchase Price Allocation
Developed technology - 15-year life	$ 13,950	$ (11,050)	$ 2,900
Goodwill	25,893	977	26,870
Other assets and liabilities, net	2,112	495	2,607
Net assets acquired	$ 41,955	$ (9,578)	$ 32,377

(1) During the third quarter of 2022, measurement period adjustments were recorded based on information obtained about facts and circumstances that existed as of the acquisition date.

Goodwill arising from the ALung acquisition, which is not deductible for tax purposes, primarily represents the anticipated synergies between ALung and LivaNova's ACS business. The assets acquired, including goodwill, are recognized in LivaNova's ACS segment. The goodwill for the ACS reporting unit was fully impaired during the third quarter of 2022. Please refer to "Note 7. Goodwill and Intangible Assets" for further details.

LivaNova recognized ALung acquisition-related expenses of approximately $5.1 million during the year ended December 31, 2022, within SG&A on the Company's consolidated statements of income (loss).

The Company's consolidated financial statements include the operating results of ALung from the acquisition date. Separate post-acquisition operating results and pro forma financial information for this acquisition have not been presented as the effect was not material.

The ALung contingent consideration payments are triggered upon the achievement of thresholds associated with sales of products covered by the purchase agreement and are estimated to occur during the years reflected in the table below. The sales-based earnout was valued using projected sales from LivaNova's internal strategic plan and is a Level 3 fair value measurement, which includes the following significant unobservable inputs (in thousands):

ALung Acquisition	Fair value at May 2, 2022	Valuation Technique	Unobservable Input	Ranges
Sales-based earnout	$ 16,791	Monte Carlo simulation	Risk-adjusted discount rate	7.0% - 8.4%
			Credit risk discount rate	6.4% - 8.0%
			Revenue volatility	25.7%
			Projected years of earnout	2023 - 2027

The ALung contingent consideration arrangement states that, in the event that LivaNova ceases the operations of ALung, LivaNova would be subject to a one-time phase-out payment of $13.8 million. In January 2024, LivaNova announced the wind down of ACS, including ALung, as part of the 2024 Restructuring Plan. As a result, the ALung contingent consideration arrangement liability was adjusted to the phase-out payment amount of $13.8 million as of December 31, 2023. For a reconciliation of the beginning and ending balance of contingent consideration liabilities, refer to "Note 9. Fair Value Measurements."

Note 5. Divestiture of Heart Valve Business

On December 2, 2020, LivaNova entered into a Purchase Agreement with Mitral, a company incorporated under the laws of Luxembourg and wholly-owned and controlled by funds advised by Gyrus Capital S.A., a Swiss private equity firm. The Purchase Agreement provided for the divestiture of certain of LivaNova's subsidiaries, as well as certain other assets and liabilities relating to the Company's Heart Valve business and site management operations conducted by the Company's subsidiary LSM at the Company's Saluggia campus for $64.1 million.

On April 9, 2021, LivaNova and Mitral entered into an Amended & Restated Purchase Agreement to, among other things, defer the closing of the sale and purchase of LSM by up to two years and include or amend certain additional terms relating to such deferral, including certain amendments relating to the potential hazardous substances provision of LSM and the related expense reimbursement provisions. On April 7, 2023, Mitral provided notice to LivaNova, consistent with the terms of the Amended & Restated Purchase Agreement, that they would not exercise their right to purchase LSM.

The sale of the Heart Valve business closed on June 1, 2021. LivaNova received $45.5 million in 2021, and the remaining deferred purchase price of $9.5 million in 2022. Also, in 2022, LivaNova made a $4.8 million payment to Mitral upon finalizing the trade working capital and net indebtedness adjustments. During the year ended December 31, 2021, LivaNova recognized a loss from the sale of the Heart Valve business of $1.9 million, which is included within other operating expenses on the consolidated statements of income (loss).

In conjunction with the sale, LivaNova entered into a transition services agreement to provide certain support services generally for up to twelve months from the closing date of the sale. These services include, among others, accounting, information technology, human resources, quality assurance, regulatory affairs, supply chain, clinical affairs and customer support. During the year ended December 31, 2021, LivaNova recognized income of $1.9 million, for providing these services. Income recognized related to the transition services agreements is recorded as a reduction to the related expenses in the associated expense line items in the consolidated statements of income (loss).

Note 6. Restructuring

LivaNova initiates restructuring plans to leverage economies of scale, streamline distribution and logistics, and strengthen operational and administrative effectiveness in order to reduce overall costs.

During the fourth quarter of 2020, LivaNova initiated a reorganization plan to reduce the Company's cost structure. LivaNova incurred restructuring expense under the 2020 Restructuring Plan of $9.7 million during 2021, primarily associated with severance costs for 27 employees terminated during 2021 and lease abandonment costs. The reorganization plan was completed during 2022.

During the second quarter of 2022, management committed to implement a cost-optimization and cost reduction program to adapt to current economic conditions, which included a workforce reduction to be completed by mid-2023. LivaNova recognized restructuring expense under the 2022 Restructuring Plan of $0.9 million and $6.6 million during the years ended December 31, 2023 and 2022, respectively. The total estimated restructuring costs associated with the plan were approximately $10.0 million including employee termination benefits, consulting fees and contract termination costs.

On January 5, 2024, the Board of Directors of LivaNova PLC approved the 2024 Restructuring Plan to enhance the Company's focus on its core Cardiopulmonary and Neuromodulation segments. The main component of this plan is to wind down the ACS segment, which the Company anticipates will be substantially complete by the end of 2024. LivaNova recognized restructuring expense under the 2024 Restructuring Plan of $0.1 million in other operating expenses, and $12.6 million for inventory obsolescence in cost of sales on its consolidated statements of income (loss) during the year ended December 31, 2023. Additionally, the Company determined that it was more likely than not that the carrying amounts associated with the ACS segment, including the long-lived assets (asset group), may not be recoverable. This was determined to be a triggering event occurring in the fourth quarter of 2023 requiring an impairment assessment, based on certain factors, including the results of an updated long-term financial outlook for the ACS segment. As such, LivaNova recorded impairments of the following long-lived assets during the year ended December 31, 2023, included within impairment of long-lived assets on its consolidated statements of income (loss) (in thousands):

	2023
Intangible assets:	
Developed technology	$ 78,067
Trade names	7,117
Property, plant and equipment	3,894
Operating lease assets	896
Total impairment of long-lived assets	$ 89,974

In connection with the 2024 Restructuring Plan, LivaNova expects to incur pre-tax restructuring charges in the range of approximately $15 million to $20 million. The anticipated charges are comprised of approximately $10 million to $12 million in severance expenses and retention bonuses and approximately $5 million to $8 million in other expenses, including lease termination, facilities remediation, and asset disposal expenses. LivaNova expects the majority of the severance expenses to be incurred in the first half of 2024. Retention bonuses will be earned over the period of service, which is expected to be over the full year of 2024. All future cash payments related to these restructuring charges are expected to be paid out during 2024. These estimates are subject to change.

The following table presents a reconciliation of the beginning and ending balance of the accruals and other reserves recorded in connection with LivaNova's restructuring plans included within accrued liabilities and other on the consolidated balance sheets for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	Employee Severance and Termination Costs	Other	Total
As of December 31, 2020	$ 5,749	$ 546	$ 6,295
Charges	7,963	1,750	9,713
Cash payments	(12,876)	(2,296)	(15,172)
As of December 31, 2021	836	—	836
Charges	6,611	—	6,611
Cash payments	(5,402)	—	(5,402)
As of December 31, 2022	2,045	—	2,045
Charges	956	—	956
Cash payments	(2,090)	—	(2,090)
As of December 31, 2023 [1]	$ 911	$ —	$ 911

(1) Cumulative restructuring expense, inclusive of discontinued operations, since the merger of Cyberonics and Sorin in October 2015 totaled $136.4 million as of December 31, 2023.

The following table presents restructuring expense by reportable segment for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	2023	2022	2021
Cardiopulmonary	$ (55)	$ 697	$ 2,844
Neuromodulation	504	2,651	1,531
Advanced Circulatory Support	27	1,999	—
Other [1]	480	1,264	5,338
Total [2]	$ 956	$ 6,611	$ 9,713

(1) Other primarily includes restructuring expense not allocated to segments.
(2) Restructuring expense is included within other operating expenses on the consolidated statements of income (loss).

Note 7. Goodwill and Intangible Assets

The following table presents LivaNova's finite-lived and indefinite-lived intangible assets as of December 31, 2023 and 2022 (in thousands):

	2023	2022
Finite-lived intangible assets:		
Customer relationships	$ 187,196	$ 184,397
Developed technology	103,490	217,205
Trade names	13,280	24,368
Other intangible assets	773	756
Total gross finite-lived intangible assets	304,739	426,726
Accumulated amortization - Customer relationships	84,647	72,820
Accumulated amortization - Developed technology	56,921	80,219
Accumulated amortization - Trade names	13,280	16,483
Accumulated amortization - Other intangible assets	719	651
Total accumulated amortization	155,567	170,173
Net finite-lived intangible assets	$ 149,172	$ 256,553
Indefinite-lived intangible assets:		
IPR&D	$ 112,006	$ 112,006
Goodwill	782,941	768,787
Total indefinite-lived intangible assets	$ 894,947	$ 880,793

The following table presents the amortization periods for LivaNova's finite-lived intangible assets as of December 31, 2023:

	Minimum Life in years	Maximum Life in years
Customer relationships	8	18
Developed technology	14	17

The following table presents estimated future amortization expense based on LivaNova's finite-lived intangible assets as of December 31, 2023 (in thousands):

2024	$ 17,566
2025	17,566
2026	17,566
2027	17,114
2028	17,114
Thereafter	62,246
Total	$ 149,172

In connection with the 2024 Restructuring Plan, as previously discussed in "Note 6. Restructuring," LivaNova recorded impairments of the ACS developed technology and trade names intangible assets of $78.1 million and $7.1 million, respectively, during the year ended December 31, 2023, which is included within impairment of long-lived assets on the consolidated statements of income (loss).

Goodwill

The following table presents the changes in the carrying amount of goodwill by reportable segment for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	Cardiopulmonary	Neuromodulation	Advanced Circulatory Support	Total
As of December 31, 2020	$ 421,038	$ 398,754	$ 102,526	$ 922,318
Foreign currency adjustments	(22,793)	—	—	(22,793)
As of December 31, 2021	398,245	398,754	102,526	899,525
Goodwill as a result of acquisition [1]	—	—	25,893	25,893
Measurement period adjustments	—	—	977	977
Impairment	—	—	(129,396)	(129,396)
Foreign currency adjustments	(28,212)	—	—	(28,212)
As of December 31, 2022	370,033	398,754	—	768,787
Foreign currency adjustments	14,154	—	—	14,154
As of December 31, 2023	$ 384,187	$ 398,754	$ —	$ 782,941

(1) Refer to "Note 4. Business Combinations" for additional information.

As part of LivaNova's third-quarter 2022 goodwill impairment assessment, the Company considered that revenue for its ACS reporting unit during the nine months ended September 30, 2022 had declined by approximately 29% compared to the prior year period, primarily as a result of a reduction in severe COVID-19 cases, hospital-related challenges and product mix. As a result, the Company lowered its future revenue projections for the ACS reporting unit. Based on these circumstances, LivaNova concluded it was more likely than not that the goodwill of LivaNova's ACS reporting unit was impaired and performed a quantitative assessment of the goodwill as of September 30, 2022, using management's then current estimate of future cash flows. Based on the valuation performed, LivaNova determined that the fair value of the ACS reporting unit was less than the carrying value and recognized a goodwill impairment of $129.4 million in LivaNova's consolidated statement of income (loss) during the year ended December 31, 2022.

LivaNova performed a quantitative assessment for its Cardiopulmonary and Neuromodulation reporting units as of October 1, 2023. The quantitative impairment assessment was performed using management's current estimate of future cash flows. LivaNova concluded that the fair value of its Cardiopulmonary and Neuromodulation reporting units exceeded the carrying value of the respective reporting units by 23% and 528%, respectively. Therefore, LivaNova concluded that its Cardiopulmonary and Neuromodulation reporting units' goodwill were not impaired on the October 1, 2023 test date.

Cumulative goodwill impairments from continuing operations since the merger of Cyberonics and Sorin in October 2015 totaled $193.1 million as of December 31, 2023.

Note 8. Investments

The following table presents the carrying value of LivaNova's investments in equity securities of non-consolidated affiliates without readily determinable fair values and an investment accounted for under the equity method. Investments, excluding the equity method investment, 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 consolidated balance sheets as of December 31, 2023 and 2022 (in thousands):

	2023	2022
ShiraTronics, Inc.	$ 5,750	$ 5,000
Cadence Neuroscience, Inc. [(1)]	5,000	—
Noctrix Health, Inc.	3,159	3,159
Ceribell, Inc.	3,000	3,000
Rainbow Medical Ltd.	1,084	1,047
Highlife S.A.S.	1,049	1,013
MD Start II	865	1,069
	19,907	14,288
Equity method investment [(2)]	2,936	1,978
	$ 22,843	$ 16,266

(1) During the first quarter of 2023, LivaNova invested in Cadence Neuroscience, Inc., a privately held medical device company focusing on advancements in neuromodulation to detect specific signals from the brain and deliver electrical stimulation to modify the activity of neural circuits.

(2) As of December 31, 2023 and 2022, LivaNova had commitments to fund follow-on investments up to approximately €1.9 million and €3.0 million (approximately $2.0 million and $3.2 million as of December 31, 2023 and 2022, respectively) based on cash calls.

Note 9. Fair Value Measurements

LivaNova reviews its 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 years ended December 31, 2023, 2022 or 2021.

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 as of December 31, 2023 and 2022 (in thousands):

		Fair Value Measurements Using Inputs Considered as:		
	2023	Level 1	Level 2	Level 3
Assets				
Derivative assets - capped call derivatives	$ 38,496	$ —	$ —	$ 38,496
Convertible notes receivable	275	—	—	275
	$ 38,771	$ —	$ —	$ 38,771
Liabilities				
Derivative liabilities - freestanding instruments (FX)	$ 3,883	$ —	$ 3,883	$ —
Derivative liabilities - embedded exchange feature	45,569	—	—	45,569
Contingent consideration arrangements	94,652	—	—	94,652
	$ 144,104	$ —	$ 3,883	$ 140,221

	2022	Fair Value Measurements Using Inputs Considered as: Level 1	Level 2	Level 3
Assets				
Derivative assets - designated as cash flow hedges (interest rate swaps)	$ 1,333	$ —	$ 1,333	$ —
Derivative assets - capped call derivatives	54,393	—	—	54,393
Convertible notes receivable	285	—	—	285
	$ 56,011	$ —	$ 1,333	$ 54,678
Liabilities				
Derivative liabilities - freestanding instruments (FX)	$ 5,886	$ —	$ 5,886	$ —
Derivative liabilities - embedded exchange feature	85,675	—	—	85,675
Contingent consideration arrangements	85,292	—	—	85,292
	$ 176,853	$ —	$ 5,886	$ 170,967

The following table provides a reconciliation of the beginning and ending balances of LivaNova's recurring fair value measurements, using significant unobservable inputs (Level 3) for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	Capped Call Derivative Asset	Convertible Notes Receivable	Embedded Exchange Feature Derivative Liability	Contingent Consideration Liability Arrangements
As of December 31, 2021	$ 106,629	$ 2,767	$ 181,700	$ 98,382
Additions	—	—	—	26,369
Utilized as business combination consideration	—	(2,495)	—	—
Measurement period adjustments [1]	—	—	—	(9,578)
Changes in fair value [2] [3] [4]	(52,236)	13	(96,025)	(29,881)
As of December 31, 2022	54,393	285	85,675	85,292
Changes in fair value [2] [3]	(15,897)	(10)	(40,106)	9,360
As of December 31, 2023	38,496	275	45,569	94,652
Less current portion at December 31, 2023	—	—	—	13,750
Long-term portion at December 31, 2023	$ 38,496	$ 275	$ 45,569	$ 80,902

(1) For further details refer to "Note 4. Business Combinations."

