

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q

(Mark One)



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

For the quarterly period ended June 30, 2022

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 1-7928

BIO-RAD LABORATORIES, INC.

(Exact name of registrant as specified in its charter)

Delaware

94-1381833

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification No.)

1000 Alfred Nobel Drive, Hercules, California

94547

(Address of principal executive offices)

(Zip Code)

(510) 724-7000

(Registrant's telephone number, including area code)

No Change

(Former name, former address and former fiscal year, if changed since last report.)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A Common Stock, Par Value \$0.0001 per share	BIO	New York Stock Exchange
Class B Common Stock, Par Value \$0.0001 per share	BIOb	New York Stock Exchange

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 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. (Check one):

Large accelerated filer



Non-accelerated filer



Accelerated filer



Smaller reporting company



Emerging growth company



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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐

No ☒

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Common Shares Outstanding at July 22, 2022:

Class A - 24,633,863

Class B - 5,063,720

BIO-RAD LABORATORIES, INC.

FORM 10-Q JUNE 30, 2022

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INFORMATION RELATING TO FORWARD-LOOKING STATEMENTS

Other than statements of historical fact, statements made in this report include forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, without limitation, statements we make regarding our future financial performance, operating results, plans and objectives, impact of the COVID-19 pandemic on Bio-Rad's results and operations, and steps governments, universities, hospitals and private industry, including diagnostic laboratories, are taking or may take as a result of the pandemic. Forward-looking statements generally can be identified by the use of forward-looking terminology, such as "believe," "expect," "anticipate," "may," "will," "intend," "estimate," "continue," or similar expressions or the negative of those terms or expressions. Such statements involve risks and uncertainties, which could cause actual results to vary materially from those expressed in or indicated by the forward-looking statements. We have based these forward-looking statements on our current expectations and projections about future events. However, actual results may differ materially from those currently anticipated depending on a variety of risk factors including, but not limited to, the duration, severity and impact of the COVID-19 pandemic, global economic conditions, supply chain issues, our ability to develop and market new or improved products, our ability to compete effectively, foreign currency exchange fluctuations, reductions in government funding or capital spending of our customers, international legal and regulatory risks, product quality and liability issues, our ability to integrate acquired companies, products or technologies into our company successfully, changes in the healthcare industry, natural disasters and other catastrophic events beyond our control, and other risks and uncertainties identified under "Part II, Item 1A, Risk Factors" of this Quarterly Report on Form 10-Q. We caution you not to place undue reliance on forward-looking statements, which reflect an analysis only and speak only as of the date hereof. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise, except as required by law.

PART I – FINANCIAL INFORMATION

[Item 1. Financial Statements](#)

BIO-RAD LABORATORIES, INC.
Condensed Consolidated Balance Sheets
(In thousands, except share data)

	June 30, 2022	December 31, 2021
ASSETS:	(Unaudited)	
Cash and cash equivalents	\$ 596,584	\$ 470,783
Short-term investments	1,371,075	399,135
Restricted investments	5,560	5,560
Accounts receivable, less allowance for credit losses of \$14,179 at 2022 and \$15,142 at 2021	450,324	423,537
Inventories:		
Raw materials	188,475	116,880
Work in process	158,799	142,742
Finished goods	309,856	312,617
Total inventories	657,130	572,239
Prepaid expenses	130,534	107,745
Other current assets	38,490	10,089
Total current assets	3,249,697	1,989,088
Property, plant and equipment	1,494,099	1,488,568
Less: accumulated depreciation and amortization	(1,022,778)	(997,616)
Property, plant and equipment, net	471,321	490,952
Operating lease right-of-use assets	185,150	204,798
Goodwill, net	347,323	347,343
Purchased intangibles, net	239,747	253,939
Other investments	8,088,002	14,387,006
Other assets	100,886	102,669
Total assets	<u>\$ 12,682,126</u>	<u>\$ 17,775,795</u>

The accompanying notes are an integral part of these condensed consolidated financial statements.

BIO-RAD LABORATORIES, INC.
Condensed Consolidated Balance Sheets
(continued)
(In thousands, except share data)

	June 30, 2022	December 31, 2021
LIABILITIES AND STOCKHOLDERS' EQUITY:	(Unaudited)	
Accounts payable	\$ 158,259	\$ 141,941
Accrued payroll and employee benefits	180,631	276,986
Current maturities of long-term debt and notes payable	466	489
Income and other taxes payable	25,908	46,299
Current operating lease liabilities	35,735	36,435
Other current liabilities	212,715	178,788
Total current liabilities	613,714	680,938
Long-term debt, net of current maturities	1,196,943	10,514
Deferred income taxes	1,613,528	3,059,080
Operating lease liabilities	158,529	175,938
Other long-term liabilities	176,815	182,191
Total liabilities	3,759,529	4,108,661
Stockholders' equity:		
Class A common stock, shares issued 25,156,984 and 25,133,530 at 2022 and 2021, respectively; shares outstanding 24,633,765 and 24,853,986 at 2022 and 2021, respectively	2	2
Class B common stock, shares issued and outstanding, 5,063,720 at 2022 and 5,078,452 at 2021	1	1
Additional paid-in capital	471,863	441,733
Class A treasury stock at cost, 523,219 and 279,544 shares at 2022 and 2021, respectively	(226,340)	(106,290)
Retained earnings	9,210,457	13,507,241
Accumulated other comprehensive income (loss)	(533,386)	(175,553)
Total stockholders' equity	8,922,597	13,667,134
Total liabilities and stockholders' equity	\$ 12,682,126	\$ 17,775,795

The accompanying notes are an integral part of these condensed consolidated financial statements.