(2) During the year ended December 31, 2023, the contingent consideration change in fair value resulted in an increase of $3.8 million recorded to cost of sales and an increase of $5.6 million recorded to R&D. During the year ended December 31, 2022, the contingent consideration change in fair value resulted in a decrease of $10.5 million recorded to cost of sales and a decrease of $19.4 million recorded to R&D.

(3) Changes in the fair value of the embedded exchange feature derivative liability and capped call derivative asset are recognized in foreign exchange and other income/(expense) in the consolidated statements of income (loss). See the below section titled "*Embedded Exchange Feature and Capped Call Derivatives"* for further information on the changes in fair value as it relates to the embedded exchange feature and capped call derivatives.

(4) The decrease in fair value associated with contingent consideration arrangements during the year ended December 31, 2022 was primarily related to the change in (i) the discount rates due to increasing interest rates, (ii) the probability of the regulatory milestone-based payment associated with the acquisition of TandemLife and (iii) the timing of projected achievement of a certain regulatory milestone and timing of sales-based earnout payments associated with the acquisition of ImThera.

Embedded Exchange Feature and Capped Call Derivatives

In June 2020, the Company issued $287.5 million in Notes and entered into related capped call transactions. The Notes include an embedded exchange feature that is bifurcated from the Notes. Please refer to "Note 10. Financing Arrangements" for further details. The embedded exchange feature derivative is measured at fair value using a binomial lattice model and estimated 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, including 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 because the Company uses historical volatility and implied volatility from actual options traded to determine expected stock price volatility, an unobservable input that is significant to the valuation. In general, an increase in LivaNova's stock price or stock price volatility would increase the fair value of the embedded exchange feature and capped call derivatives which would result in an increase in expense. As the remaining time to the expiration of the derivatives decreases, the fair value of the derivatives decreases. The future impact of the derivatives on net income depends on how significant inputs such as stock price, stock price volatility and time to the expiration of the derivatives change in relation to other inputs. Changes in the fair value of the embedded exchange feature and capped call derivatives are recognized in foreign exchange and other income/(expense) in the consolidated statements of income (loss).

The fair value of the embedded exchange feature derivative liability and the capped call derivative assets was $45.6 million and $38.5 million, respectively, as of December 31, 2023, and the stock price volatility was 38%. As of December 31, 2023, a 10% lower volatility, holding other inputs constant, would reduce the fair value for the embedded exchange feature derivative liability by $13.4 million, and a 10% higher volatility, holding other inputs constant, would increase the fair value by $13.3 million. As of December 31, 2023, a 10% lower volatility, holding other inputs constant, would decrease the fair value of the capped call derivatives by $9.1 million, and a 10% higher volatility, holding other inputs constant, would increase the fair value by $4.8 million.

Contingent Consideration Arrangements

The following table presents the fair value of LivaNova's Level 3 contingent consideration arrangements by acquisition as of December 31, 2023 and 2022 (in thousands):

	2023	2022
ImThera	$ 80,902	$ 69,389
ALung	13,750	15,903
	$ 94,652	$ 85,292

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 earnouts are valued using projected sales from LivaNova's internal strategic plan. These arrangements are Level 3 fair value measurements and include the following significant unobservable inputs as of December 31, 2023:

ImThera Acquisition	Valuation Technique	Unobservable Input	Inputs
Regulatory milestone-based payment	Discounted cash flow	Discount rate	7.2%
		Probability of payment	85%
		Projected payment year	2026
Sales-based earnout	Monte Carlo simulation	Risk-adjusted discount rate	13.6% - 14.0%
		Credit risk discount rate	7.4% - 7.9%
		Revenue volatility	30.8%
		Probability of payment	85%
		Projected years of earnout	2026 - 2029

The ALung business combination involved a contingent consideration arrangement composed of potential cash payments upon the achievement of certain sales-based thresholds associated with sales of products. The ALung contingent consideration arrangement states that, in the event that LivaNova ceases the operations of ALung, LivaNova would be subject to a one-time phase-out payment of $13.8 million. In January 2024, LivaNova announced the wind down of ACS, including ALung, as part of the 2024 Restructuring Plan. As a result, the ALung contingent consideration arrangement liability was adjusted to the phase-out payment amount of $13.8 million as of December 31, 2023.

The TandemLife business combination involved a contingent consideration arrangement composed of potential cash payments upon the achievement of certain regulatory milestones. The probability of payment for the final regulatory milestone was reduced to 0% during the year ended December 31, 2022.

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

LivaNova's investments in equity securities of non-consolidated affiliates without readily determinable fair values 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. LivaNova's investments in non-financial assets such as goodwill, intangible assets, and PP&E are measured at fair value if there is an indication of impairment and recorded at fair value only when an impairment is recognized. LivaNova classifies the measurement input for these assets as Level 3 inputs within the fair value hierarchy.

Other

The carrying values of LivaNova's cash, cash equivalents and restricted cash, accounts receivable, accounts payable and accrued liabilities approximate their fair values due to the short-term nature of these items.

The carrying value of LivaNova's long-term debt including the current portion as of December 31, 2023 and 2022 was $586.0 million and $539.0 million, respectively. The fair value of the Notes as of December 31, 2023 and 2022 was $314.4 million and $328.1 million, respectively. For all other long-term debt obligations, LivaNova believes the carrying value approximates fair value.

Note 10. Financing Arrangements

The following table presents the remaining outstanding principal amounts of LivaNova's long-term debt facilities as of December 31, 2023 and 2022 (in thousands, except interest rates):

	2023	2022	Maturity	Interest Rate
Term Facilities	$ 328,459	$ 289,294	July 2027	9.02%
2020 Cash Exchangeable Senior Notes	255,500	239,568	December 2025	3.00%
Bank of America, US	1,500	1,500	January 2025	8.09%
Bank of America Merrill Lynch Banco Múltiplo S.A.	—	6,462	N/A	N/A
Mediocredito Italiano	—	1,601	N/A	N/A
Other	568	534		
Total long-term facilities	586,027	538,959		
Less current portion of long-term debt	17,484	20,892		
Total long-term debt obligations	$ 568,543	$ 518,067		

The following table presents the contractual annual principal maturities of LivaNova's long-term debt facilities as of December 31, 2023 (in thousands):

2024	$ 17,484
2025	311,029
2026	30,625
2027	265,313
2028	—
Thereafter	338
Total payments	624,789
Less: Debt issuance costs	(38,762)
Total long-term facilities	$ 586,027

Revolving Credit

The outstanding principal amount of LivaNova's short-term unsecured revolving credit agreements and other agreements with various banks was $0.6 million and $2.5 million as of December 31, 2023 and 2022, respectively, with an average interest rate of 4.94% and loan terms ranging from overnight to 364 days as of December 31, 2023.

On August 13, 2021, LivaNova PLC and its wholly-owned subsidiary, LivaNova USA as borrower, entered into a First Lien Credit Agreement with the lenders and issuing banks party thereto and Goldman Sachs Bank USA, as First Lien Administrative Agent and First Lien Collateral Agent, relating to a $125 million senior secured multi-currency revolving credit facility to be made available to the borrower, referred to as the 2021 First Lien Credit Agreement. The 2021 First Lien Credit Agreement, as amended from time to time, expires on August 13, 2026, and bears interest at a rate equal to, for USD-denominated loans, an adjusted SOFR with a floor of 0.00%, or a Base Rate, plus, in each case, a variable margin based on the Company's Total Net Leverage Ratio, as defined in the agreement. Interest is paid monthly or quarterly, as selected by the borrower, with any outstanding principal due at maturity. The 2021 First Lien Credit Agreement also contemplates the payment of commitment fees on the unused portion of the commitments, at a variable percentage based on the Company's Total Net Leverage Ratio. As of each of December 31, 2023 and 2022, the applicable commitment fee percentage was 0.5% per annum. The 2021 First Lien Credit Agreement is available for working capital and other general corporate purposes and, if drawn, can be repaid at any time without premium or penalty. As of December 31, 2023, the Company was in compliance with the financial covenants contained in its 2021 First Lien Credit Agreement.

There were no outstanding borrowings under the 2021 First Lien Credit Agreement's $125 million revolving credit facility as of December 31, 2023 and 2022.

On August 12, 2021, the Company terminated its previous $50.0 million revolving credit facility agreement with ACF FINCO I LP, which was undrawn, resulting in a loss on debt extinguishment of $1.6 million recognized during the year ended December 31, 2021 primarily associated with the write-off of unamortized debt issuance costs, and is included within loss on debt extinguishment on the consolidated statements of income (loss).

Bridge Loan Facility

On February 24, 2022, LivaNova PLC and its wholly-owned subsidiary LivaNova USA entered into the €200 million Bridge Loan Facility. On March 16, 2022, LivaNova entered into Amendment No. 2 to the 2021 First Lien Credit Agreement, which converted the available borrowings under the Bridge Loan Facility from €200 million to $220 million and converted the EURIBOR rate in the 2021 First Lien Credit Agreement to SOFR. LivaNova delivered a borrowing notice for $220 million in connection with the Bridge Loan Facility, which was funded on March 17, 2022.

On March 18, 2022, LivaNova PLC, acting through its Italian branch, entered into an Indemnity Letter and an Account Pledge Agreement with Barclays, further to which Barclays issued the SNIA Litigation Guarantee. As security for the SNIA Litigation Guarantee, LivaNova is required to grant cash collateral to Barclays in USD in an amount equal to the USD equivalent of 105% of the amount of the SNIA Litigation Guarantee calibrated on a biweekly basis. The proceeds of the Bridge Loan Facility were used by LivaNova to post a portion of the cash collateral supporting the SNIA Litigation Guarantee. Cash collateral classified as restricted cash on the consolidated balance sheets as of December 31, 2023 and 2022 was $311.4 million and $301.4 million, respectively. For additional information regarding the SNIA litigation, please refer to "Note 13. Commitments and Contingencies."

Debt discounts and issuance costs related to the Bridge Loan Facility were approximately $4.5 million. Amortization of debt discount and issuance costs for the Bridge Loan Facility was $4.5 million for the year ended December 31, 2022 and is included in interest expense on the consolidated statements of income (loss).

The Bridge Loan Facility was repaid in full on July 6, 2022.

Term Facilities

On July 6, 2022, LivaNova and its wholly-owned subsidiary, LivaNova USA, entered into Incremental Facility Amendment No. 2, which provides for LivaNova USA to, among other things, obtain commitments for term loan facilities from a syndicate of lenders in an aggregate principal amount of $350 million consisting of (i) the Initial Term Facility with an aggregate principal amount of $300 million and (ii) the Delayed Draw Term Facility with an additional aggregate principal amount of $50 million. On April 6, 2023, LivaNova drew $50 million under the Delayed Draw Term Facility for general corporate purposes.

Proceeds from the Initial Term Facility were used to repay in full the Bridge Loan Facility on July 6, 2022, with the remainder used for general corporate purposes of the Company. The Term Facilities have a maturity of the earlier of (i) five years or (ii)

91 days prior to December 15, 2025, the maturity date of the 2020 Cash Exchangeable Senior Notes, unless by that date LivaNova USA will have either redeemed or refinanced the Notes, or set aside an amount of cash equal to the then-outstanding principal amount of the Notes. The Term Facilities bear interest at a rate equal to an adjusted term SOFR plus a variable margin based on the Company's consolidated total net leverage ratio. As of December 31, 2023, the applicable margin over adjusted term SOFR was equal to 3.5% per annum. The Term Facilities are subject to an original issue discount of 1.5% of their principal amount. The Term Facilities are subject to quarterly principal repayment, based on the following amortization schedule: (i) during the first year from the initial funding date: 1.9%; (ii) year two: 5.0%; (ii) year three: 5.0%; (iv) year four: 7.5%; and (v) year five: 10.0%, with the remainder to be paid at maturity. The effective interest rate of the Term Facilities at December 31, 2023 was 6.53%.

The 2021 First Lien Credit Agreement, as amended, contains customary representations, warranties and covenants, including the requirement to maintain a Senior Secured First Lien Net Leverage Ratio, calculated as the ratio of Consolidated Senior Secured First Lien Net Indebtedness to Consolidated EBITDA, as defined in the credit agreement, for the period of four consecutive fiscal quarters ended on the calculation date, of not more than 3.50 to 1.00 and an Interest Coverage Ratio, calculated as the ratio of Consolidated EBITDA to Consolidated Interest Expense, both as defined in the credit agreement, for the period of four consecutive fiscal quarters ended on the calculation date, of not less than 3.00 to 1.00. As of December 31, 2023, the Company was in compliance with the financial covenants contained in the 2021 First Lien Credit Agreement.

Debt discounts and issuance costs related to the Initial Term Facility were approximately $9.6 million. Amortization of debt discount and issuance costs for the Initial Term Facility was $2.0 million and $0.8 million for the years ended December 31, 2023 and 2022, respectively, and is included in interest expense on the consolidated statements of income (loss). The unamortized discount and issuance costs related to the Initial Term Facility as of December 31, 2023 and 2022 was $6.8 million and $8.7 million, respectively. Issuance costs related to the Delayed Draw Term Facility were approximately $1.6 million. Amortization of issuance costs for the Delayed Draw Term Facility was $0.5 million and $1.1 million for the years ended December 31, 2023 and 2022, respectively, and is included in interest expense on the consolidated statements of income (loss). The issuance costs related to the Delayed Draw Term Facility were fully amortized as of December 31, 2023. The unamortized issuance cost related to the Delayed Draw Term Facility as of December 31, 2022 was $0.5 million, and is included within prepaid expenses and other current assets on the consolidated balance sheets.

2020 Cash Exchangeable Senior Notes

On June 17, 2020, LivaNova's wholly-owned subsidiary, LivaNova USA, issued $287.5 million aggregate principal amount of 3.00% Notes by private placement to qualified institutional buyers pursuant to Rule 144A under the Securities Act. The sale of the Notes resulted in approximately $278.0 million in net proceeds to the Company after deducting issuance costs. Interest is payable semiannually in arrears on June 15 and December 15 of each year. The effective interest rate of the Notes at December 31, 2023 was 9.95%. The Notes mature on December 15, 2025 unless earlier exchanged, repurchased, or redeemed.

Debt discounts and issuance costs related to the Notes were approximately $82.0 million and included $75.0 million of discount attributable to the embedded exchange feature, discussed below, and $7.0 million of allocated issuance costs to the Notes related to legal, bank and accounting fees. Amortization of debt discount and issuance costs for the Notes was $15.9 million, $14.4 million and $13.1 million for the years ended December 31, 2023, 2022 and 2021, respectively, and is included in interest expense on the consolidated statements of income (loss). The unamortized discount related to the Notes as of December 31, 2023 and 2022 was $32.0 million and $47.9 million, respectively.

Holders of the Notes are entitled to exchange the Notes at any time during specified periods, at their option. This includes the right to exchange the Notes during any calendar quarter, if the last reported sale price of LivaNova's ordinary shares, with a nominal value of £1.00 per share, is greater than or equal to 130% of the exchange price, or $79.27 per share for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter. The exchange condition was not satisfied on December 31, 2023. As a result, the Company has included its obligations from the Notes and the associated embedded exchange feature derivative as a long-term liability on the consolidated balance sheets as of December 31, 2023. The Notes are exchangeable solely into cash and 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 and prior to the 51st scheduled trading day immediately preceding the maturity date, 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 their stated maturity, 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 consolidated balance sheets at its estimated fair value and is adjusted at the end of each reporting period, with the unrealized gain or loss reflected within foreign exchange and other income/(expense) in the consolidated statements of income (loss). The fair value of the embedded exchange feature derivative liability was $45.6 million and $85.7 million as of December 31, 2023 and 2022, respectively.

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. If the Company's share price exceeds the cap price, the proceeds under the capped call transactions would not fully offset the excess principal amount due to the holders of the Notes. The capped call transactions expire on December 15, 2025 and must be settled in cash. If the capped call transactions are converted or redeemed early, settlement occurs at their termination value, which is equal to their fair value at the time of the conversion or redemption. The capped call transactions are carried on the 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 within foreign exchange and other income/(expense) in the consolidated statements of income (loss). The fair value of the capped call derivative assets was $38.5 million and $54.4 million as of December 31, 2023 and 2022, respectively. As of December 31, 2023, the capped call derivative assets were classified as long-term.

2020 Senior Secured Term Loan

On August 12, 2021, the Company repaid in full and terminated its previously outstanding $450 million 2020 senior secured term loan, resulting in a loss on debt extinguishment of $58.6 million recognized during the year ended December 31, 2021, which is comprised of a $35.6 million make-whole premium and $23.0 million associated with the write-off of unamortized debt issuance costs, and is included within loss on debt extinguishment on the consolidated statements of income (loss).

Note 11. Derivatives and Risk Management

Due to the global nature of LivaNova's operations, the Company is exposed to FX fluctuations. Historically, LivaNova has entered into FX derivative contracts and interest rate swap contracts to reduce the impact of FX and interest rate fluctuations, respectively, on earnings and cash flow.

LivaNova is also exposed to equity price risk in connection with its Notes, including exchange and settlement provisions based on the price of its ordinary shares at exchange or maturity of the Notes. The capped call transactions associated with the Notes also include settlement provisions that are based on the price of LivaNova's ordinary shares, subject to a capped price per share. LivaNova does not enter into derivative contracts for speculative purposes.

LivaNova measures all outstanding derivatives each period end at fair value and reports the fair value as either financial assets or liabilities on the consolidated balance sheets. 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. These derivatives are intended to serve as economic hedges and follow the cash flows of the economic hedged item. The cash flows from these derivative contracts are reported as operating activities on LivaNova's consolidated statements of cash flows.

If the derivative qualifies for hedge accounting, changes in the fair value of the derivative will be recorded in AOCI until the hedged item is recognized in earnings upon settlement/termination. FX derivative gains and losses in AOCI are reclassified to LivaNova's 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 LivaNova's consolidated statements of income (loss). LivaNova evaluates hedge effectiveness at inception.

Freestanding FX Derivative Contracts

The gross notional amount of FX derivative contracts not designated as hedging instruments outstanding as of December 31, 2023 and 2022 was $223.4 million and $154.5 million, respectively. These derivative contracts are designed to offset the FX effects in earnings of various intercompany loans and trade receivables. LivaNova recorded a net loss for these freestanding derivatives of $1.3 million for the year ended December 31, 2023 and net gains of $4.5 million and $10.9 million for the years ended December 31, 2022 and 2021, respectively. These gains and losses are included in foreign exchange and other income/(expense) on LivaNova's consolidated statements of income (loss).

Counterparty Credit Risk

LivaNova is exposed to credit risk in the event of non-performance by the counterparties to the Company's derivatives.

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

To manage credit risk with respect to LivaNova's other derivatives, the Company selects and periodically reviews counterparties based on credit ratings, limits its exposure with respect to each counterparty, and monitors their respective 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

Foreign Currency Risk

Historically, LivaNova utilized FX derivative contracts, designed as cash flow hedges, to hedge the variability of cash flows associated with LivaNova's 12-month USD forecasts of revenues and costs denominated in British Pound, Japanese Yen and the Euro. LivaNova transfers to earnings from AOCI the gain or loss realized on the FX derivative contracts at the time of invoicing. Upon the settlement of LivaNova's foreign currency cash flow hedges in the fourth quarter of 2022 and following an in-depth analysis of the utility of the Company's cash flow hedging program, LivaNova discontinued its foreign currency cash flow hedging program.

Interest Rate Risk

Historically, LivaNova entered into interest rate swaps associated with the Initial Term Facility, which qualified for and were designated as cash flow hedges. The Company's outstanding interest rate swaps expired on April 6, 2023. LivaNova elected not to renew the interest rate swaps as interest expense associated with the Initial Term Facility is principally offset by holding a significant portion of the Initial Term Facility in a depository account, which earns a floating rate of interest.

The gross notional amounts of open derivative contracts designated as cash flow hedges as of December 31, 2023 and 2022 were as follows (in thousands):

Description of Derivative Contract	2023	2022
Interest rate swap contracts	$ —	$ 210,000

The pre-tax gains (losses) for derivative contracts designated as cash flow hedges recognized in OCI and the amount reclassified to earnings from AOCI for the years ended December 31, 2023, 2022 and 2021 were as follows (in thousands):

		2023	
Description of Derivative Contract	Location in Earnings of Reclassified Gain or Loss	Loss Recognized in OCI	Gain Reclassified from AOCI to Earnings
Interest rate swap contracts	Interest expense	$ (433)	$ 533

Description of Derivative Contract	Location in Earnings of Reclassified Gain or Loss	2022 (Loss) Gain Recognized in OCI	2022 Loss Reclassified from AOCI to Earnings
FX derivative contracts	Foreign exchange and other income/(expense)	$ (4,602)	$ (382)
FX derivative contracts	SG&A	—	(5,165)
Interest rate swap contracts	Interest expense	914	(52)
		$ (3,688)	$ (5,599)

Description of Derivative Contract	Location in Earnings of Reclassified Gain or Loss	2021 Loss Recognized in OCI	2021 (Loss) Gain Reclassified from AOCI to Earnings
FX derivative contracts	Foreign exchange and other income/(expense)	$ (3,922)	$ (2,333)
FX derivative contracts	SG&A	—	2,408
		$ (3,922)	$ 75

LivaNova offsets fair value amounts associated with its derivative instruments that are executed with the same counterparty under master netting arrangements on the Company's consolidated balance sheets. Master 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 consolidated balance sheets as of December 31, 2023 and 2022 (in thousands):

2023	Asset Derivatives		Liability Derivatives	
Derivatives Not Designated as Hedging Instruments	**Balance Sheet Location**	**Fair Value [1]**	**Balance Sheet Location**	**Fair Value [1]**
Capped call derivatives	Long-term derivative assets	$ 38,496		
FX derivative contracts			Accrued liabilities and other	$ 3,883
Embedded exchange feature			Long-term derivative liabilities	45,569
Total derivatives not designated as hedging instruments		38,496		49,452
Total derivatives		$ 38,496		$ 49,452

2022	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	Prepaid expenses and other current assets	$ 1,333		
Total derivatives designated as hedging instruments		1,333		
Derivatives Not Designated as Hedging Instruments				
Capped call derivatives	Long-term derivative assets	54,393		
FX derivative contracts			Accrued liabilities and other	$ 5,886
Embedded exchange feature			Long-term derivative liabilities	85,675
Total derivatives not designated as hedging instruments		54,393		91,561
Total derivatives		$ 55,726		$ 91,561

(1) For the classification of inputs used to evaluate the fair value of LivaNova's derivatives, refer to "Note 9. Fair Value Measurements."

Note 12. Leases

LivaNova has operating leases primarily for (i) office space, (ii) manufacturing, warehouse and R&D facilities and (iii) vehicles. LivaNova's leases have remaining lease terms up to 15 years, some of which include options to extend the leases, and some of which include options to terminate the leases at the Company's sole discretion. The following table presents the components of operating lease assets and liabilities as of December 31, 2023 and 2022 (in thousands):

	2023	2022
Assets		
Operating lease right-of-use assets	$ 50,845	$ 35,830
Liabilities		
Accrued liabilities and other	$ 8,362	$ 9,379
Long-term operating lease liabilities	45,388	29,548
Total lease liabilities	$ 53,750	$ 38,927

The following table presents the components of operating lease cost for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	2023	2022	2021
Operating lease cost	$ 10,286	$ 10,408	$ 18,070
Variable lease cost	871	580	1,200
Short-term lease cost	644	468	1,084
Total lease cost	$ 11,801	$ 11,456	$ 20,354

The following table presents the contractual maturities of LivaNova's lease liabilities as of December 31, 2023 (in thousands):

2024	$ 10,938
2025	9,517
2026	6,888
2027	5,997
2028	5,139
Thereafter	32,167
Total lease payments	70,646
Less: Amount representing interest	16,896
Present value of lease liabilities	$ 53,750

The following table presents the weighted average remaining lease term and discount rate as of December 31, 2023 and 2022:

	2023	2022
Weighted Average Remaining Lease Term	9.6 years	6.5 years
Weighted Average Discount Rate	5.7%	3.9%

The following table presents the supplemental lease information for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	2023	2022	2021
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows for operating leases	$ 11,652	$ 12,468	$ 13,650
Operating lease assets obtained in exchange for lease liabilities	$ 24,800	$ 7,820	$ 9,037

Note 13. Commitments and Contingencies

Saluggia Site Hazardous Substances

LSM, formerly a subsidiary of Sorin, one of the companies that merged into LivaNova PLC in 2015, manages site services for the campus in Saluggia, Italy. In addition to being a former LivaNova manufacturing facility, the Saluggia campus is also the location of manufacturing facilities of third parties, a cafeteria for workers, and storage facilities for hazardous substances and equipment previously used in a nuclear research center, later turned nuclear medicine business, between the 1960s and the late 1990s. Pursuant to authorization from the Italian government, LSM has, and continues to, perform ordinary maintenance, secure the facilities, monitor air and water quality and file applicable reports with the competent environmental authorities.

In 2020, LSM received correspondence from ISIN requesting that, within five years, LSM demonstrate the financial capacity to meet its obligations under Italian law to clean and dismantle any contaminated buildings and equipment, as well as to deliver hazardous substances to a national repository. This repository will be built by the Italian government at a location and time yet to be determined. ISIN subsequently published Technical Guide n. 30, which identifies the technical criteria, and general safety and protection requirements for the design, construction, operation and dismantling of temporary storage facilities for the hazardous substances. In January 2021, a list of 67 potential sites for the national repository was published.

Although there is no legal obligation to begin any work or deliver the hazardous substances, as the performance of these obligations is contingent on the construction of the as-yet unbuilt national repository, based on the aforementioned factors, the Company concluded its obligation to clean, dismantle, and deliver any hazardous substances to a national repository is probable and reasonably estimable. Accordingly, in the fourth quarter of 2020, LivaNova recognized a $42.2 million provision for this matter, which is included within other operating expenses on the consolidated statements of income (loss). The estimated liability as of December 31, 2023 was €35.8 million ($39.7 million), which represented the low end of the estimated range of loss of €35.8 million ($39.7 million) to €45.6 million ($50.5 million) as of December 31, 2023. The estimated liability as of December 31, 2022 was €34.2 million ($36.6 million). The increase in the Saluggia site remediation provision from December 31, 2022 was due to adjustments associated with expected disposal costs.

SNIA Environmental Liability

Sorin was created as a result of a spin-off from SNIA in 2004, and in 2015, Sorin was merged into LivaNova. SNIA subsequently became insolvent, and the Public Administrations sought compensation from SNIA in an aggregate amount of approximately $3.8 billion for remediation costs relating to the environmental damage at chemical sites previously operated by SNIA's other subsidiaries.

There are proceedings relating to the SNIA bankruptcy to which LivaNova is not a party in the Bankruptcy Court of Udine and the Bankruptcy Court of Milan. In 2011, the Bankruptcy Court of Udine held that 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. In 2016, the Court of Udine rejected the appeal, and the Public Administrations appealed to the Supreme Court. Similarly, in 2014, the Bankruptcy Court of Milan held that the Public Administrations were not creditors of either SNIA or its subsidiaries. The Public Administrations appealed. In April 2022, Bankruptcy Court of Milan declared the Public Administrations to be a non-privileged creditor of SNIA for up to €454 million, and the Public Administrations appealed to the Supreme Court.

In 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 entered voluntarily into the proceeding, asking Sorin, as jointly liable with SNIA, to pay compensation for SNIA's environmental damages. In 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 $323,000 as of December 31, 2023) for legal fees. The Public Administrations appealed the 2016 Decision to the Court of Appeal. 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 $633.1 million as of December 31, 2023). LivaNova appealed the partial decision on liability to the Italian Supreme Court in August 2019.

In November 2021, the Court of Appeal delivered the remainder of its decision, ordering LivaNova to pay damages of approximately €453.6 million (approximately $502.0 million as of December 31, 2023). LivaNova appealed the decision on damages in December 2021. On February 21, 2022, the Court of Appeal notified the Company that it granted the Company a suspension with respect to the payment of damages until a decision has been reached on the appeal to the Italian Supreme Court. This suspension was subject to LivaNova providing a first demand bank guarantee of €270.0 million (approximately $298.8 million as of December 31, 2023) within 30 calendar days, and on March 21, 2022, LivaNova delivered the guarantee, thereby satisfying the condition. Refer to "Note 10. Financing Arrangements" for information on the financing of the guarantee.

In November 2022, in response to one of a number of appeals asserted by LivaNova, the Supreme Court issued an ordinance, a procedural document, whereby the Supreme Court referred a question on interpretation of a European directive on demergers to the ECJ. Specifically, the ordinance asks the ECJ to provide a binding decision as to whether a company resulting from a demerger can be held jointly and severally liable not only for the established liabilities of the demerged company that were articulated at the time of demerger, but also for the environmental liabilities of the demerged company that materialized after the demerger which are derived from actions performed prior to the demerger. Following receipt of the binding decision from the ECJ, which is expected in 2024, the Supreme Court is expected to incorporate and issue a decision in response to all of the appeals of LivaNova and counter-appeals submitted by the Public Administrations. While the timing of the decisions by the ECJ and, subsequently, the Supreme Court are uncertain, the Company believes that the final decision from the Supreme Court is not expected until at least 2025.

In 2011, Caffaro, a SNIA subsidiary, sold its Brescia chemical business to Caffaro Brescia, a third party belonging to the Todisco group, and as part of the acquisition, Caffaro Brescia agreed to secure hydraulic barriers at the site and maintain existing environmental security measures. In 2020, Caffaro Brescia declared it was withdrawing from its agreement to maintain the environmental measures. In 2021, LivaNova (in addition to Caffaro Brescia, and other non-LivaNova entities) received an administrative order from the Italian Ministry of the Environment requiring the Company to ensure the maintenance of the environmental measures and to guarantee that such works remain fully operational, the annual management and maintenance for which is estimated at approximately €1 million per year. The receipt of the Order appears to be based on the aforementioned Court of Appeal decision regarding LivaNova's alleged joint liability with SNIA for SNIA's environmental liabilities. LivaNova's response, dated February 16, 2021, disputes the grounds upon which the Order is based. LivaNova also appealed the Order in the Administrative Court in Brescia.

LivaNova has not recognized a liability in connection with these related matters because any potential loss is not currently probable.

Product Liability Litigation

The Company continues to be involved in litigation involving LivaNova's 3T device. The litigation includes the cases remaining in the MDL, various US state court cases, and in jurisdictions outside the US. As of February 29, 2024, the Company was aware of approximately 70 filed and unfiled claims worldwide. 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.

During the years ended December 31, 2023, 2022 and 2021 LivaNova recorded an additional liability of $34.5 million, $22.3 million and $38.1 million, respectively, due to new information received about the nature of certain claims. As of December 31, 2023, the provision for these matters was $13.9 million. While the amount accrued represents LivaNova's best estimate for those filed and unfiled claims that LivaNova believes are both probable and estimable at this time, and which are a subset of the filed and unfiled claims worldwide of which the Company is currently aware, the actual liability for resolution of these matters may vary from the Company's provision. The remaining claims for which a provision has not been recorded are remote or the potential loss is not estimable at this time.

The following table presents the changes in the carrying amount of the litigation provision liability for the years ended December 31, 2023, 2022 and 2021 (in thousands):

As of December 31, 2020	$	36,490
Payments		(34,808)
Adjustments [1]		38,068
FX and other		(280)
As of December 31, 2021		39,470
Payments		(28,867)
Adjustments [1]		22,309
FX and other		(425)
As of December 31, 2022		32,487
Payments		(53,652)
Adjustments [1]		34,521
FX and other		504
As of December 31, 2023		13,860
Less current portion as of December 31, 2023		10,756
Long-term portion as of December 31, 2023 [2]	$	3,104

(1) Adjustments to the litigation provision are included within other operating expenses on the consolidated statements of income (loss).
(2) Included within other long-term liabilities on the consolidated balance sheets.