BIO-RAD LABORATORIES, INC.
Condensed Consolidated Statements of Income (Loss)
(In thousands, except per share data)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Net sales	\$ 691,099	\$ 715,931	\$ 1,391,161	\$ 1,442,727
Cost of goods sold	295,118	314,333	591,620	640,502
Gross profit	395,981	401,598	799,541	802,225
Selling, general and administrative expense	208,730	213,425	406,324	439,278
Research and development expense	67,034	63,391	129,577	137,303
Income from operations	120,217	124,782	263,640	225,644
Interest expense	10,720	363	14,768	761
Foreign currency exchange (gains) losses, net	897	(1,761)	(1,231)	(1,690)
(Gains) losses from change in fair market value of equity securities and loan receivable	1,338,190	(1,030,691)	5,883,307	(2,210,094)
Other (income) expense, net	(6,710)	96	(39,307)	(17,311)
Income (loss) before income taxes	(1,222,880)	1,156,775	(5,593,897)	2,453,978
Benefit from (provision for) income taxes	295,696	(242,661)	1,297,100	(562,450)
Net income (loss)	<u>\$ (927,184)</u>	<u>\$ 914,114</u>	<u>\$ (4,296,797)</u>	<u>\$ 1,891,528</u>
Basic earnings (loss) per share:				
Net income (loss) per basic share	<u>\$ (31.12)</u>	<u>\$ 30.71</u>	<u>\$ (143.88)</u>	<u>\$ 63.49</u>
Weighted average common shares - basic	<u>29,794</u>	<u>29,764</u>	<u>29,863</u>	<u>29,793</u>
Diluted earnings (loss) per share:				
Net income (loss) per diluted share	<u>\$ (31.12)</u>	<u>\$ 30.32</u>	<u>\$ (143.88)</u>	<u>\$ 62.70</u>
Weighted average common shares - diluted	<u>29,794</u>	<u>30,148</u>	<u>29,863</u>	<u>30,167</u>

The accompanying notes are an integral part of these condensed consolidated financial statements.

BIO-RAD LABORATORIES, INC.
Condensed Consolidated Statements of Comprehensive Income (Loss)
(In thousands)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Net income (loss)	\$ (927,184)	\$ 914,114	\$ (4,296,797)	\$ 1,891,528
Other comprehensive income (loss):				
Foreign currency translation adjustments, net of income taxes	(219,036)	56,084	(347,635)	(158,241)
Foreign other post-employment benefits adjustments, net of income taxes	198	741	523	2,599
Net unrealized holding loss on available-for-sale (AFS) debt investments, net of income taxes	(6,692)	(93)	(10,721)	(1,648)
Other comprehensive income (loss), net of income taxes	(225,530)	56,732	(357,833)	(157,290)
Comprehensive income (loss)	<u>\$ (1,152,714)</u>	<u>\$ 970,846</u>	<u>\$ (4,654,630)</u>	<u>\$ 1,734,238</u>

The accompanying notes are an integral part of these condensed consolidated financial statements.

BIO-RAD LABORATORIES, INC.
Condensed Consolidated Statements of Cash Flows
(In thousands, unaudited)

	Six Months Ended June 30,	
	2022	2021
Cash flows from operating activities:		
Cash received from customers	\$ 1,323,873	\$ 1,456,601
Cash paid to suppliers and employees	(1,201,166)	(1,131,533)
Interest paid, net	(440)	(1,536)
Income tax payments, net	(86,155)	(77,573)
Dividend proceeds and miscellaneous receipts, net	41,707	22,293
Proceeds from (payments for) forward foreign exchange contracts, net	18,694	(18)
Net cash provided by operating activities	<u>96,513</u>	<u>268,234</u>
Cash flows from investing activities:		
Payments for purchases of property, plant and equipment	(43,162)	(42,935)
Proceeds from dispositions of property, plant and equipment	108	13
Proceeds from divestiture of a division	1,360	—
Payments for purchases of marketable securities and investments	(1,478,432)	(255,277)
Proceeds from sales of marketable securities and investments	313,322	32,801
Proceeds from maturities of marketable securities and investments	153,432	116,794
Net cash used in investing activities	<u>(1,053,372)</u>	<u>(148,604)</u>
Cash flows from financing activities:		
Proceeds from issuance of Notes, net of debt financing costs	1,186,220	—
Payments on long-term borrowings	(254)	(1,523)
Payments of contingent consideration	—	(561)
Proceeds from issuance of common stock and from reissuance of treasury stock under the employee stock purchase plan and upon exercise of stock options	8,444	8,107
Tax payments from net share settlement	(443)	(507)
Payments for purchases of treasury stock	(125,000)	(49,998)
Net cash provided by (used in) financing activities	<u>1,068,967</u>	<u>(44,482)</u>
Effect of foreign exchange rate changes on cash	<u>13,666</u>	<u>(5,102)</u>
Net increase in cash, cash equivalents and restricted cash	<u>125,774</u>	<u>70,046</u>
Cash, cash equivalents and restricted cash at beginning of period	471,133	667,115
Cash, cash equivalents and restricted cash at end of period	<u><u>\$ 596,907</u></u>	<u><u>\$ 737,161</u></u>

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the condensed consolidated balance sheets that agrees to the same amounts shown in the condensed consolidated statements of cash flows (in thousands):

	June 30, 2022	June 30, 2021
Cash and cash equivalents	\$ 596,584	\$ 732,836
Restricted cash included in Other current assets	13	3,436
Restricted cash included in Other assets	<u>310</u>	<u>889</u>
Total cash, cash equivalents and restricted cash shown in the condensed consolidated statements of cash flows	<u><u>\$ 596,907</u></u>	<u><u>\$ 737,161</u></u>

These restricted cash items are primarily related to performance guarantees and other restricted deposits.

The accompanying notes are an integral part of these condensed consolidated financial statements.

BIO-RAD LABORATORIES, INC.
Condensed Consolidated Statements of Changes in Stockholders' Equity
(In thousands)
(Unaudited)

	Common Stock	Additional Paid-in Capital	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
Balance at December 31, 2021	\$ 3	\$ 441,733	\$ (106,290)	\$ 13,507,241	\$ (175,553)	\$ 13,667,134
Net income (loss)	—	—	—	(3,369,613)	—	(3,369,613)
Other comprehensive income (loss), net of tax	—	—	—	—	(132,303)	(132,303)
Issuance of common stock	—	4,177	—	—	—	4,177
Stock compensation expense	—	13,521	—	—	—	13,521
Balance at March 31, 2022	\$ 3	\$ 459,431	\$ (106,290)	\$ 10,137,628	\$ (307,856)	\$ 10,182,916
Net income (loss)	—	—	—	(927,184)	—	(927,184)
Other comprehensive income (loss), net of tax	—	—	—	—	(225,530)	(225,530)
Issuance of common stock	—	(443)	—	—	—	(443)
Stock compensation expense	—	13,571	—	—	—	13,571
Purchase of treasury stock	—	—	(125,000)	—	—	(125,000)
Issuance of treasury stock	—	(696)	4,950	13	—	4,267
Balance at June 30, 2022	\$ 3	\$ 471,863	\$ (226,340)	\$ 9,210,457	\$ (533,386)	\$ 8,922,597