Caisson Contract Litigation

On November 25, 2019, LivaNova received notice of a lawsuit initiated by former members of 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., was filed in the United States District Court for the District of Minnesota. The complaint alleged (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 program and the Company's November 20, 2019 announcement that it was ending the program at the end of 2019. The lawsuit sought damages arising out of the 2017 acquisition agreement, including various regulatory milestone payments. In May 2022, the District Court granted LivaNova's motion for summary judgment, and in June 2023, the Eighth Circuit Court of Appeals affirmed the decision. The Company now considers Caisson's claim against LivaNova to be closed.

Mitral Demand Letter

On July 29, 2022, LivaNova received a demand letter from Mitral for approximately €20.8 million ($23.0 million as of December 31, 2023) for breach of warranty claims under the A&R Purchase Agreement. Specifically, the claims allege failure to disclose certain information relating to a supplier, thereby allegedly impacting the profitability of Mitral's business in China and Japan. On March 22, 2023, Mitral served a formal claim on LivaNova in the High Court of Justice Commercial Court (King's Bench Division) alleging damages flowing from the aforementioned asserted breaches of warranties in the A&R Purchase Agreement, and the Company filed its Defense on May 17, 2023. In November 2023, the Company entered into a settlement agreement with Mitral regarding the aforementioned matter pursuant to which the Company paid to Mitral less than €1.0 million ($1.1 million as of December 31, 2023), including costs. The Company now considers this matter closed.

Italian MedTech Payback Measure

As previously disclosed, in 2015, the Italian Parliament introduced rules regarding public contracts with the National Healthcare System for the supply of goods and services. In particular, the law introduced a "payback" measure requiring companies selling medical devices in Italy to repay a percentage of the healthcare expenditures exceeding the regional maximum caps for medical devices. In the intervening years since the rules were first issued, there has been considerable uncertainty about how the law will operate and what the exact timeline is for finalization. In August 2022, a decree was published which provided guidance and timetables for the rule. In response, LivaNova filed an appeal at the Administrative Court against the Decree of the Ministry of Health assessing the amount payable and against the MedTech Payback Guidelines. LivaNova also filed appeals against the regions requesting payments. In August 2023, the Administrative Court upheld LivaNova's request to suspend the effect of the requests for payment by the regions, pending the decision by the court on the merits of the case. In November 2023, the Administrative Court, in a separate matter, asked the Constitutional Court whether

the payback law is compliant with the Italian Constitution and pending the decision by the Constitutional Court, all cases brought by medical device companies in this matter are suspended. The Company has accrued for the "payback" law since 2015 based on market and product information. As of December 31, 2023 and December 31, 2022, the total amount reserved for this matter was $8.2 million and $6.4 million, respectively; however, the actual liability could vary.

Other Matters

Additionally, LivaNova is the subject of various pending or threatened legal actions and proceedings that arise in the ordinary course of LivaNova's 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 LivaNova's consolidated net income, financial position or liquidity.

Note 14. Stockholders' Equity

On August 6, 2021, the Company closed an offering and issued 4,181,818 ordinary shares, par value £1.00 per share, at an offering price of $82.50 per share. Net proceeds from the offering were approximately $322.6 million, after deducting underwriting discounts, commissions and offering expenses. Proceeds from the offering were used to repay the Company's $450 million 2020 senior secured term loan. For additional information, please refer to "Note 10. Financing Arrangements."

Accumulated other comprehensive income (loss)

The following table presents the change in each component of AOCI, net of tax and the reclassifications out of AOCI into net income (loss) for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	Change in Unrealized Gain (Loss) on Cash Flow Hedges	Foreign Currency Translation Adjustments [1]	Total
As of December 31, 2020	**$ 2,319**	**$ 25,490**	**$ 27,809**
Other comprehensive loss before reclassifications, before tax	(3,922)	(31,722)	(35,644)
Tax benefit	719	—	719
Other comprehensive loss before reclassifications, net of tax	(3,203)	(31,722)	(34,925)
Reclassification of gain from accumulated other comprehensive income, before tax	(75)	—	(75)
Reclassification of tax expense	14	—	14
Reclassification of gain from accumulated other comprehensive income, after tax	(61)	—	(61)
Net current-period other comprehensive loss, net of tax	(3,264)	(31,722)	(34,986)
As of December 31, 2021	**(945)**	**(6,232)**	**(7,177)**
Other comprehensive loss before reclassifications, before tax	(3,688)	(42,853)	(46,541)
Tax expense	—	—	—
Other comprehensive loss before reclassifications, net of tax	(3,688)	(42,853)	(46,541)
Reclassification of loss from accumulated other comprehensive loss, before tax	5,599	—	5,599
Reclassification of tax expense	—	—	—
Reclassification of loss from accumulated other comprehensive loss, after tax	5,599	—	5,599
Net current-period other comprehensive income (loss), net of tax	1,911	(42,853)	(40,942)
As of December 31, 2022	**966**	**(49,085)**	**(48,119)**
Other comprehensive (loss) income before reclassifications, before tax	(433)	21,202	20,769
Tax expense	—	—	—
Other comprehensive (loss) income before reclassifications, net of tax	(433)	21,202	20,769
Reclassification of gain from accumulated other comprehensive income (loss), before tax	(533)	—	(533)
Reclassification of tax expense	—	—	—
Reclassification of gain from accumulated other comprehensive income (loss), after tax	(533)	—	(533)
Net current-period other comprehensive (loss) income, net of tax	(966)	21,202	20,236
As of December 31, 2023	**$ —**	**$ (27,883)**	**$ (27,883)**

(1) Taxes were 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 15. Stock-Based Incentive Plans

Stock-Based Plans

Stock-based awards may be granted under the 2015 Plan and the 2022 Plan in the form of stock options, SARs, RSUs and other stock-based and cash-based awards. As of December 31, 2023, there were approximately 12,098 shares available for future grants to LivaNova's non-executive directors under the 2015 Plan and 1,422,656 shares pursuant to Options or Stock Appreciation Rights and 902,967 shares pursuant to other types of awards available for future grants to LivaNova's non-executive directors and employees under the 2022 Plan. In June 2023, the Company's shareholders approved the A&R 2022 Plan. The A&R 2022 Plan increases the aggregate number of ordinary shares that can be issued under the 2022 Plan pursuant to options or SARs from 1,900,000 to 2,250,000 and the number of ordinary shares that can be issued pursuant to awards other than options or SARs from 1,200,000 to 1,500,000.

During the year ended December 31, 2023, LivaNova issued stock-based compensatory awards with terms approved by the Compensation Committee of LivaNova's Board of Directors. The awards with service conditions generally vest ratably over four years and are subject to forfeiture unless service conditions are met. The market performance-based awards that were issued cliff vest after three years subject to the rank of LivaNova's total shareholder return for the three-year period ending December 31, 2025 relative to the total shareholder returns for a peer group of companies. The adjusted free cash flow and return on invested capital operating performance-based awards that were issued, cliff vest after three years subject to the achievement of certain thresholds of cumulative results for the three-year period ending December 31, 2025.

The Company also provides an ESPP. Compensation expense related to the ESPP for the years ended December 31, 2023, 2022 and 2021 was $1.1 million, $1.2 million and $1.5 million, respectively.

Stock-Based Compensation

The following table presents the amounts of stock-based compensation recognized on LivaNova's consolidated statements of income (loss), by expense category for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	2023	2022	2021
Cost of goods sold	$ 967	$ 1,455	$ 2,451
Selling, general and administrative	29,421	35,638	29,449
Research and development	5,964	7,716	8,664
Total stock-based compensation expense	36,352	44,809	40,564
Income tax benefit	1,845	706	588
Total expense, net of income tax benefit	$ 34,507	$ 44,103	$ 39,976

The following table presents the amounts of stock-based compensation expense recognized on LivaNova's consolidated statements of income (loss) by type of arrangement for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	2023	2022	2021
RSUs	$ 20,493	$ 21,563	$ 19,614
SARs	13,710	14,065	12,489
Market performance-based restricted stock units	866	4,651	3,522
Operating performance-based restricted stock units	162	3,338	3,434
Employee share purchase plan	1,121	1,192	1,505
Total stock-based compensation expense	$ 36,352	$ 44,809	$ 40,564

Unrecognized Stock-Based Compensation

The following table presents the amounts of stock-based compensation cost not yet recognized related to non-vested awards, including awards assumed or issued as of December 31, 2023 (in thousands):

	Unrecognized Compensation Cost	Weighted Average Remaining Vesting Period (in years)
Service-based stock appreciation rights	$ 23,633	2.61
Service-based restricted stock unit awards	27,802	2.52
Performance-based restricted stock unit awards	4,473	1.78
Total stock-based compensation cost unrecognized	$ 55,908	2.30

Stock Appreciation Rights and Stock Options

LivaNova uses the Black-Scholes option pricing methodology to calculate the grant date fair market value of SARs. The following table lists the assumptions LivaNova utilized as inputs to the Black-Scholes model for the years ended December 31, 2023, 2022 and 2021:

	2023	2022	2021
Dividend yield [1]	—	—	—
Risk-free interest rate [2]	3.7%	2.5%	1.0%
Expected option term - in years [3]	5.3	5.3	5.6
Expected volatility at grant date [4]	45.1%	42.2%	42.1%

(1) LivaNova has not paid dividends, and no future dividends have been approved.
(2) LivaNova uses yield rates on US Treasury securities for a period that approximates the expected term of the awards granted to estimate the risk-free interest rate.
(3) LivaNova estimated the expected term of the awards granted using historic data of actual time elapsed between the date of grant and the exercise or forfeiture of options or SARs for employees.
(4) LivaNova determines the expected volatility of the awards based on historical volatility.

The following tables present the activity for service-based SARs and stock option awards:

SARs and Stock Options	Number of Optioned Shares	Wtd. Avg. Exercise Price per Share	Wtd. Avg. Remaining Contractual Term (years)	Aggregate Intrinsic Value (in thousands) [1]
Outstanding — as of December 31, 2022	2,806,836	$ 68.46		
Granted	974,204	$ 42.71		
Exercised	(232,980)	$ 44.24		
Forfeited	(297,831)	$ 56.67		
Expired	(295,927)	$ 75.12		
Outstanding — as of December 31, 2023	2,954,302	$ 62.40	6.85	$ 12,005
Fully vested and exercisable — end of year	1,455,930	$ 69.81	5.2	$ 3,280
Fully vested and expected to vest — end of year [2]	2,883,388	$ 62.67	6.8	$ 11,513

(1) The aggregate intrinsic value of SARs and options is based on the difference between the fair market value of the underlying stock at December 31, 2023, using the market closing stock price, and exercise price for awards where the market closing stock price exceeds the exercise price.
(2) Includes the impact of expected future forfeitures.

	Year Ended December 31,		
	2023	2022	2021
Weighted average grant date fair value of SARs granted during the year (per share)	$ 19.44	$ 34.13	$ 29.22
Aggregate intrinsic value of SARs and stock options exercised during the year (in thousands)	$ 1,905	$ 2,143	$ 12,223

Restricted Stock Units Awards

The following tables present the activity for service-based RSU awards:

RSUs	Number of Shares	Wtd. Avg. Grant Date Fair Value
Non-vested shares as of December 31, 2022	741,892	$ 68.02
Granted	528,128	$ 43.31
Vested	(333,013)	$ 66.37
Forfeited	(154,470)	$ 56.09
Non-vested shares as of December 31, 2023	782,537	$ 54.40

	Year Ended December 31,		
	2023	2022	2021
Weighted average grant date fair value of service-based RSUs issued during the year (per share)	$ 43.31	$ 76.35	$ 74.17
Aggregate fair value of RSUs that vested during the year (in thousands)	$ 14,853	$ 22,793	$ 21,501

The following tables present the activity for performance-based RSU awards:

Performance-based RSUs	Number of Shares	Wtd. Avg. Grant Date Fair Value
Non-vested shares as of December 31, 2022	330,534	$ 70.45
Granted	189,117	$ 40.63
Vested	(75,877)	$ 40.94
Forfeited	(171,804)	$ 65.83
Performance adjustments [1]	(64,950)	$ 42.52
Non-vested shares as of December 31, 2023	207,020	$ 66.84

(1) Represents the difference between the target units granted and the actual units awarded based upon the attainment of performance goals for the Company.

	Year Ended December 31,		
	2023	2022	2021
Weighted average grant date fair value of performance-based restricted share units granted during the year (per share)	$ 40.63	$ 92.53	$ 89.29
Aggregate fair value of performance-based restricted share units that vested during the year (in thousands)	$ 3,641	$ 877	$ 8,268

Note 16. Employee Retirement Plans

Defined Benefit Plans

LivaNova sponsors several defined benefit pension plans, which include plans in the US, Italy, Germany, Japan and France. The Company maintains a frozen cash balance retirement plan in the US that is a contributory, defined benefit plan designed to provide the benefit in terms of a stated account balance dependent on the employer's promised interest-crediting rate. In Italy and France, LivaNova maintains a severance pay defined benefit plan that obligates the employer to pay a severance payment in case of resignation, dismissal or retirement. In other jurisdictions, LivaNova sponsors non-contributory, defined benefit plans designated to provide guaranteed minimum retirement benefits to eligible employees.

Risks Related to Defined Benefit Plans

The defined benefit plans expose LivaNova to various demographic and economic risks such as longevity risk, investment risks, currency and interest rate risks and in some cases inflation risk. Pension fund Trustees are responsible for and have full discretion over the investment strategy of the plan assets. In general, Trustees manage pension fund risks by diversifying the investments of plan assets and in some cases by matching the interest rate risk of liabilities in whole or in part.

The Company has an active de-risking strategy in which it consistently looks for opportunities to reduce the risks associated with its defined benefit plans. The plans are governed by Trustees who have a legal obligation to evenly balance the interests of all stakeholders and operate under the local regulatory framework.

The following table presents the change in benefit obligations and funded status of LivaNova's US pension benefits for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	US Pension Benefits		
	2023	2022	2021
Accumulated benefit obligations at year end	$ 9,222	$ 9,790	$ 12,578
Change in projected benefit obligation:			
Projected benefit obligation at beginning of year	$ 9,790	$ 12,578	$ 13,085
Interest cost	409	254	224
Plan settlement	(245)	(1,369)	(972)
Actuarial (gain)/loss	(416)	(1,361)	527
Benefits paid	(316)	(312)	(286)
Projected benefit obligation at end of year	$ 9,222	$ 9,790	$ 12,578
Change in plan assets:			
Fair value of plan assets at beginning of year	$ 5,516	$ 8,020	$ 8,688
Actual return on plan assets	598	(1,189)	189
Employer contributions	1,118	367	401
Plan settlement	(245)	(1,369)	(972)
Benefits paid	(316)	(313)	(286)
Fair value of plan assets at end of year	$ 6,671	$ 5,516	$ 8,020
Funded status at end of year:			
Fair value of plan assets	$ 6,671	$ 5,516	$ 8,020
Projected benefit obligations	9,222	9,790	12,578
Underfunded status of the plan	2,551	4,274	4,558
Recognized liability	$ 2,551	$ 4,274	$ 4,558
Amounts recognized on the consolidated balance sheets consist of:			
Non-current liabilities	$ 2,551	$ 4,274	$ 4,558
Recognized liability	$ 2,551	$ 4,274	$ 4,558

The following table presents the change in benefit obligations and funded status of LivaNova's non-US pension benefits for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	Non-US Pension Benefits		
	2023	2022	2021
Accumulated benefit obligations at year end	$ 8,099	$ 8,248	$ 10,522
Change in projected benefit obligation:			
Projected benefit obligation at beginning of year	$ 8,532	$ 10,817	$ 13,039
Service cost	239	259	354
Interest cost	239	83	56
Actuarial gain	86	(831)	(1,372)
Benefits paid	(972)	(1,060)	(294)
Foreign currency exchange rate changes and other	136	(736)	(966)
Projected benefit obligation at end of year	$ 8,260	$ 8,532	$ 10,817
Change in plan assets:			
Fair value of plan assets at beginning of year	$ 3,232	$ 3,142	$ 2,816
Actual return on plan assets	(78)	(80)	61
Employer contributions	263	265	302
Benefits paid	(26)	(37)	(78)
Foreign currency exchange rate changes and other	(101)	(58)	41
Fair value of plan assets at end of year	$ 3,290	$ 3,232	$ 3,142
Funded status at end of year:			
Fair value of plan assets	$ 3,290	$ 3,232	$ 3,142
Projected benefit obligations	8,260	8,532	10,817
Underfunded status of the plans [1]	4,970	5,300	7,675
Recognized liability	$ 6,367	$ 5,300	$ 7,675
Amounts recognized on the consolidated balance sheets consist of:			
Non-current liabilities	$ 6,367	$ 5,300	$ 7,675
Recognized liability	$ 6,367	$ 5,300	$ 7,675

(1) In certain non-US countries, fully funding pension plans is not a common practice. Consequently, certain pension plans have been partially funded.