	Common Stock	Additional Paid-in Capital	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
Balance at December 31, 2020	\$ 3	\$ 429,376	\$ (99,907)	\$ 9,268,012	\$ 282,456	\$ 9,879,940
Net income	—	—	—	977,414	—	977,414
Other comprehensive income, net of tax	—	—	—	—	(214,022)	(214,022)
Issuance of common stock	—	4,052	—	—	—	4,052
Stock compensation expense	—	11,673	—	—	—	11,673
Purchase of treasury stock	—	—	(49,998)	—	—	(49,998)
Balance at March 31, 2021	\$ 3	\$ 445,101	\$ (149,905)	\$ 10,245,426	\$ 68,434	\$ 10,609,059
Net income	—	—	—	914,114	—	914,114
Other comprehensive income, net of tax	—	—	—	—	56,732	56,732
Issuance of common stock	—	3,548	—	—	—	3,548
Stock compensation expense	—	11,428	—	—	—	11,428
Issuance of treasury stock	—	(379)	443	(65)	—	(1)
Balance at June 30, 2021	\$ 3	\$ 459,698	\$ (149,462)	\$ 11,159,475	\$ 125,166	\$ 11,594,880

The accompanying notes are an integral part of these condensed consolidated financial statements.

BIO-RAD LABORATORIES, INC

Notes to Condensed Consolidated Financial Statements (Unaudited)

1. BASIS OF PRESENTATION AND USE OF ESTIMATES

Basis of Presentation

In this report, “Bio-Rad,” “we,” “us,” “the Company” and “our” refer to Bio-Rad Laboratories, Inc. and its subsidiaries. The accompanying unaudited condensed consolidated financial statements of Bio-Rad have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) and reflect all adjustments which are, in the opinion of management, necessary to fairly state the results of the interim periods presented. All such adjustments are of a normal recurring nature. Results for the interim period are not necessarily indicative of the results for the entire year. The condensed consolidated balance sheet at December 31, 2021 has been derived from the audited consolidated financial statements at that date but does not include all of the information and footnotes required by GAAP for complete financial statements. The condensed consolidated financial statements should be read in conjunction with the notes to the consolidated financial statements contained in our Annual Report on Form 10-K for the year ended December 31, 2021.

We evaluate subsequent events and the evidence they provide about conditions existing at the date of the balance sheet as well as conditions that arose after the balance sheet date but through the date the financial statements are issued. The effects of conditions that existed at the balance sheet date are recognized in the financial statements. Events and conditions arising after the balance sheet date but before the financial statements are issued are evaluated to determine if disclosure is required to keep the financial statements from being misleading. To the extent such events and conditions exist, disclosures are made regarding the nature of events and the estimated financial effects of those events and conditions.

Use of Estimates

The preparation of the condensed consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingencies at the date of the financial statements as well as the reported amounts of revenues and expenses during the reporting periods. Bio-Rad bases its estimates on historical experience and on various other market-specific and other relevant assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Such estimates include, but are not limited to, revenue recognition, the valuation of inventory, the valuation of intangible assets, the recognition and measurement of current and deferred income tax assets and fair value measurement of the Loan receivable. Actual results could differ materially from those estimates.

Revenue Recognition

We recognize revenue from operations through the sale of products, services, license of intellectual property and rental of instruments. Revenue from contracts with customers is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. We enter into contracts that can include various combinations of products and services, which are generally accounted for as distinct performance obligations. Revenue is recognized net of any taxes collected from customers (sales tax, value added tax, etc.), which are subsequently remitted to government authorities.

Our contracts from customers often include promises to transfer multiple products and services to a customer. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment, and may impact the timing of revenue recognition. Revenue associated with equipment that requires factory installation is not recognized until installation is complete and customer acceptance, if required, has occurred. Certain equipment requires installation due to the fact that the instruments are being operated in a clinical/laboratory environment, and the installation services could result in modification of the equipment in order to ensure that the instruments are working according to customer specifications, which are subject to validation tests upon completion of the installation. In these arrangements, which require factory installation, the delivery of the equipment and the installation are separate performance obligations. We recognize the transaction price allocated to the equipment only upon customer acceptance, as the transfer of control in relation to the equipment has occurred at that point as the customer has the ability to direct the use of and obtain substantially all of the remaining benefits from the asset. The transaction price allocated to the installation services is also recognized upon customer acceptance because without the completion of the installation services and related customer acceptance the customer cannot receive any of the benefits of the service.

At the time revenue is recognized, a provision is recorded for estimated product returns as this right is considered variable consideration. Accordingly, when product revenues are recognized, the transaction price is reduced by the estimated amount of product returns.

Service revenues on extended warranty contracts are recognized ratably over the life of the service agreement as a stand-ready performance obligation. For arrangements that include a combination of products and services, the transaction price is allocated to each performance obligation based on stand-alone selling prices. The method used to determine the stand-alone selling prices for product and service revenues is based on the observable prices when the product or services have been sold separately.

We recognize revenues for a functional license of intellectual property at a point in time when the control of the license and technology transfers to the customer. For license agreements that include sales or usage-based royalty payments to us, we recognize revenue at the later of (i) when the related sale of the product occurs, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied, or partially satisfied.

The primary purpose of our invoicing terms is to provide customers with simple and predictable methods of purchasing our products and services, not to either provide or receive financing to or from our customers. We record contract liabilities when cash payments are received or due in advance of our performance.

We do not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less. Our payment terms vary by the type and location of our customer, and the products and services offered. The term between invoicing and when payment is due is not significant.

Reagent Rental Agreements

Reagent rental agreements are a diagnostic industry sales method that provides use of an instrument and consumables (reagents) to a customer on a per test basis. These agreements may also include maintenance of the instruments placed at customer locations as well as initial training. We determine if a reagent rental arrangement contains a lease at contract commencement. Where we have determined that such an arrangement contains a lease, we next must ascertain its lease classification for purposes of applying appropriate accounting treatment as an operating, sales-type or direct financing lease. For purposes of determining the lease term used in performing the lease classification test, we include the noncancellable period of the lease together with those periods covered by the option to extend the lease if the customer is reasonably certain to exercise that option, the periods covered by an option to terminate the lease if the customer is reasonably certain not to exercise that option, and the periods covered by the option to extend (or not to terminate) the lease in which exercise of the option is controlled by the Company. While most of our reagent rental arrangements contain either the option for a lessee to extend and/or cancel, the period in which the contract is enforceable is a very short period and therefore the lease term has been limited to the noncancellable period. Generally these arrangements do not contain an option for the lessee to purchase the underlying asset.