The following tables present US and non-US net periodic benefit cost of LivaNova's defined benefit pension plans by component for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	US Pension Benefits		
	2023	2022	2021
Interest cost	$ 409	$ 254	$ 224
Expected return on plan assets	(209)	(298)	(358)
Settlement and curtailment loss	—	731	471
Amortization of net actuarial loss	233	262	264
Net periodic benefit cost	$ 433	$ 949	$ 601

	Non-US Pension Benefits		
	2023	2022	2021
Service cost	$ 239	$ 259	$ 354
Interest cost	239	83	56
Expected return on plan assets	78	80	(61)
Amortization of net actuarial loss (gain)	86	(831)	(1,372)
Net periodic benefit cost	$ 642	$ (409)	$ (1,023)

The following tables present the major actuarial assumptions used in determining the benefit obligations and net periodic benefit costs for LivaNova's significant US and non-US defined benefit plans as of December 31, 2023, 2022 and 2021:

	US Pension Benefits		
	2023	2022	2021
Weighted-average assumptions used to determine benefit obligation:			
Discount rate	4.93%	5.10%	2.41%
Weighted-average assumptions used to determine net periodic benefit cost:			
Discount rate	5.10%	2.41%	1.91%
Expected return on plan assets	5.00%	5.00%	5.00%

	Non-US Pension Benefits								
	2023			2022			2021		
Weighted-average assumptions used to determine benefit obligation:									
Discount rate	0.96%	-	3.20%	0.45%	-	3.70%	0.15%	-	1.00%
Rate of compensation increase	2.50%	-	3.50%	2.50%	-	3.50%	2.50%	-	3.00%
Weighted-average assumptions used to determine net periodic benefit cost:									
Discount rate	0.96%	-	3.20%	0.45%	-	3.70%	0.15%	-	1.00%
Rate of compensation increase	3.38%	-	3.50%	2.50%	-	3.50%	2.50%	-	3.00%

To determine the discount rate for LivaNova's US benefit plan, the Company used the FTSE Above Median Pension Discount Curve. For the discount rate used for non-US benefit plans, LivaNova considers local market expectations of long-term returns, primarily utilizing the Iboxx Corporate Index Bond rating AA, duration higher than 10 years. The resulting discount rates are consistent with the duration of plan liabilities.

The expected long-term rate of return on plan assets assumption for LivaNova's US defined benefit plan was derived from a study conducted by the Company's investment managers. The study includes a review of the anticipated future long-term performance of individual asset classes and considers the appropriate asset allocation strategy, given the anticipated funding requirements of the plan, to determine the average rate of earnings expected on the funds invested.

Retirement Benefit Plan Investment Strategy

In the US, LivaNova has an account that holds the defined benefit frozen balance pension plan assets. The Plan Committee sets investment guidelines for the US pension plan. Plan assets in the US are invested in accordance with sound investment practices that emphasize long-term fundamentals. The investment objective for the plan assets in the US is to achieve a positive rate of return that would be expected to close the current funding deficit and enable LivaNova to terminate the frozen pension plan at a reasonable cost. The Plan Committee also oversees the investment allocation process, selects the investment managers, and monitors asset performance. The plan investments consist of a diversified portfolio of fixed income and equity index funds. Securities are also diversified in terms of investment location (domestic and international) tenor (short- and long-term securities), investment objective (growth and value), and size of market.

Outside the US, pension plan assets are typically managed by decentralized fiduciary committees. There is a significant variation in asset allocation policy from country to country. Local regulations, local funding rules, and local financial and tax considerations influence the funding and investment allocation process in each country.

The following table presents LivaNova's US and Non-US pension plan target allocations by asset category as of December 31, 2023 and 2022:

	US Pension Benefits		Non-US Pension Benefits	
	2023	2022	2023	2022
Equity securities	29%	29%	1%	1%
Debt securities	70%	70%	79%	84%
Other	1%	1%	20%	15%

Retirement Benefit Fair Values

The following is a description of the valuation methodologies used for retirement benefit plan assets measured at fair value:

Equity Mutual Funds: Valued based on the year-end net asset values of the investment vehicles. The net asset values of the investment vehicles are based on the fair values of the underlying investments of the mutual funds valued at the closing price reported in the active markets in which the individual security is traded. Equity mutual funds have a daily reported net asset value.

Fixed Income Mutual Funds: Valued based on the year-end net asset values of the investment vehicles. The net asset values of the investment vehicles are based on the fair values of the underlying investments of the mutual funds valued based on inputs other than quoted prices that are observable.

Money Markets: Valued based on quoted prices in active markets for identical assets.

The following tables present information by level for the US retirement benefit plan assets that are measured at fair value on a recurring basis as of December 31, 2023 and 2022 (in thousands):

		Fair Value Measurement Using Inputs Considered as:		
	2023	Level 1	Level 2	Level 3
Equity mutual funds	$ 1,882	$ —	$ 1,882	$ —
Fixed income mutual funds	4,571	—	4,571	—
Money market funds and cash	85	85	—	—
	$ 6,538	$ 85	$ 6,453	$ —

		Fair Value Measurement Using Inputs Considered as:		
	2022	Level 1	Level 2	Level 3
Equity mutual funds	$ 1,591	$ —	$ 1,591	$ —
Fixed income mutual funds	3,843	—	3,843	—
Money market funds	68	68	—	—
	$ 5,502	$ 68	$ 5,434	$ —

The following tables present information by level for the Non-US retirement benefit plan assets that are measured at fair value on a recurring basis as of December 31, 2023 and 2022 (in thousands):

		Fair Value Measurement Using Inputs Considered as:		
	2023	Level 1	Level 2	Level 3
Equity mutual funds	$ (23)	$ —	$ (23)	$ —
Fixed income mutual funds	(1,530)	—	(1,530)	—
Money market funds and cash	(378)	(378)	—	—
	$ (1,931)	$ (378)	$ (1,553)	$ —

	2022	Fair Value Measurement Using Inputs Considered as: Level 1	Level 2	Level 3
Equity mutual funds	$ 42	$ —	$ 42	$ —
Fixed income mutual funds	2,742	—	2,742	—
Money market funds	448	448	—	—
	$ 3,232	$ 448	$ 2,784	$ —

Refer to "Note 2. Basis of Presentation, Use of Accounting Estimates and Significant Accounting Policies" for discussion of the fair value measurement terms of Levels 1, 2, and 3.

Defined Benefit Retirement Funding

LivaNova makes the minimum required contribution to fund the US pension plan as determined by MAP - 21 and the Highway and Transportation Funding Act of 2014. The Company contributed $1.4 million, $0.6 million and $0.7 million to the pension plans (US and non-US) during the years ended December 31, 2023, 2022 and 2021, respectively. LivaNova anticipates the Company will make contributions to the US pension plan of approximately $0.2 million during the year ended December 31, 2024.

The following table presents benefit payments expected to be paid, including amounts to be paid from LivaNova's assets, and reflecting expected future service, as of December 31, 2023 (in thousands):

	US Plans	Non-US Plans
2024	3,495	514
2025	829	537
2026	877	657
2027	667	594
2028	509	664
2029 - 2033	2,105	3,886

Defined Contribution Plans

LivaNova sponsors defined contribution plans in the US including the Cyberonics Employee Retirement Savings Plan, which qualifies under Section 401(k) of the IRC covering US employees and the Cyberonics Non-Qualified Deferred Compensation Plan, covering certain US middle and senior management. In addition, LivaNova sponsors the Belgium Defined Contribution Pension Plan for Cyberonics' Belgium employees. LivaNova incurred expenses for the Company's defined contribution plans of $11.1 million, $9.0 million and $10.2 million for the years ended December 31, 2023, 2022 and 2021, respectively.

Note 17. Income Taxes

Earnings Before Income Taxes and Components of Income Tax Provision

The following table presents the US and non-US components of income (loss) before income taxes and LivaNova's income tax expense (benefit) for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	2023	2022	2021
Income (loss) before income taxes:			
UK and Non-US	$ 60,799	$ 22,570	$ 22,094
US	(142,025)	(97,712)	(146,566)
	$ (81,226)	$ (75,142)	$ (124,472)
Total income tax expense (benefit) consisted of the following:			
Current:			
UK and Non-US	$ 10,954	$ 4,782	$ 4,296
US	4,598	4,860	4,050
	$ 15,552	$ 9,642	$ 8,346
Deferred:			
UK and Non-US	$ (114,428)	$ 1,409	$ 2,852
Total income tax (benefit) expense	$ (98,876)	$ 11,051	$ 11,198

Effective Income Tax Rate Reconciliation

LivaNova PLC is resident in the UK for tax purposes. LivaNova's 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 LivaNova's subsidiaries conduct operations vary. As a result of the changes in the overall level of the Company's income, the earnings mix in various jurisdictions and the changes in tax laws, LivaNova's consolidated effective income tax rate may vary from one reporting period to another.

LivaNova is subject to income taxes as well as non-income-based taxes in the US, the UK, the EU and various other jurisdictions. LivaNova continues to monitor the adoption of Pillar Two by the taxing jurisdictions in which it operates. The UK has enacted legislation providing for a minimum effective tax rate of 15% through a multinational top-up tax and a domestic top-up tax for accounting periods beginning on or after December 31, 2023. Draft UK legislation has also been published for an undertaxed profits rule to be introduced, although not before accounting periods beginning on or after December 31, 2024. A UTPR would be a backstop rule intended to ensure that amounts of multinational top-up tax that are not collected under foreign global minimum tax rules can in certain circumstances be collected instead in the UK. LivaNova is assessing the full implications on 2024 financial results and will continue to monitor legislative developments and related guidance in the UK and other jurisdictions that may impact LivaNova's operations.

The following table presents a reconciliation of the statutory income tax rate to LivaNova's effective income tax rate expressed as a percentage of loss before income tax for the years ended December 31, 2023, 2022 and 2021:

	2023	2022	2021
Statutory tax rate at UK Rate	23.5 %	19.0 %	19.0 %
Deferred tax valuation allowance	100.5	(18.8)	(47.7)
Foreign tax rate differential	5.2	10.6	7.1
US state and local tax expense, net of federal benefit	(3.5)	(1.4)	(0.3)
Effect of changes in tax rate	1.2	6.2	18.9
Write-off/impairment of investments	(3.1)	(27.6)	(1.8)
Research and development tax credits	0.3	1.2	0.3
Base erosion anti-abuse tax	—	(2.9)	(3.1)
Disallowable professional fees	(2.6)	(0.4)	(1.5)
Compensation related items	1.4	(0.1)	(0.1)
Other, net	(1.2)	(0.5)	0.2
Effective tax rate	121.7 %	(14.7)%	(9.0)%

Deferred Income Tax Assets and Liabilities

The following table presents the significant components of LivaNova's deferred tax assets and liabilities as of December 31, 2023 and 2022 (in thousands):

	2023	2022
Deferred tax assets:		
Net operating loss carryforwards	$ 130,097	$ 142,456
Tax credit carryforwards	39,732	41,918
Interest expense carryforward	87,308	65,497
Accruals and reserves	33,911	35,132
Deferred compensation	16,565	16,081
Inventories	13,584	9,073
Capitalized/Deferred R&D	26,744	29,796
Other	3,970	6,898
Gross deferred tax assets	351,911	346,851
Valuation allowance	(182,464)	(264,754)
Net deferred tax assets	169,447	82,097
Deferred tax liabilities:		
Property, equipment & intangible assets	(61,511)	(76,419)
Gain on sale of intellectual property	—	(12,810)
Other	(645)	—
Gross deferred tax liabilities:	(62,156)	(89,229)
Net deferred tax assets (liabilities)	$ 107,291	$ (7,132)
Reported on the consolidated balance sheets as (after valuation allowance and jurisdictional netting):		
Net deferred tax assets	$ 118,858	$ 1,384
Net deferred tax liabilities	(11,567)	(8,516)
Net deferred tax assets (liabilities)	$ 107,291	$ (7,132)

LivaNova reviews the realizability of its deferred tax assets by jurisdictions at each balance sheet date by weighing the positive and negative evidence including cumulative losses and impacts of transactions or other events. As of December 31, 2023 and 2022, LivaNova had valuation allowances against deferred tax assets of $182.5 million and $264.8 million, respectively. These valuation allowances were primarily related to continuing operations and are a result of significant negative evidence in the form of cumulative losses in certain jurisdictions. The decrease in valuation allowance in 2023 primarily relates to the release of valuation allowances in the UK of $110.8 million and other jurisdictions, partially offset by continued valuation allowance accruals in the US and Brazil. Any changes to the realizability of the deferred tax assets due to transactions and other events in 2024 will be accounted for during the quarter in which they occur.

The following table provides a reconciliation of the beginning and ending balances of LivaNova's deferred tax asset valuation allowances for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	2023	2022	2021
Balance at beginning of year	$ 264,754	$ 244,978	$ 189,864
Additions	38,278	24,896	67,814
Deductions	(120,568)	(5,120)	(12,700)
Balance at end of year	$ 182,464	$ 264,754	$ 244,978

The following table presents NOL and tax credit carryforwards as of December 31, 2023, which can be used to reduce LivaNova's income tax payable in future years (in thousands):

Region	Gross Amount	Tax Benefit	Amount with No Expiration	Amount with Expiration	Carryforward Period
UK NOL	$ 375,044	$ 93,760	$ 93,760	$ —	Unlimited
Europe, excluding UK, NOL	67,160	11,048	11,048	—	Unlimited
US Federal NOL	32,100	6,741	35	6,706	2028 - 2034
US State NOL	182,335	10,842	2,349	8,493	2023 - 2042
S. America & other regions NOL	21,802	7,318	7,229	89	2028 - 2042
Far East NOL	1,404	388	349	39	2025 - 2032
US foreign tax credits	—	15,850	—	15,850	2025 - 2030
US tax credits	—	15,857	—	15,857	2023 - 2043
US State research & development tax credits	—	6,780	5,416	1,364	2030 - 2042
Other non-US tax credits	—	1,245	243	1,002	2024 - 2034
	$ 679,845	$ 169,829	$ 120,429	$ 49,400	

No provision has been made for income taxes on undistributed earnings of foreign subsidiaries as of December 31, 2023 because it is LivaNova's intention to indefinitely reinvest undistributed earnings of its foreign subsidiaries. In the event of the distribution of those earnings in the form of dividends, a sale of the subsidiaries, or certain other transactions, LivaNova may be liable for income taxes and withholding taxes. As of December 31, 2023, it was not practicable to determine the exact amount of the deferred tax liability related to those investments.

Uncertain Income Tax Positions

The following table presents a reconciliation of LivaNova's total gross unrecognized tax benefit for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	2023	2022	2021
Balance at beginning of year	$ 1,640	$ 1,741	$ 3,433
Tax positions related to prior years for settlement with tax authorities	5,406	—	(1,434)
Tax positions related to prior years for lapses of statute of limitations	(1,698)	—	—
Impact of foreign currency exchange rates	58	(101)	(258)
Balance at end of year [1]	$ 5,406	$ 1,640	$ 1,741

(1) The unrecognized tax benefit balance as of December 31, 2023 includes $4.9 million, which is presented on the consolidated balance sheets as a reduction to the related deferred tax assets for net operating loss carryforwards.

Accrued interest and penalties totaled $0.7 million, $0.3 million and $0.2 million as of December 31, 2023, 2022 and 2021, respectively, and were included in other long-term liabilities on LivaNova's consolidated balance sheets. LivaNova records accrued interest and penalties related to unrecognized tax benefits in interest expense and foreign exchange and other income/(expense), respectively, on LivaNova's consolidated statements of income (loss).

LivaNova operates in multiple jurisdictions with complex legal and tax regulatory environments, and the Company's tax returns are periodically audited or subjected to review by tax authorities. LivaNova monitors tax law changes and the potential impact on its results of operations. Tax authorities may disagree with certain positions LivaNova has taken and assess additional taxes. LivaNova regularly assesses the likely outcomes of the Company's tax positions in order to determine the appropriateness of its reserves for uncertain tax positions. However, there can be no assurance that LivaNova will accurately predict the outcome of these audits, and the actual outcome of an audit could have a material impact on LivaNova's consolidated results of income, financial position or cash flows. If all of LivaNova's unrecognized tax benefits as of December 31, 2023 were recognized, $0.5 million would impact the Company's effective tax rate and $4.9 million would be in the form of a net operating loss carryforward, which is expected to require a full valuation allowance based on present circumstances. LivaNova does not anticipate the balance in unrecognized tax benefits will change significantly during the next twelve months as a results of settlement with tax authorities or the expiration of statutes or limitations.

The major jurisdictions where LivaNova is subject to income tax examinations are as follows:

Jurisdiction	Earliest Year Open
US - federal and state	2020
Italy	2018
Germany	2019
England and Wales	2019
Canada	2019

Note 18. Earnings Per Share

The following table presents the basic and diluted weighted-average shares outstanding used in the computation of basic and diluted net income per share for the years ended December 31, 2023, 2022 and 2021 (in thousands of shares):

	2023	2022	2021
Basic weighted average shares outstanding	53,939	53,472	50,633
Add effects of stock-based compensation instruments [1]	273	—	—
Diluted weighted average shares outstanding	54,212	53,472	50,633

(1) Excluded from the computation of diluted earnings per share for the years ended December 31, 2023, 2022 and 2021 were shares for stock options, SARs and RSUs totaling 3.0 million, 3.9 million and 3.9 million because to include them would have been anti-dilutive under the treasury stock method.

Note 19. Geographic and Segment Information

Segment Information

LivaNova identifies operating segments based on how it manages, evaluates and internally reports its business activities to allocate resources, develop and execute its strategy and assess performance. For the periods presented herein, LivaNova had three reportable segments: Cardiopulmonary, Neuromodulation and ACS. Net revenue of the Company's reportable segments includes revenues from the sale of products that each reportable segment develops and manufactures or distributes.

LivaNova's Cardiopulmonary segment is engaged in the design, development, manufacture, marketing and selling of cardiopulmonary products, including heart-lung machines, oxygenators, autotransfusion systems, perfusion tubing systems, cannulae and other related accessories.

LivaNova's Neuromodulation segment is engaged in the design, development, manufacture, marketing and selling of devices that deliver neuromodulation therapy for treating DRE and DTD. 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. It also includes the development and management of clinical testing of LivaNova's aura6000 System for treating obstructive sleep apnea. LivaNova's Neuromodulation segment also includes costs associated with LivaNova's former heart failure program, which, as previously disclosed, the Company began to wind down during the first quarter of 2023.

LivaNova's ACS segment was engaged in the design, development, manufacture, marketing and selling of temporary life support products. ACS's products, which comprise the LifeSPARC and Hemolung systems, and standalone cannulae and accessories, including ProtekDuo and transseptal (TandemHeart) cannulae, simplify temporary extracorporeal cardiopulmonary life support solutions for critically ill patients. For additional information, please refer to "Note 22. Subsequent Event."

LivaNova operates under three geographic regions: US, Europe, and Rest of World. The table below presents net revenue by operating segment and geographic region for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	2023	2022	2021
Cardiopulmonary			
United States	$ 188,299	$ 159,489	$ 154,073
Europe [1]	156,606	127,064	134,562
Rest of World	244,072	213,761	194,344
	588,977	500,314	482,979
Neuromodulation			
United States	407,493	374,542	358,476
Europe [1]	57,435	50,291	51,435
Rest of World	54,782	52,160	46,261
	519,710	476,993	456,172
Advanced Circulatory Support			
United States	39,252	37,527	53,821
Europe [1]	751	1,447	1,120
Rest of World	319	327	518
	40,322	39,301	55,459
Other Revenue [2]	4,536	5,197	40,755
Totals			
United States	635,044	571,558	571,299
Europe [1]	214,792	178,802	201,524
Rest of World	303,709	271,445	262,542
Total net revenue [3] [4]	$ 1,153,545	$ 1,021,805	$ 1,035,365

(1) Includes countries in Europe where the Company has a direct sales presence. Countries where sales are made through distributors are included in "Rest of World."
(2) Other revenue primarily includes rental income not allocated to segments. For the year ended December 31, 2021, other revenue also includes the net revenue of the Company's Heart Valve business, which was divested on June 1, 2021.
(3) Net revenue to external customers includes $41.5 million, $32.3 million and $35.8 million in the UK, LivaNova's country of domicile, for the years ended December 31, 2023, 2022 and 2021, respectively.
(4) No single customer represented over 10% of the Company's consolidated net revenue. No country's net revenue exceeded 10% of the Company's consolidated revenue except for the US.

The following table presents a reconciliation of segment income to consolidated loss before tax for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	2023	2022	2021
Cardiopulmonary [1]	$ 20,004	$ 11,247	$ (6,429)
Neuromodulation	153,384	172,775	169,499
Advanced Circulatory Support [2]	(117,418)	(142,590)	2,195
Segment income	55,970	41,432	165,265
Other income/(expense) [3]	(124,468)	(118,184)	(166,049)
Operating loss	(68,498)	(76,752)	(784)
Interest expense	(58,853)	(48,250)	(50,151)
Loss on debt extinguishment	—	—	(60,238)
Foreign exchange and other income/(expense)	46,125	49,860	(13,299)
Loss before tax	$ (81,226)	$ (75,142)	$ (124,472)

(1) The Cardiopulmonary results for the years ended December 31, 2023, 2022 and 2021 include an increase in the litigation provision, net related to LivaNova's 3T Heater-Cooler device of $34.5 million, $21.7 million and $38.1 million, respectively. Refer to "Note 13. Commitments and Contingencies" for additional information.

(2) The ACS results for the year ended December 31, 2023 include an impairment of long-lived assets of $90.0 million, and an inventory obsolescence adjustment of $12.6 million. Refer to "Note 6. Restructuring" for additional information. The ACS results for the year ended December 31, 2022 include a goodwill impairment of $129.4 million. Refer to "Note 7. Goodwill and Intangible Assets" for additional information.

(3) Other income/(expense) primarily includes rental income, non-allocated corporate expenses, and amortization of intangible assets. For the year ended December 31, 2021, other income/(expense) also includes the results of the Company's Heart Valve business, which was divested on June 1, 2021.

The following table presents assets by reportable segment as of December 31, 2023 and 2022 (in thousands):

	2023	2022
Cardiopulmonary	$ 961,976	$ 874,143
Neuromodulation	647,391	646,633
Advanced Circulatory Support [1]	9,886	121,454
Other assets [2]	810,310	652,543
Total	$ 2,429,563	$ 2,294,773

(1) During the year ended December 31, 2023, LivaNova recorded an impairment of the ACS reportable segment's long-lived assets (asset group) of $90.0 million, and an inventory obsolescence adjustment of $12.6 million. Refer to "Note 6. Restructuring" for additional information.

(2) Other assets primarily include corporate assets not allocated to segments.

The following table presents capital expenditures by segment for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	2023	2022	2021
Cardiopulmonary	$ 22,326	$ 13,828	$ 14,824
Neuromodulation	1,201	369	179
Advanced Circulatory Support	1,210	1,773	1,326
Other capital expenditures [1]	10,370	10,622	5,984
Total	$ 35,107	$ 26,592	$ 22,313

(1) Other capital expenditures primarily include corporate capital expenditures not allocated to segments. For the year ended December 31, 2021, other capital expenditures also includes capital expenditures of the Company's Heart Valve business, which was divested on June 1, 2021.

Geographic Information

The following table presents property, plant and equipment, net by geographic region as of December 31, 2023 and 2022 (in thousands):

	2023	2022
United States	$ 62,701	$ 63,458
Europe	85,606	79,654
Rest of World	5,874	4,075
Total	$ 154,181	$ 147,187

Note 20. Supplemental Financial Information

The following table presents the components of inventories as of December 31, 2023 and 2022 (in thousands):

	2023	2022
Raw materials	$ 81,878	$ 70,027
Work-in-process	12,901	15,508
Finished goods	53,108	43,844
Total inventories	$ 147,887	$ 129,379

Inventories includes adjustments totaling $24.4 million and $8.2 million as of December 31, 2023 and 2022, respectively, to record balances at lower of cost or net realizable value.

The following table presents the components of property, plant and equipment, net as of December 31, 2023 and 2022 (in thousands):

	2023	2022	Lives in Years
Land	$ 14,902	$ 14,637	
Building and building improvements	84,543	80,611	5 to 36
Equipment, software, furniture and fixtures	233,337	206,892	2 to 20
Other	6,690	8,861	5 to 10
Capital investment in process	10,745	11,307	
Total gross property, plant and equipment	350,217	322,308	
Accumulated depreciation	(196,036)	(175,121)	
Total property, plant and equipment, net	$ 154,181	$ 147,187	

The following table presents the components of accrued liabilities and other as of December 31, 2023 and 2022 (in thousands):

	2023	2022
Legal and professional costs	$ 17,794	$ 8,653
Contingent consideration	13,750	—
Contract liabilities	10,725	10,226
Operating lease liabilities [1]	8,362	9,379
Italian medical device payback law	8,223	6,414
Interest payable	7,840	(76)
Royalty accrual	4,441	3,950
Current derivative liabilities	3,883	5,886
Provisions for agents, returns and other	4,464	1,678
Research and development costs	2,462	7,020
Restructuring liabilities [2]	911	2,045
Other accrued expenses	24,446	26,306
Total accrued liabilities and other	$ 107,301	$ 81,481

(1) Refer to "Note 12. Leases."
(2) Refer to "Note 6. Restructuring."

The following table presents the items included within foreign exchange and other income/(expense) on the consolidated statements of income (loss) for the years ended December 31, 2023, 2022 and 2021 (in thousands):

	2023	2022	2021
Notes fair value adjustment [1]	$ 40,106	$ 96,025	$ (59,944)
Capped call fair value adjustment [1]	(15,897)	(52,236)	34,327
Interest income	22,012	4,697	435
Foreign exchange rate fluctuations	(705)	378	(1,243)
Dividend income	1,540	305	3,415
Investment revaluation	—	—	4,642
Other derivative liabilities fair value adjustment	—	—	4,290
Other	(931)	691	779
Total foreign exchange and other income/(expense)	$ 46,125	$ 49,860	$ (13,299)

(1) Refer to "Note 9. Fair Value Measurements."

The following table presents a reconciliation of cash, cash equivalents and restricted cash reported on the consolidated balance sheets that sum to the total of the amounts shown on the consolidated statements of cash flows as of December 31, 2023 and 2022 (in thousands):

	2023	2022
Cash and cash equivalents	$ 266,504	$ 214,172
Restricted cash [1]	311,368	301,446
Cash, cash equivalents and restricted cash	$ 577,872	$ 515,618

(1) Restricted cash represents funds held as collateral for the SNIA Litigation Guarantee. Refer to "Note 13. Commitments and Contingencies."

Note 21. New Accounting Pronouncements

Adoption of New Accounting Pronouncements

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

Issue Date & Standard	Description	Adoption	Assessment
November 2023 ASU No. 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures	This ASU expands public entities' reportable segment disclosures by requiring disclosure of significant segment expenses that are regularly provided to the CODM and included within each reported measure of segment profit or loss, the amount and description of other segment items, and the title and position of the Company's CODM, as well as an explanation of how the CODM uses the Company's reported measures of segment profit or loss in assessing segment performance and deciding how to allocate resources.	This ASU will be effective for annual periods beginning after December 15, 2023 and subsequent interim periods, on a retrospective basis.	LivaNova is currently evaluating the effect this standard will have on its consolidated financial statements and related disclosures.
December 2023 ASU NO. 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures	This ASU expands annual income tax disclosures primarily related to the rate reconciliation and income taxes paid.	This ASU will be effective for annual periods beginning after December 15, 2024, on a prospective basis, with early adoption and retrospective application permitted.	LivaNova is currently evaluating the effect this standard will have on its consolidated financial statements and related disclosures.

Note 22. Subsequent Event

Restructuring

During the first quarter of 2024, the Company reorganized its operating and reporting structure upon initiating the 2024 Restructuring Plan and transitioned all ACS standalone cannulae and accessories, including ProtekDuo and transseptal (TandemHeart) cannulae, into its Cardiopulmonary segment. Operations for other ACS products, including LifeSPARC and Hemolung systems, will be discontinued by the end of 2024. For additional information, please refer to "Note 6. Restructuring."

Effective in the first quarter of 2024, LivaNova changed its reportable segments corresponding to the above-mentioned restructuring and changes in how the Company's CODM regularly reviews information, allocates resources and assesses performance. The Company's changes to its reportable segments are summarized as follows:

- LivaNova's ACS segment will be included within "Other," excluding the ACS standalone cannulae and accessories business.
- LivaNova's ACS standalone cannulae and accessories business will be included within the Cardiopulmonary reportable segment.

Exhibit 4.1

DESCRIPTION OF SECURITIES REGISTERED

UNDER SECTION 12 OF THE EXCHANGE ACT

LivaNova PLC (the "Company") has one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), which are its ordinary shares, which have a nominal or par value of £1.00 each (the "ordinary shares"). The below is a summary of the applicable provisions of the Company's Articles of Association (the "Articles") and certain relevant provisions of applicable law. The summary is not complete and we encourage you to read this summary, the Articles and the other documents we refer to herein for a more complete understanding of the ordinary shares.

General

Under English law, persons who are neither residents nor nationals of the U.K. may freely hold, vote and transfer the ordinary shares in the same manner and under the same terms as U.K. residents or nationals.

Share Capital

As of December 31, 2023, the entire issued share capital of the Company is comprised of 53,942,151 ordinary shares.

Dividends and Distributions

Under English law, the Company may only pay dividends out of profits that are available for that purpose. The Company's profits available for distribution are (in basic terms) its accumulated, realized profits, so far as not previously utilized by distribution or capitalization, less its accumulated, realized losses, so far as not previously reduced or extinguished in a reduction or reorganization of capital duly made. The amount of the Company's distributable reserves is a cumulative calculation. The Company may be profitable in a single financial year but unable to pay a dividend if the profits of that year do not offset all previous years' accumulated, realized losses.

Additionally, the Company may only make a distribution if the amount of its net assets is not less than the aggregate of its called-up share capital and undistributable reserves, and if, and to the extent that, the distribution does not reduce the amount of those assets to less than that aggregate.

The Articles permit the Company shareholders, by ordinary resolution (a resolution passed by a simple majority of those shareholders present in person or by proxy and voting in respect of the relevant resolution), to declare dividends but no dividend shall exceed the amount recommended by the directors.

In addition, the directors may decide to pay interim dividends. The entitlement to a dividend lapses if unclaimed by a shareholder for 12 years from the date when it became due for payment.

The Articles also permit a scrip dividend scheme under which the directors of the Company may offer any holders of ordinary shares the right to receive shares, credited as fully paid, instead of cash in respect of all or any dividend subject to certain terms and conditions set out in the Articles.