We concluded that the use of the instrument (referred to as “lease elements”) is not within the guidance of ASC 606 but rather ASC 842. Accordingly, we first allocate the transaction price between the lease elements and the non-lease elements based on relative standalone selling prices. The determination of the transaction price requires judgment and consideration of any fixed/minimum payments as well as estimates of variable consideration. After allocation, the amount of variable payments allocated to lease components will be recognized as income under ASC 842, while the amount of variable payments allocated to non-lease components will be recognized as income in accordance with ASC 606.

Maintenance services, along with the reagents, are allocated to the non-lease elements and are recognized as income. Generally, the terms of the arrangements result in the transfer of control for reagents upon either (i) when the consumables are delivered or (ii) when the consumables are consumed by the customer.

Our reagent rental arrangements are predominantly comprised of variable lease payments that fluctuate depending on the volume of reagents purchased, as very few of such arrangements contain any fixed/minimum lease payments. Further, our reagent rental arrangements are predominantly classified as operating leases, and any sales-type leases represent in aggregate an immaterial amount of lease income. Our reported lease income is primarily variable in nature and is recognized upon delivery or as the reagents are consumed by the customer.

Revenue allocated to the lease elements of these reagent rental arrangements represented approximately 3% and 2% of total revenue for both the three and six months ended June 30, 2022 and June 30, 2021, respectively, and are included as part of Net sales in our condensed consolidated statements of income (loss).

Contract costs:

As a practical expedient, we expense as incurred costs to obtain contracts as the amortization period would have been one year or less. These costs include our internal sales force and certain partner sales incentive programs and are recorded within Selling, general and administrative expense in our condensed consolidated statements of income (loss).

Disaggregation of Revenue:

The following table presents our revenues disaggregated by geographic region (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
EMEA	\$ 217.3	\$ 229.1	\$ 436.2	\$ 476.7
APAC	152.7	172.1	313.5	341.0
United States	281.6	274.6	564.1	546.0
Other (primarily Canada and Latin America)	39.5	40.1	77.4	79.0
Total net sales	<u>\$ 691.1</u>	<u>\$ 715.9</u>	<u>\$ 1,391.2</u>	<u>\$ 1,442.7</u>

The disaggregation of our revenue by geographic region is based primarily on the location of the use of the product or service, and by industry segment sources. The disaggregation of our revenues by industry segment sources are presented in our Segment Information footnote (see Note 10).

Deferred revenues primarily represent unrecognized fees billed or collected for extended service arrangements. The deferred revenue balance at June 30, 2022 and December 31, 2021 was \$79.9 million and \$71.0 million, respectively. The short-term deferred revenue balance at June 30, 2022 and December 31, 2021 was \$60.5 million and \$50.9 million, respectively.

We warrant certain equipment against defects in design, materials and workmanship, generally for a period of one year. We estimate the cost of warranties at the time the related revenue is recognized based on historical experience, specific warranty terms and customer feedback. These costs are recorded within Cost of goods sold in our condensed consolidated statements of income (loss).

Warranty liabilities are included in Other current liabilities and Other long-term liabilities in the condensed consolidated balance sheets. Change in our warranty liability for the six months ended June 30, 2022 and 2021 were as follows (in millions):

	Six Months Ended June 30,	
	2022	2021
Balance at beginning of period	\$ 12.7	\$ 9.8
Provision for warranty	5.2	5.9
Actual warranty costs	(6.1)	(5.2)
Balance at end of period	<u>\$ 11.8</u>	<u>\$ 10.5</u>

Allowance for Credit Losses

We record trade accounts receivable at the net invoice value and such receivables are non-interest bearing. We consider receivables past due based on the contractual payment terms. Amounts later determined and specifically identified to be uncollectible are charged or written off against the allowance for credit losses.

Any adjustments made to our historical loss experience reflect current differences in asset-specific risk characteristics, including, for example, accounts receivable by customer type (public or government entity versus private entity) and by geographic location of customer.

Changes in our allowance for credit losses were as follows (in millions):

	Six Months Ended June 30,	
	2022	2021
Balance at beginning of period	\$ 15.1	\$ 19.8
Provision for expected credit losses	0.4	0.6
Write-offs charged against the allowance	(1.4)	(3.1)
Recoveries collected	0.1	—
Balance at end of period	\$ 14.2	\$ 17.3

Recent Accounting Pronouncements Adopted

In November 2021, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2021-10, "Government Assistance." The ASU includes tax credits but not within Topic 740, "Income Taxes," cash grants, grants of other assets and project grants. The ASU excludes transactions in which a government is a customer within Topic 606, "Revenue from Contracts with Customers." The ASU was effective for fiscal years beginning after December 15, 2021. The adoption of ASU 2021-10 did not have a material impact on our condensed consolidated financial statements.

In October 2021, the FASB issued ASU 2021-08, "Accounting for Contract Assets and Contract Liabilities from Contracts with Customers." ASU 2021-08 requires an acquirer in a business combination to recognize and measure contract assets and contract liabilities (deferred revenue) from acquired contracts using the revenue recognition guidance in Topic 606. Under this approach, the acquirer applies the revenue model as if it had originated the contracts. This is a departure from the current requirement to measure contract assets and contract liabilities at fair value. ASU 2021-08 is applied to business combinations occurring on or after January 1, 2023. We early adopted ASU 2021-08 on January 1, 2022, which did not have any impact on our condensed consolidated financial statements as we did not have any new acquisitions.

Recent Accounting Pronouncements to be Adopted

In June 2022, the FASB issued ASU 2022-03, "Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions." ASU 2022-03 clarifies the guidance in Topic 820, "Fair Value Measurement," and uses two examples to differentiate between (1) a restriction that is a characteristic of the security (for which the effect of the restriction is included in the equity security's fair value because it is a security-specific characteristic) and (2) a contractual sale restriction (for which the effect of the restriction is not included in the equity security's fair value because it is an entity-specific characteristic). In addition, the amendments clarify that an entity cannot recognize a contractual sale restriction as a separate unit of account (i.e. as a contra-asset or separate liability); and require new disclosures for all entities with equity securities subject to contractual sale restrictions. ASU 2022-03 is effective for fiscal years beginning after December 15, 2023, and early adoption is permitted for both interim and annual financial statements. We are currently evaluating the effect of adopting ASU 2022-03 on our condensed consolidated financial statements and disclosures.