Voting Rights

The shareholders in general meeting must vote by poll. On a poll taken at a general meeting, each qualifying Company shareholder present in person or by proxy and entitled to vote on the resolution has one vote for every ordinary share held by such shareholder.

In the case of joint holders, the vote of the senior holder who tenders a vote shall be accepted to the exclusion of the votes of the other joint holders. The necessary quorum for a general meeting is shareholders who together represent at least a majority of the voting rights of all Company shareholders entitled to vote at the meeting, present in person or by proxy, save that if the Company has only one shareholder entitled to attend and vote at the general meeting, one qualifying Company shareholder present at the meeting and entitled to vote is a quorum.

Amendment to the Articles

Under the UK Companies Act 2006 (the "Companies Act"), the shareholders may amend the articles of association of the Company by special resolution (a resolution passed by the holders of at least 75% of those shares voted either in person or by proxy on the relevant resolution) at a general meeting. The notice of the general meeting at which a special resolution is proposed shall be required to specify the intention to propose any resolutions at the meeting as special resolutions.

Modification of rights

The rights attaching to the ordinary shares may be modified with the written consent of the holders of 75% in nominal value of the issued ordinary shares (excluding any shares of that class held as treasury shares), or by a special resolution of the holders of the issued ordinary shares, but not otherwise.

General Meetings and Notices

An annual general meeting must be called by not less than 21 clear days' notice (i.e., excluding the date of receipt or deemed receipt of the notice and the date of the meeting itself). All other general meetings must be called by not less than 14 clear days' notice. General meetings that are not annual general meetings may be called by shorter notice if agreed to by a majority in number of the Company shareholders having the right to attend and vote at the meeting, being a majority who together hold not less than 95% in nominal or par value of the ordinary shares given that right. At least seven clear days' notice is required for any adjourned meeting, and such meeting must be held not less than 14 days but not more than 28 days after adjournment at such time and place specified for the purpose in the notice calling the meeting or as decided by the chairman of the meeting.

Subject to the Companies Act, notices of general meetings shall be given to every holder of ordinary shares as of the record date for the relevant meeting. Beneficial owners nominated to enjoy information rights under the Companies Act and the Company's auditors are also entitled to receive notices of, and other communications relating to, general meetings. Under the Companies Act, the Company is required to hold an annual general meeting of its shareholders within six months from the day following the end of its fiscal year. Subject to the foregoing, a general meeting may be held at a time and place determined by the Company's board.

Under the Companies Act, the Company must convene such a meeting once it has received requests to do so from Company shareholders representing at least 5% of the paid up share capital of the Company carrying voting rights at general meetings (excluding any paid-up capital held as treasury shares).

Under the Articles, a general meeting may also be called 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 Company shareholders may call a general meeting for the purpose of appointing one or more directors.

Disclosure of interests in ordinary shares

Under the Companies Act, the Company may serve a notice requiring a person it knows, or has reasonable cause to believe, has an interest in any ordinary shares (or to have had an interest in the previous three years) to confirm or deny the fact, and, if the former, to disclose certain information about the interest, including information about any other person with an interest in the ordinary shares. If a shareholder fails to comply with such a notice within such reasonable period of time as may be set out in the notice, the shareholder shall not be entitled to attend or vote either personally or by proxy at a general meeting, and, where the shares to which such failure to comply represent at least 0.25 per cent. in nominal value of the issued shares of their class, in respect of such shares, no dividends shall be paid, and no transfers of such shares shall be registered save in certain circumstances.

Return of Capital and Winding Up

On a return of capital on a liquidation, reduction of capital or otherwise, the surplus assets of the Company available for distribution among the holders of the ordinary shares shall be applied in the same order of priority as applies in respect of dividends (i.e. on a pro rata basis based on the number of ordinary shares held by each holder, with all ordinary shares ranking equally amongst themselves for such purpose).

In the event of a voluntary winding up of the Company, the liquidator may, with the sanction of a special resolution of the Company and any other sanction required by law, subject to the Companies Act, divide among the Company shareholders the whole or any part of the assets of the Company, whether they consist of property of the same kind or not, and the liquidator may, for that purpose, value any assets as they deem fair and determine how the division shall be carried out as between the shareholders or different classes of shareholders, and may vest the whole or any part of the assets in trustees upon such trusts for the benefit of the Company shareholders as he, with the like sanction, may determine. No Company shareholder shall be compelled to accept any assets upon which there is a liability.

Authority to Allot New Shares and Pre-Emption Rights

Under the Companies Act, the Board may only allot shares in the Company or grant rights to subscribe for, or to convert any security into, shares in the Company if it is authorized to do so by the Articles or by ordinary shareholder resolution. There are certain exceptions under the Companies Act, including for shares allotted pursuant to an employees' share scheme (as such term is defined in the Companies Act).

At the annual general meeting of shareholders held on June 12, 2023 (the "2023 AGM"), the Company's shareholders passed an ordinary resolution granting the Board authority to allot new shares and to grant rights to subscribe for, or to convert any

security into, shares, up to an aggregate nominal value of £10,770,848, which is equivalent to approximately 20% of the Company's total issued ordinary share capital (excluding treasury shares) as at April 21, 2023. This authority (unless previously revoked, varied or renewed by the Company) will expire at the end of the next annual general meeting of the Company or, if earlier, the close of business on the date that is fifteen (15) months after the 2023 AGM, save that the directors may, before this authority expires, make offers or agreements which would or might require shares in the Company to be allotted, or rights to subscribe for, or convert securities into, shares to be granted, after its expiry and the directors may allot shares or grant rights to subscribe for, or convert securities into, shares pursuant to such offers or agreements as if this authority had not expired.

Under the Companies Act, the allotment of equity securities that are to be paid for wholly in cash must be offered first to the existing holders of equity securities in proportion to the respective nominal amounts (i.e., par values) of their holdings on the same or more favorable terms, unless a special resolution to the contrary has been passed or the Articles otherwise provide an exclusion of these pre-emption rights. In this context, equity securities generally means shares other than shares which, with respect to dividends or capital, carry a right to participate only up to a specified amount in a distribution, which, in relation to the Company, will include the ordinary shares, and all rights to subscribe for or to convert securities into such ordinary shares. There are certain exceptions under the Companies Act, including for equity securities allotted pursuant to an employees' share scheme (as such term is defined in the Companies Act) and for equity securities wholly or partly paid up otherwise than in cash.

At the 2023 AGM, the Company's shareholders passed a special resolution to give the Board the power to allot new equity securities for cash or to sell treasury shares held by the Company for cash, in each case without first offering them to shareholders in proportion to their existing holdings up to an aggregate nominal amount of £10,770,848, which is equal to approximately 20% of the Company's issued ordinary share capital (excluding treasury shares) as at April 21, 2023. This power (unless previously revoked, varied or renewed by the Company) will expire at the end of the next annual general meeting of the Company or, if earlier, the close of business on the date that is fifteen (15) months after the 2023 AGM, save that the directors may, before this power expires, make offers or agreements which would or might require equity securities to be allotted and/or treasury shares to be sold after its expiry and the directors may allot equity securities and/or sell treasury shares pursuant to such offers or agreement as if this power had not expired.

Alteration of Share Capital/Repurchase of Ordinary Shares

Subject to the Companies Act, and without prejudice to any relevant special rights attached to any class of shares, the Company may, from time to time, among other things:

- increase its share capital by allotting and issuing new shares in accordance with the Articles and any relevant shareholder resolution (see "Authority to Allot New Shares and Pre-Emption Rights" above);
- consolidate all or any of its share capital into shares of a larger nominal amount (i.e., par value) than the existing shares, subject to this being approved by its shareholders by means of an ordinary resolution;
- subdivide any of its shares into shares of a smaller nominal amount (i.e., par value) than its existing shares, subject to this being approved by its shareholders by means of an ordinary resolution; or
- redenominate its share capital or any class of share capital, subject to this being approved by its shareholders by means of an ordinary resolution.

The Companies Act prohibits the Company from purchasing its own shares unless the terms of the contract pursuant to which the purchase(s) are to be made have been approved by its shareholders by means of an ordinary resolution.

Transfer of ordinary shares

The Articles allow holders of ordinary shares to transfer all or any of their shares by instrument of transfer in writing in any usual form or in any other form which is permitted by the Companies Act and is approved by the Company's board. The instrument of transfer must be executed by or on behalf of the transferor and (in the case of a transfer of any ordinary shares which are not fully paid) by or on behalf of the transferee.

The Company may not charge a fee for registering the transfer of a share.

The Company's board may, in its absolute discretion, refuse to register a transfer of shares in certificated form if it is not fully paid or is with respect to a share on which the Company has a lien and sums in respect of which the lien exists is payable and is not paid within 14 clear days after due notice has been sent. If the Company's board refuses to register a transfer of a share, it shall send notice to the transferee of notice of the refusal together with reasons for the refusal and any instrument of transfer shall (except in the case of fraud) be returned when the notice of refusal is sent.

Material U.K. Tax Consequences of Holding Ordinary Shares for U.S. Holders

The following summarizes certain U.K. tax consequences generally applicable to ordinary shares and is based on current U.K. tax law and HM Revenue & Customs ("HMRC") published practice, both of which are subject to change. It does not purport to be a complete analysis of all U.K. tax considerations which may arise. It relates only to persons who (i) are absolute beneficial owners holding ordinary shares as a capital investment, (ii) are resident for tax purposes solely in the United States, and (iii) do not carry on (whether solely or in partnership) any trade, profession or vocation in the United Kingdom through a branch or agency to which those shares are attributable, or, in the case of corporate holders of ordinary shares, do not carry on a trade in the United Kingdom through a permanent establishment to which those shares are attributable (persons meeting each of the descriptions in (i), (ii) and (iii) being "US Holders"). It may not apply to certain categories of U.S Holders, such as those who acquired their ordinary shares in connection with employment.

Shareholders should consult their own tax advisors in respect of the tax consequences related to receipt, ownership, purchase or sale or other disposition of their ordinary shares.

Dividends

U.S. Holders will not be subject to U.K. income tax or U.K. corporation tax on income in relation to any dividends received in respect of their ordinary shares. Additionally, no U.K. tax is required to be withheld from any dividends paid in respect of ordinary shares.

Disposition and Transfers

U.S. Holders will not be subject to U.K. tax on capital gains arising on the disposal of their ordinary shares.

Treaty relief

If the U.K. tax treatment of dividends paid to U.S. Holders, or the U.K. taxation of capital gains realized by U.S. Holders from the disposal of ordinary shares, were to change, then eligible U.S. Holders may be able to claim relief from applicable U.K. tax

under the provisions of the tax treaty between the U.K. and the United States of America. Relief under the treaty generally has to be claimed rather than applying automatically.

Stamp duty and stamp duty reserve tax ("SDRT")

Transfers of ordinary shares within a clearance service or depositary receipt system should not give rise to a liability to U.K. stamp duty or SDRT, provided that no instrument of transfer is executed and no election that applies to ordinary shares is, or has been, made by the clearance service or depositary receipt system under Section 97A of the U.K. Finance Act 1986. We understand that HMRC regards the facilities of the Depositary Trust Company as a clearance service for these purposes.

Transfers of ordinary shares within a clearance service or depositary receipt system where an election has been made by the clearance service or depositary receipt system under Section 97A of the U.K. Finance Act 1986 will generally be subject to SDRT (rather than U.K. stamp duty) at the rate of 0.5% of the amount or value of the consideration or, in certain circumstances, the value of the shares. SDRT is a liability of the transferee of the shares.

Transfers of ordinary shares that are held in certificated form by means of an instrument of transfer will generally be subject to U.K. stamp duty at the rate of 0.5% of the consideration given (rounded up to the nearest £5 per instrument), typically (although not necessarily) payable by the transferee. An exemption from U.K. stamp duty is available for a written instrument transferring an interest in ordinary shares where the amount or value of the consideration is £1,000 or less, and it is certified on the instrument that the transaction effected by the instrument does not form part of a larger transaction or series of transactions for which the aggregate consideration exceeds £1,000.

SDRT may be payable on an agreement to transfer ordinary shares, generally at the rate of 0.5% of the consideration given in money or money's worth under the agreement. Any SDRT paid would be refundable, and any unpaid charge to SDRT would be discharged, if an instrument of transfer is executed pursuant to the agreement which gave rise to the SDRT and U.K. stamp duty is duly paid on the instrument transferring the relevant ordinary shares within six years of the date on which the agreement was made or, if the agreement was conditional, the date on which the agreement became unconditional.

In certain circumstances the stamp duty or SDRT liability may be calculated by reference to the market value of the ordinary shares concerned in the relevant transaction, rather than the consideration given for the transfer or agreement for transfer.

If ordinary shares (or interests therein) are subsequently transferred into a clearance service or depositary receipt system, U.K. stamp duty or SDRT will generally be payable at the rate of 1.5% of the amount or value of the consideration given or, in certain circumstances, the value of the shares (save to the extent that an election has been made under Section 97A of the U.K. Finance Act 1986). This liability for U.K. stamp duty or SDRT will strictly be accountable for by the clearance service or depositary receipt system, as the case may be, but will, in practice, generally be reimbursed by participants in the clearance service or depositary receipt system.

Transfers through CREST of CREST depositary interests ("CDIs"), representing underlying ordinary shares will be generally liable to SDRT, rather than U.K. stamp duty, at the 0.5% rate. CREST is obliged to collect SDRT on relevant transactions settled within the CREST system.

This discussion is for general information only and does not constitute tax or legal advice. In addition, US Holders should consult their own tax advisors regarding the U.S. tax consequences of the purchase, ownership and disposition of ordinary shares.

Stock Exchange Listing

The ordinary shares trade on Nasdaq under the symbol “LIVN”.

LivaNova

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October 31, 2022

Michael Hutchinson
Ridgewood, New Jersey

Dear Mike,

We are pleased to offer you employment with LivaNova USA Inc. (the "Company"), a wholly owned subsidiary of LivaNova PLC ("LivaNova"), as the Senior Vice President (SVP) Chief Legal Officer, effective from 14, November 2022 (your 'start date') on the terms and conditions set forth in this letter. In this role, you will report to me and serve as a member of the Executive Leadership Team ("ELT") of LivaNova PLC. Your principal place of employment will be the Company's office in Houston, Texas.

Base Salary: You will receive an annual base salary of $490,000 ("Base Salary"), payable by the Company bi-weekly in accordance with its normal payroll practices and subject to all applicable withholdings and deductions. You will be eligible for a merit increase in 2023, at the same time as other executive officers of the Company.

Annual Incentive Compensation: You will be eligible to participate in the Company's annual Short Term Incentive Compensation Plan or any successor or replacement program, with each year's annual bonus having a target of 65% of your Base Salary, calculated and payable in accordance with the Company's normal practices. For the 2022 performance year, you will be eligible for a pro-rated annual bonus, payable based on the number of days you are employed during 2022 and based on the Company's actual performance during 2022 relative to the established metrics.

Long-Term Incentives: You will be eligible to participate in the Company's Long-Term Incentive Plan ("LTIP") beginning in 2023. The annual target grant-date aggregate value of awards made to you under the LTIP will be $1,000,000. Regular annual LTIP awards are comprised of Performance Share Units, Stock Appreciation Rights, and Time-Based Restricted Stock Units. Awards under the LTIP are subject to the approval of the Compensation Committee of LivaNova's Board of Directors.

Employee Health and Welfare Benefits: You will be offered the same benefits as all other US employees of the Company upon meeting eligibility requirements as provided for in any benefit plan documents, including participating in the Company's 401(k) plan, and any benefits provided to other executives commensurate with your job level, such as tax advice. The Company reserves the right to change or terminate any aspect of our benefit offerings at any time.

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New Hire Cash Bonus: You will receive a one-time cash bonus in the amount of $200,000 (less applicable withholdings and deductions) to be paid in three installments: 50% on the first payroll date after your start date; 25% on the first payroll date six months after your start date; and 25% on the first payroll date after the first anniversary of your start date, subject to your continued employment through the applicable vesting date. If you voluntarily terminate your employment with the Company within one (1) year of your start date, the Company reserves the right to seek a pro-rata repayment of this one-time bonus.

One Time Restricted Stock Unit Grant: On LivaNova's next quarterly equity grant date after your start date, we will recommend to the Compensation Committee that you be granted a one-time Restricted Stock Unit ("RSU") award under the LTIP with a grant-date value of $500,000, vesting 25% per year on each of the first four anniversaries of the grant date.

Relocation Assistance: You agree to relocate to Houston, Texas within 24 months after your start date. LivaNova provides assistance with your relocation from your current home in New Jersey to Houston, Texas by providing relocation services through the Company's preferred vendor, including closing costs on the sale of your principal residence and on your new home, costs of the move of goods to your new home, and a miscellaneous allowance of $5,000. A copy of the relocation policy is attached. The miscellaneous allowance may be used to pay, for example, the costs for excess baggage or air shipment meant to address immediate needs while awaiting ground shipment delivery. Any possible tax liability arising from relocation assistance is your responsibility and will not be paid by the Company. If you voluntarily terminate your employment with the Company within one (1) year of your relocation, the Company reserves the right to seek full repayment of all paid or reimbursed relocation assistance costs, including Temporary Living costs described below.

Temporary Living: During the first twelve months of your employment, you will be provided accommodation in London sufficient to meet your needs for the time that you spend in LivaNova's London office. For your relocation to Houston, the Company supports temporary living expenses for up to $12,000 in the host location while you and your spouse are in between permanent housing. Temporary living expenses are covered in accordance with LivaNova's travel and expense policies. Please retain receipts for these expenses.

Stock Ownership Policy: LivaNova's stock ownership policy requires you to maintain ownership of LivaNova equity with a market value equal to three times your current salary.

At Will Employment: Your employment is "at will" and may be terminated with or without cause, and with or without notice, at any time by the Company or by you; provided that you shall be required to give the Company two (2) months' advance written notice of the voluntary termination of your employment. Providing notice does not create an express or implied contract for continued

employment or employment for a fixed period. If your employment is terminated by the Company without cause, then contingent upon your execution, within 30 days following receipt, of a release of claims in a form provided by the Company, and such release becoming effective according to its terms, the Company shall provide you with a lump-sum severance payment equal to twelve (12) months of your then-current base salary (less applicable withholdings and deductions), which shall be paid within 30 days following your termination date, and any other benefits to which you may be entitled under the Company's severance policies and practices for executive officers. This letter is not intended to alter the employment-at-will relationship between you and the Company in any way. It does, however, supersede any other written or verbal representation made by a representative of the Company or LivaNova relative to your employment with the Company.

Representations: You have not entered into any agreements, understandings, or arrangements with any person or entity that you would breach as a result of, or that would in any way preclude or prohibit you from accepting this offer of employment, being employed with the Company, or performing any of the duties and responsibilities provided for in this letter. You do not possess any confidential, proprietary business information belonging to any former employer and you will not use any confidential, proprietary business information belonging to any former employer in connection with your employment with the Company.

Conditions: This employment offer is conditional upon: (a) satisfactory completion, in the Company's sole discretion, of a pre-employment background investigation, which may include, but not be limited to, a review of academic records, employment history, consumer credit, criminal history, driving record, references, and drug screening; (b) the Company receiving proof of your authorization to work in the United States; and (c) your execution of the Company's "Confidentiality Agreement" and "Inventions, Confidentiality and Non-Compete Agreement" on your start date.

Entire Agreement: This letter constitutes the entire agreement between you and the Company relating to the subject matter hereof and supersedes all prior or simultaneous representations, discussions, negotiations, and agreements, whether written or oral. This letter may be amended or modified only by a written agreement, signed by you and the Company. No oral waiver, amendment or modification will be effective.

Governing Law: This letter will be governed by and construed in accordance with the laws of the State of Texas, without giving effect to the conflict of law principles thereof.

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If the terms and conditions of this offer of employment are acceptable to you, please sign below and return this letter to me.

LivaNova USA Inc.

_____
Damien McDonald

LivaNova PLC

_____
Damien McDonald

Acceptance of Offer:
I have read and understood, and I accept all the terms of the offer of employment as set forth in the foregoing letter.

_____
Michael Hutchinson

Date: _____

EXHIBIT 21.1

LIST OF SUBSIDIARIES
LivaNova PLC and Subsidiaries
As of December 31, 2023

Company	Jurisdiction of Formation
LivaNova Plc	United Kingdom
LivaNova Plc (Italian Branch)	Italy
Caisson Interventional, LLC	USA
CardiacAssist, Inc. Dba TandemLife	USA
Cyberonics Holdings, LLC	USA
Cyberonics Netherlands CV	Netherlands
ALung Technologies, Inc.	USA
ImThera Medical, Inc.	USA
LivaNova Australia PTY Limited	Australia
LivaNova Austria GmbH	Austria
LivaNova Belgium N.V.	Belgium
LivaNova Brasil Comércio e Distribuição de Equipamentos Médico-hospitalares Ltda	Brazil
LivaNova Canada, Inc.	Canada
LivaNova Cayman Limited	Cayman Islands
LivaNova Chile SpA	Chile
LivaNova (China) Medical Technology Co. Ltd	China
LivaNova Colombia Sas	Colombia
LivaNova Deutschland GmbH	Germany
LivaNova Espana, S.L.	Spain
LivaNova Finland Oy	Finland
LivaNova Holding S.r.l.	Italy
LivaNova Hong Kong Limited	Hong Kong
LivaNova Hungary Limited Liability Company	Hungary
LivaNova, Inc.	USA
LivaNova India Private Limited	India
LivaNova IP Limited	United Kingdom
LivaNova Japan K.K.	Japan
LivaNova Malaysia Sbn. Bhd.	Malaysia
LivaNova Nederland N.V.	Netherlands
LivaNova Norway AS	Norway
LivaNova Poland Sp. Z o.o.	Poland
LivaNova SAS	France
LivaNova Scandinavia AB	Sweeden
LivaNova Singapore Pte Ltd	Singapore
LivaNova Site Management S.r.l.	Italy
LivaNova Switzerland SA	Switzerland
LivaNova Taiwan Co. Ltd	Taiwan
LivaNova (Thailand) Ltd	Thailand
LivaNova Turkey Medikal Limited Sirketi	Turkey
LivaNova UK Limited	United Kingdom
LivaNova USA, Inc.	USA

Company	Jurisdiction of Formation
LIVN Irishco 2 UC	Ireland
LIVN UK Holdco Limited	United Kingdom
LIVN UK 2 Co. Limited	United Kingdom
LIVN US 3, LLC	USA
LIVN US 5, LLC	USA
Sorin Group Italia S.r.l.	Italy
Sorin Group Rus LLC	Russia

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-228411, 333-207478, 333-265563 and 333-273450) and Form S-3 (No. 333-258359) of LivaNova PLC of our report dated February 29, 2024 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Houston, Texas
February 29, 2024

EXHIBIT 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, William A. Kozy, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2023 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 Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934 (the "Exchange Act")) and internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) 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: February 29, 2024

/s/ WILLIAM A. KOZY
William A. Kozy
Interim Chief Executive Officer and Chair of the Board of Directors
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER

PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Alex Shvartsburg, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2023 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 Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934 (the "Exchange Act")) and internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) 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: February 29, 2024

/s/ ALEX SHVARTSBURG
Alex Shvartsburg
Chief Financial Officer
(Principal Accounting and 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

AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Each of William A. Kozy, Interim Chief Executive Officer and Chair of the Board of Directors of LivaNova PLC (the "Company"), and Alex Shvartsburg, 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 Annual Report on Form 10-K of the Company and its consolidated subsidiaries for the year ended December 31, 2023, 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: February 29, 2024

/s/ WILLIAM A. KOZY
William A. Kozy
Interim Chief Executive Officer and Chair of the Board of Directors
(Principal Executive Officer)

/s/ ALEX SHVARTSBURG
Alex Shvartsburg
Chief Financial Officer
(Principal Accounting and 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.

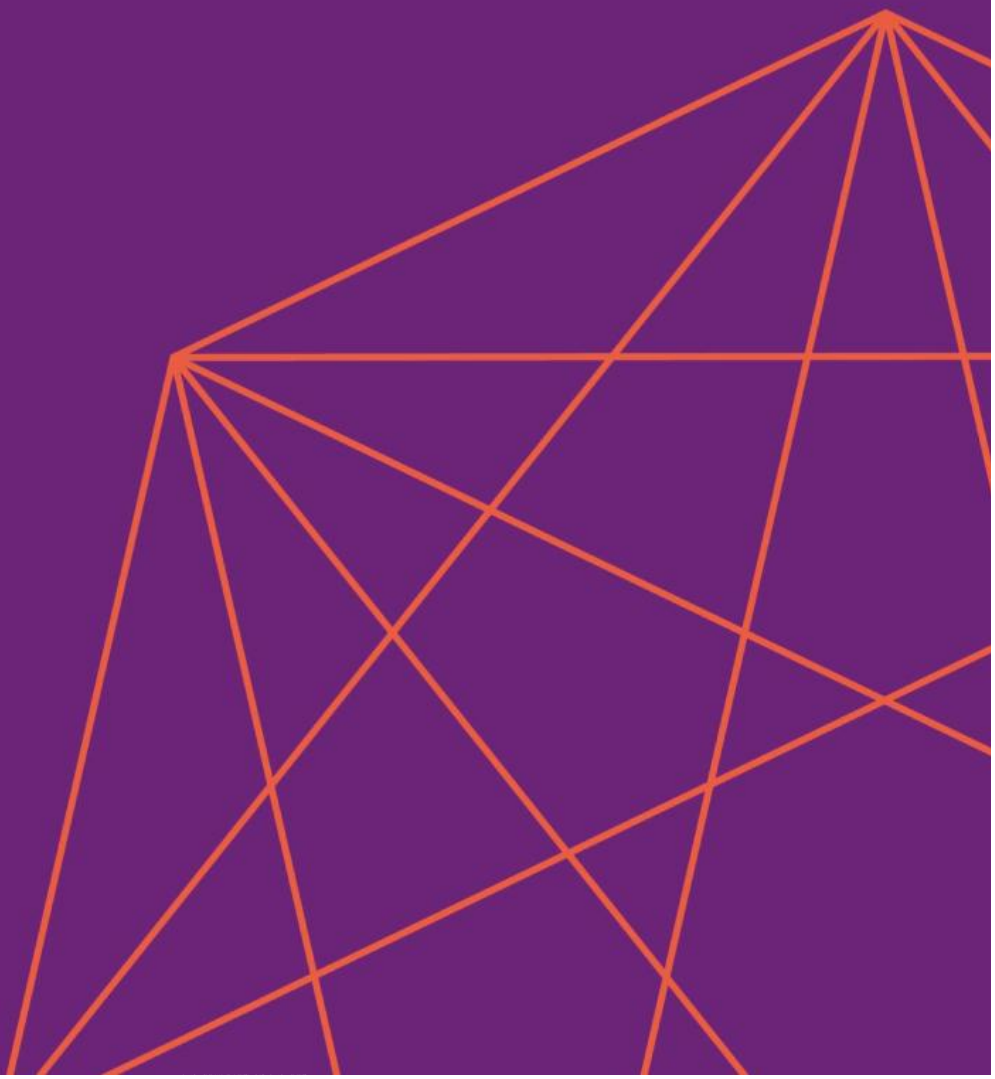
LivaNova

Health innovation that matters

Compensation Recoupment Policy			
Policy #	n/a	Audience	All
Issue date:	19 July 2023	Approver	Board of Directors

Compensation Recoupment Policy

19 July 2023



LivaNova Compensation Recoupment Policy

Introduction

The LivaNova Plc ("LivaNova" or the "Company") Board of Directors ("Board") believes that the success of the Company for the benefit of its members as a whole requires it to create and maintain a culture that emphasizes integrity and accountability and that reinforces the Company's pay-for-performance compensation philosophy. The Board has therefore adopted this policy (the "Policy"), which provides for the recoupment of certain executive compensation in circumstances where the Board determines that recoupment is appropriate and warranted, including the filing of a material restatement of the Company's financial results, as contemplated in Section 10D of the U.S. Securities Exchange Act of 1934.

Administration

This Policy shall be administered by the Compensation Committee of the Board (the "Committee"). Any determinations made by the Committee shall be final and binding on all affected individuals.

Covered Executives

This Policy applies to the Company's current and former members of the LivaNova Executive Leadership Team and such other senior executives or employees whom the Committee may deem subject to the Policy from time to time ("Covered Executives").

Recoupment

The Company may recoup any Incentive Compensation, as defined below, awarded or paid to a Covered Executive based on:

a. the achievement of financial results that are subsequently the subject of a restatement due to material noncompliance with any financial reporting requirement under either GAAP or the federal securities laws, other than as a result of changes to accounting rules and regulations, and regardless of individual fault ("Situation A"), or

b. a subsequent finding by the Committee that financial information or performance metrics used to determine the amount of the Incentive Compensation are materially inaccurate, regardless of individual fault ("Situation B"), or

c. significant misconduct by the Covered Executive or an employee under the supervision of the Covered Executive, resulting in a violation of a significant Company policy, law or regulation that causes material harm to the Company ("Situation C").

For purposes of this Policy, "Incentive Compensation" includes, without limitation, any of the following: annual cash bonuses and other short-term and long-term cash incentives, stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, and performance stock units. For the avoidance of doubt, the following elements of compensation are not Incentive Compensation: salaries.

Amount Subject to Recoupment

In Situations A and B, the amount to be recovered, subject to the Committee's discretion, should ordinarily be the excess of the Incentive Compensation paid to the Covered Executive in the preceding three fiscal years based on the erroneous data over the Incentive Compensation that would have been paid to the Covered Executive had it been based on the restated or corrected results, as determined by the Committee. If the Committee cannot determine the amount of excess Incentive Compensation received by the Covered Executive directly from the restated or corrected results, then it will make its determination based on a reasonable estimate of the effect of the restatement or correction.

In Situation C, the determination by the Committee of whether to recoup Incentive Compensation may be influenced by a variety of factors, including, but not limited to, (i) the compensation structure for the Covered Executive, (ii) pay equity factors, (iii) retention, promotion, or succession planning factors, (iv) whether the underlying conduct was an isolated occurrence, (v) feasibility and cost of implementation, (vi) legal and compliance factors, and (vii) whether other disciplinary actions have been taken against the Covered Executive. If the Committee determines that it is appropriate to recoup Incentive Compensation from the Covered Executive, the Committee shall determine in its sole discretion the amount of Incentive Compensation to recoup, provided that only Incentive Compensation paid or settled within three years prior to the discovery of the misconduct shall be subject to recoupment.

Method of Recoupment

The Committee will determine, in its sole discretion, the methods for recouping Incentive Compensation, which may include, without limitation:

a. requiring reimbursement of cash Incentive Compensation previously paid;

b. seeking recovery of any gain realized on the vesting, exercise, settlement, sale, transfer, or other disposition of any equity-based awards;

c. offsetting the recouped amount from any compensation otherwise owed by the Company to the Covered Executive;

d. cancelling outstanding vested or unvested equity awards; and/or

e. taking any other remedial and recovery action permitted by law, as determined by the Committee.

No Indemnification or Advancement

Notwithstanding the provisions of the Company's Articles of Association, or any Deeds of Indemnity granted by the Company, or any Company policy to the contrary, the Company shall not (i) indemnify any Covered Executives against the loss of any Incentive Compensation recovered pursuant to this Policy, or (ii) advance expenses for the defense of any claim or action by the Company to recoup Incentive Compensation under this Policy.

Interpretation

The Committee is authorized to interpret and construe this Policy and to make all determinations necessary, appropriate, or advisable for the administration of this Policy, subject to the constraints, if any, of applicable law.

Effective Date

This Policy shall be effective as of the date it is adopted by the Board (the "Effective Date") and shall apply to Incentive Compensation that is approved, awarded or granted to Covered Executives on or after that date.