2. FAIR VALUE MEASUREMENTS

We determine the fair value of an asset or liability based on the assumptions that market participants would use in pricing the asset or liability in an orderly transaction between market participants at the measurement date. The identification of market participant assumptions provides a basis for determining what inputs are to be used for pricing each asset or liability. A fair value hierarchy has been established which gives precedence to fair value measurements calculated using observable inputs over those using unobservable inputs. This hierarchy prioritizes the inputs into three broad levels as follows:

- Level 1: Quoted prices in active markets for identical instruments
- Level 2: Other significant observable inputs (including quoted prices in active markets for similar instruments)
- Level 3: Significant unobservable inputs (including assumptions in determining the fair value of certain investments)

Financial assets and liabilities carried at fair value and measured on a recurring basis as of June 30, 2022 are classified in the hierarchy as follows (in millions):

	Level 1	Level 2	Level 3	Total
Financial assets carried at fair value:				
Cash equivalents:				
Commercial paper	\$ —	\$ 56.8	\$ —	\$ 56.8
Time deposits	36.3	—	—	36.3
Asset-backed securities	—	4.5	—	4.5
U.S. government sponsored agencies	—	9.0	—	9.0
Money market funds	99.5	—	—	99.5
Total cash equivalents (a)	135.8	70.3	—	206.1
Restricted investments (b)	6.9	—	—	6.9
Equity securities (c)	7,815.4	—	—	7,815.4
Loan under the fair value option (d)	—	—	286.7	286.7
Available-for-sale investments:				
Corporate debt securities	—	692.2	—	692.2
U.S. government sponsored agencies	—	227.4	—	227.4
Foreign government obligations	—	10.1	—	10.1
Municipal obligations	—	27.4	—	27.4
Asset-backed securities	—	358.7	—	358.7
Total available-for-sale investments (e)	—	1,315.8	—	1,315.8
Forward foreign exchange contracts (f)	—	3.7	—	3.7
Total financial assets carried at fair value	\$ 7,958.1	\$ 1,389.8	\$ 286.7	\$ 9,634.6
Financial liabilities carried at fair value:				
Forward foreign exchange contracts (g)	\$ —	\$ 1.2	\$ —	\$ 1.2
Total financial liabilities carried at fair value	\$ —	\$ 1.2	\$ —	\$ 1.2

Financial assets and liabilities carried at fair value and measured on a recurring basis as of December 31, 2021 are classified in the hierarchy as follows (in millions):

	Level 1	Level 2	Level 3	Total
Financial assets carried at fair value:				
Cash equivalents:				
Commercial paper	\$ —	\$ 39.8	\$ —	\$ 39.8
Time deposits	7.2	10.1	—	17.3
Asset-backed securities	—	0.1	—	0.1
Foreign government obligations	—	0.8	—	0.8
Municipals obligations	—	0.3	—	0.3
U.S. government sponsored agencies	—	33.6	—	33.6
Money market funds	50.7	—	—	50.7
Total cash equivalents (a)	57.9	84.7	—	142.6
Restricted investments (b)	6.9	—	—	6.9
Equity securities (c)	13,977.5	—	—	13,977.5
Loan under the fair value option (d)	—	—	443.1	443.1
Available-for-sale investments:				
Corporate debt securities	—	182.3	—	182.3
U.S. government sponsored agencies	—	44.3	—	44.3
Foreign government obligations	—	1.0	—	1.0
Other foreign obligations	—	3.8	—	3.8
Municipal obligations	—	9.0	—	9.0
Asset-backed securities	—	87.3	—	87.3
Total available-for-sale investments (e)	—	327.7	—	327.7
Forward foreign exchange contracts (f)	—	1.7	—	1.7
Total financial assets carried at fair value	\$ 14,042.3	\$ 414.1	\$ 443.1	\$ 14,899.5
Financial liabilities carried at fair value:				
Forward foreign exchange contracts (g)	\$ —	\$ 2.8	\$ —	\$ 2.8
Total financial liabilities carried at fair value	\$ —	\$ 2.8	\$ —	\$ 2.8

(a) Cash equivalents are included in Cash and cash equivalents in the condensed consolidated balance sheets.

(b) Restricted investments are included in the following accounts in the condensed consolidated balance sheets (in millions):

	June 30, 2022	December 31, 2021
Restricted investments	\$ 5.6	\$ 5.6
Other investments	1.3	1.3
Total	\$ 6.9	\$ 6.9

(c) Equity securities are included in the following accounts in the condensed consolidated balance sheets (in millions):

	June 30, 2022	December 31, 2021
Short-term investments	\$ 55.2	\$ 71.4
Other investments	7,760.2	13,906.1
Total	\$ 7,815.4	\$ 13,977.5

- (d) The Loan under the fair value option is included in Other investments in the condensed consolidated balance sheets.
- (e) Available-for-sale investments are included in Short-term investments in the condensed consolidated balance sheets.
- (f) Forward foreign exchange contracts in an asset position are included in Other current assets in the condensed consolidated balance sheets.
- (g) Forward foreign exchange contracts in a liability position are included in Other current liabilities in the condensed consolidated balance sheets.

Level 1 Fair Value Measurements

As of June 30, 2022, we own 12,987,900 ordinary voting shares and 9,588,908 preference shares of Sartorius AG (Sartorius), of Goettingen, Germany, a process technology supplier to the biotechnology, pharmaceutical, chemical and food and beverage industries. We own approximately 37% of the ordinary outstanding shares (excluding treasury shares) and 28% of the preference shares of Sartorius as of June 30, 2022. The Sartorius family trust (Sartorius family members are beneficiaries of the trust) holds a majority interest of the outstanding ordinary shares of Sartorius. We do not have the ability to exercise significant influence over the operating and financial policies of Sartorius primarily because we do not have any representative or designee on Sartorius' board of directors and have tried and failed to obtain access to operating or financial information necessary to apply the equity method of accounting.

The changes in fair market value of our investment in Sartorius for the three months ended June 30, 2022 was \$1.28 billion loss and is recorded in our condensed consolidated statements of income (loss).

Level 2 Fair Value Measurements

To estimate the fair value of Level 2 debt securities as of June 30, 2022, our primary pricing provider uses Refinitiv as the primary pricing source. Our pricing process allows us to select a hierarchy of pricing sources for securities held. If Refinitiv does not price a Level 2 security that we hold, then the pricing provider will utilize our custodian supplied pricing as the secondary pricing source.

Available-for-sale investments consist of the following (in millions):

	June 30, 2022				
	Amortized Cost	Unrealized Gains	Unrealized Losses	Allowances for Credit Losses	Fair Value
Short-term investments:					
Corporate debt securities	\$ 699.6	\$ —	\$ (7.4)	\$ —	\$ 692.2
Municipal obligations	27.6	—	(0.2)	—	27.4
Asset-backed securities	\$ 363.1	\$ —	\$ (4.4)	\$ —	\$ 358.7
U.S. government sponsored agencies	229.0	—	(1.6)	—	227.4
Foreign government obligations	\$ 10.1	\$ —	\$ —	\$ —	\$ 10.1
	<u>\$ 1,329.4</u>	<u>\$ —</u>	<u>\$ (13.6)</u>	<u>\$ —</u>	<u>\$ 1,315.8</u>

The following is a summary of the amortized cost and estimated fair value of our debt securities at June 30, 2022 by contractual maturity date (in millions):

	Amortized Cost	Estimated Fair Value
Mature in less than one year	\$ 471.8	\$ 469.2
Mature in one to five years	705.3	696.9
Mature in more than five years	152.3	149.7
Total	<u>\$ 1,329.4</u>	<u>\$ 1,315.8</u>

Available-for-sale investments consist of the following (in millions):

	December 31, 2021				Estimated Fair Value
	Amortized Cost	Unrealized Gains	Unrealized Losses	Allowances for Credit Losses	
Short-term investments:					
Corporate debt securities	\$ 181.9	\$ 0.5	\$ (0.2)	—	\$ 182.2
Municipal obligations	9.0	—	—	—	9.0
Asset-backed securities	87.5	0.1	(0.2)	—	87.4
U.S. government sponsored agencies	44.3	—	—	—	44.3
Foreign government obligations	1.0	—	—	—	1.0
Other foreign obligations	3.8	—	—	—	3.8
Total	<u>327.5</u>	<u>0.6</u>	<u>(0.4)</u>	<u>—</u>	<u>327.7</u>

There were no significant unrealized losses as of June 30, 2022 and December 31, 2021 in either the less than or greater than 12 month categories. Our evaluation of credit losses for available-for-sale debt securities included the extent to which the fair value is less than the amortized cost basis, adverse conditions specifically related to the debt security, an industry or geographic area, and any changes in the rating of a security by a rating agency. Credit loss impairments are limited to the amount that the fair value of an instrument is less than its amortized cost basis.

At June 30, 2022, we have concluded that all payments related to our available-for-sale investments are expected to be made in full and on time at par value. The diminution of value in the intervening period is due to market conditions such as illiquidity and interest rate movements and not due to significant, inherent credit concerns surrounding the issuer. As a result, we have no allowances for credit losses on our available-for-sale investments portfolio as of June 30, 2022.

Included in other current assets are \$6.3 million and \$2.2 million of interest receivable as of June 30, 2022 and December 31, 2021, respectively, primarily associated with securities in our available-for-sale investments portfolio. The interest on these securities is typically payable semi-annually. Due to the short-term nature of our interest receivable asset, we have made an accounting policy election not to measure an allowance for credit losses for accrued interest receivable. We consider any uncollected interest receivable that is overdue greater than one year to be impaired for purposes of write-off. For the six months ended June 30, 2022, we have not written-off any uncollected interest receivable.

As part of distributing our products, we regularly enter into intercompany transactions. We enter into forward foreign exchange contracts to manage foreign exchange risk of future movements in foreign exchange rates that affect foreign currency denominated intercompany receivables and payables. We do not use derivative financial instruments for speculative or trading purposes. We do not seek hedge accounting treatment for these contracts. As a result, these contracts, generally with maturity dates of 90 days or less and denominated primarily in currencies of industrial countries, are recorded at their fair value at each balance sheet date. The notional principal amounts provide one measure of the transaction volume outstanding as of June 30, 2022 and do not represent the amount of Bio-Rad's exposure to loss. The estimated fair value of these contracts was derived using the spot rates from Refinitiv on the last business day of the quarter and the points provided by counterparties. The resulting gains or losses offset exchange gains or losses on the related receivables and payables, both of which are included in Foreign currency exchange (gains) losses, net in the condensed consolidated statements of income (loss).

The following is a summary of our forward foreign exchange contracts (in millions):

	June 30, 2022
Contracts maturing in July through September 2022 to sell foreign currency:	
Notional value	\$ 453.9
Unrealized gain/(loss)	\$ 2.5
Contracts maturing in July through September 2022 to purchase foreign currency:	
Notional value	\$ 83.4
Unrealized gain/(loss)	\$ —

Level 3 Fair Value Investments

During the fourth quarter of 2021, we extended a collateralized loan to Sartorius-Herbst Beteiligungen II GmbH ("SHB"), a private limited company incorporated under the laws of Germany, with a principal amount of €400 million due on January 31, 2029, subject to certain events which could trigger payment prior to maturity (the "Loan"). SHB used the Loan proceeds to partially finance the acquisition of interests under the Sartorius family trust ("Trust") from a beneficiary of the Trust. The Loan is collateralized by the pledge of certain of the Trust interests, which upon termination of the Trust in mid-2028 represent the right to receive Sartorius ordinary shares. Interest on the loan is payable annually in arrears at 1.5% per annum, and the entire principal amount is due at maturity. In addition to contractual interest, we are entitled to certain value appreciation rights associated with the acquired Trust interests, which upon termination of the Trust represent the right to receive Sartorius ordinary shares, that is due upon repayment of the Loan. We elected the fair value option under ASC 825, Financial Instruments for accounting of the Loan to SHB to simplify the accounting. The fair value of the Loan and value appreciation right is estimated under the income approach using a discounted cash flow, and option pricing model, respectively, which results in a fair value measurement categorized in Level 3. The significant assumptions used to estimate fair value of the Loan include an estimate of the discount rate and cash flows of the Loan and the significant assumptions used to estimate the fair value of the value appreciation right include volatility, the risk-free interest rate, expected life (in years) and expected dividend. The inputs are subject to estimation uncertainty and actual amounts realized may materially differ. An increase in the expected volatility may result in a significantly higher fair value, whereas a decrease in expected life may result in a significantly lower fair value. All subsequent changes in fair value of the Loan and value appreciation right, including accrued interest are recognized in (Gains) losses from change in fair market value of equity securities and loan receivable in our condensed consolidated statements of income (loss). The overall change in fair market value reflected in (Gains) losses from change in fair market value of equity securities and loan receivable during the six months ended June 30, 2022 was \$129.6 million, which includes \$43.7 million for the change in fair market value for the Loan and \$85.9 million for the change in fair market value of the value appreciation right. The decrease in the fair market value of the value appreciation right was due to a decline in the value of the Sartorius ordinary shares. As of June 30, 2022, the €400 million principal amount of the loan is still due on January 31, 2029.

The following table provides a reconciliation of the Level 3 Loan measured at estimated fair value (in millions):

December 31, 2021	\$	443.1
Net decrease in estimated fair market value of the loan included in Gains (losses) in fair market value of equity securities and loan receivable	\$	(129.6)
Foreign currency exchange gains (losses), net	\$	(26.8)
June 30, 2022	\$	286.7

3. GOODWILL AND OTHER PURCHASED INTANGIBLE ASSETS

Goodwill by segment are as follows (in millions):

	Life Science	Clinical Diagnostics	Total
Balances as of June 30, 2022 and December 31, 2021:			
Goodwill	\$ 333.3	\$ 349.2	\$ 682.5
Accumulated impairment losses	(41.8)	(293.4)	(335.2)
Goodwill, net	\$ 291.5	\$ 55.8	\$ 347.3

Information regarding our identifiable purchased intangible assets with finite and indefinite lives is as follows (in millions):

June 30, 2022				
	Weighted-Average Remaining Amortization Period (years)	Purchase Price	Accumulated Amortization	Net Carrying Amount
Customer relationships/lists	5.15	\$ 106.3	\$ (88.7)	\$ 17.6
Know how	3.25	164.4	(149.9)	14.5
Developed product technology	13.17	210.6	(116.4)	94.2
Licenses	6.33	58.8	(36.5)	22.3
Tradenames	7.02	6.1	(4.3)	1.8
Covenants not to compete	3.42	6.4	(3.4)	3.0
Total finite-lived intangible assets		552.6	(399.2)	153.4
In-process research and development		86.3	—	86.3
Total purchased intangible assets		\$ 638.9	\$ (399.2)	\$ 239.7

December 31, 2021

	Weighted-Average Remaining Amortization Period (years)	Purchase Price	Accumulated Amortization	Net Carrying Amount
Customer relationships/lists	5.27	\$ 111.8	\$ (90.7)	\$ 21.1
Know how	3.75	171.6	(154.9)	16.7
Developed product technology	13.42	215.6	(115.6)	100.0
Licenses	6.79	64.9	(40.6)	24.3
Tradenames	7.33	6.3	(4.4)	1.9
Covenants not to compete	3.78	6.5	(2.9)	3.6
Total finite-lived intangible assets		576.7	(409.1)	167.6
In-process research and development		86.3	—	86.3
Total purchased intangible assets		<u>\$ 663.0</u>	<u>\$ (409.1)</u>	<u>\$ 253.9</u>

Amortization expense related to purchased intangible assets is as follows (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Amortization expense	\$ 6.3	\$ 7.2	\$ 12.6	\$ 14.4

4. SUPPLEMENTAL CASH FLOW INFORMATION

The reconciliation of net income (loss) to net cash provided by operating activities is as follows (in millions):

	Six Months Ended	
	June 30, 2022	June 30, 2021
Net income (loss)	\$ (4,296.8)	\$ 1,891.5
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation and amortization	64.6	66.4
Reduction in the carrying amount of right-of-use assets	20.0	19.6
Share-based compensation	27.1	23.1
Other-than-temporary impairment losses on investment	—	0.8
(Gains) losses from change in fair market value of equity securities and loan receivable	5,883.3	(2,210.1)
Gain on divestiture of a division	(1.4)	—
Payments for operating lease liabilities	(18.6)	(21.1)
(Increase) decrease in accounts receivable	(45.8)	12.9
(Increase) decrease in inventories	(102.3)	14.3
Increase in other current assets	(10.4)	(19.5)
Decrease in accounts payable and other current liabilities	(43.1)	(34.2)
Decrease in income taxes payable	(23.3)	(13.7)
Increase (decrease) in deferred income taxes	(1,362.4)	503.8
Increase in other long-term liabilities	1.5	34.1
Other	4.1	0.3
Net cash provided by operating activities	\$ 96.5	\$ 268.2
Non-cash investing activities:		
Purchased property, plant and equipment	\$ 5.6	\$ 3.8
Purchased marketable securities and investments	\$ 3.5	\$ 1.4
Sold marketable securities and investments	\$ 16.3	\$ —

5. LONG-TERM DEBT

The principal components of long-term debt are as follows (in millions):

	June 30, 2022	December 31, 2021
3.3%, Senior Notes due 2027	\$ 400.0	\$ —
3.7%, Senior Notes due 2032	800.0	—
Less unamortized discounts and debt issuance costs	(13.3)	—
Long-term debt less unamortized discounts and debt issuance costs	1,186.7	—
Finance leases and other debt	10.7	11.0
Less current maturities	(0.5)	(0.5)
Long-term debt	<u>\$ 1,196.9</u>	<u>\$ 10.5</u>

Senior Notes due 2027 and 2032

In March 2022, pursuant to an indenture we issued \$400.0 million in principal amount of Senior Notes due March 2027 (the “2027 Notes”) and \$800.0 million in principal amount of Senior Notes due March 2032 (the “2032 Notes” and, together with the 2027 Notes, the “Notes”). The issuance of the 2027 Notes yielded net cash proceeds of \$395.7 million at an effective rate of 3.5346% and the sale of the 2032 Notes yielded net cash proceeds of \$790.5 million at an effective rate of 3.8429%. The 2027 Notes and the 2032 Notes pay a fixed rate of interest of 3.3% and 3.7% per annum, respectively. Interest on the Notes is payable semi-annually in arrears on March 15 and September 15 of each year, beginning on September 15, 2022 until the principal is paid or made available for payment. We have the option to redeem the Notes at any time, in whole or in part, at a redemption price calculated in accordance with the indenture, plus accrued and unpaid interest thereon to the redemption date. In the event of a change of control, the holders may require us to repurchase for cash all or a portion of their notes at a purchase price equal to 101% of the principal amount of the notes, plus accrued and unpaid interest, if any. Our obligations under the Notes are unsecured senior obligations that rank equally in right of payment with all of our other existing and future unsecured, unsubordinated debt. The Notes include covenants that limit our ability to, among other things, (i) grant specified liens, (ii) engage in specified sale and leaseback transactions, (iii) consolidate or merge with or into other companies or (iv) sell all or substantially all of our assets. We were in compliance with these covenants as of June 30, 2022.

6. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

Accumulated other comprehensive income included in our condensed consolidated balance sheets consists of the following components (in millions):

	Foreign currency translation adjustments	Foreign other post- employment benefits adjustments	Net unrealized holding gains on available-for-sale investments	Total accumulated other comprehensive income (loss)
Balances as of January 1, 2022:	\$ (170.5)	\$ (10.9)	\$ 5.8	\$ (175.6)
Other comprehensive income (loss), before reclassifications	(348.2)	0.7	(14.4)	(361.9)
Amounts reclassified from Accumulated other comprehensive income (loss)	—	0.1	0.4	0.5
Income tax effects	0.6	(0.3)	3.3	3.6
Other comprehensive income (loss), net of income taxes	(347.6)	0.5	(10.7)	(357.8)
Balances as of June 30, 2022:	\$ (518.1)	\$ (10.4)	\$ (4.9)	\$ (533.4)

	Foreign currency translation adjustments	Foreign other post- employment benefits adjustments	Net unrealized holding gains on available-for-sale investments	Total accumulated other comprehensive income (loss)
Balances as of January 1, 2021:	\$ 298.6	\$ (26.0)	\$ 9.8	\$ 282.4
Other comprehensive income (loss), before reclassifications	(158.4)	1.3	(2.0)	(159.1)
Amounts reclassified from Accumulated other comprehensive income (loss)	—	1.6	(0.1)	1.5
Income tax effects	0.2	(0.3)	0.5	0.4
Other comprehensive income (loss), net of income taxes	(158.2)	2.6	(1.6)	(157.2)
Balances as of June 30, 2021:	\$ 140.4	\$ (23.4)	\$ 8.2	\$ 125.2

The reclassification adjustments are calculated using the specific identification method.

The impact to Income (loss) before income taxes for amounts reclassified out of Accumulated other comprehensive income (loss) into Other (income) expense, net in the condensed consolidated statements of income (loss) were as follows (in millions):

Components of comprehensive income (loss)	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Amortization of foreign other post-employment benefit items	\$ (0.1)	\$ (1.1)	\$ (0.1)	\$ (1.6)
Net holding gains on equity securities and available-for-sale investments	\$ (0.4)	\$ —	\$ (0.4)	\$ 0.1

7. EARNINGS (LOSS) PER SHARE

Basic earnings (loss) per share is computed by dividing net income (loss) attributable to Bio-Rad by the weighted average number of common shares outstanding for that period. Diluted earnings per share takes into account the effect of dilutive instruments, such as stock options and restricted stock, and uses the average share price for the period in determining the number of potential common shares that are to be added to the weighted average number of shares outstanding. Potential common shares are excluded from the diluted earnings (loss) per share calculation if the effect of including such securities would be anti-dilutive.

The weighted average number of common shares outstanding used to calculate basic and diluted earnings (loss) per share, and the anti-dilutive shares that are excluded from the diluted earnings (loss) per share calculation are as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Basic weighted average shares outstanding	29,794	29,764	29,863	29,793
Effect of potentially dilutive stock options and restricted stock awards	—	384	—	374
Diluted weighted average common shares outstanding	29,794	30,148	29,863	30,167
Anti-dilutive shares	541	23	541	23

8. OTHER INCOME AND EXPENSE, NET

Other (income) expense, net includes the following components (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Interest and investment (income)	\$ (5.5)	\$ (0.7)	\$ (37.7)	\$ (19.0)
Net realized (gains) losses on investments	0.4	—	0.4	(0.1)
Other-than-temporary impairment loss on investment	—	—	—	0.8
Escrow receipts on prior divestitures	(1.4)	—	(1.4)	—
Other (income) expense	(0.2)	0.8	(0.6)	1.0
Other (income) expense, net	\$ (6.7)	\$ 0.1	\$ (39.3)	\$ (17.3)

9. INCOME TAXES

Our effective income tax rate was 24.2% and 21.0% for the three months ended June 30, 2022 and 2021, respectively. Our effective income tax rate was 23.2% and 22.9% for the six months ended June 30, 2022 and 2021, respectively.

The realization of deferred tax assets is dependent upon the generation of sufficient taxable income of the appropriate character in future periods. We regularly assess our ability to realize our deferred tax assets and establish a valuation allowance if it is more likely than not that some portion, or all, of our deferred tax assets will not be realized. In assessing the realizability of our deferred tax assets, we weigh all available positive and negative evidence. Due to the weight of objectively verifiable negative evidence, we believe that it is more likely than not that certain foreign deferred tax assets will not be realized as of June 30, 2022, and have maintained a valuation allowance on such deferred tax assets.

Our income tax returns are routinely audited by U.S. federal, state and foreign tax authorities. We are currently under examination by many of these tax authorities. There are differing interpretations of tax laws and regulations, and as a result, significant disputes may arise with these tax authorities involving issues around the timing and amount of deductions and allocations of income among various tax jurisdictions. We evaluate our exposures associated with our tax filing positions on a quarterly basis.

We record liabilities for unrecognized tax benefits related to uncertain tax positions. We do not believe any currently pending uncertain tax positions will have a material adverse effect on our condensed consolidated financial statements, although an adverse resolution of one or more of these uncertain tax positions in any period may have a material impact on the results of operations for that period.

Our gross unrecognized tax benefits were \$75.2 million and \$61.9 million as of June 30, 2022 and December 31, 2021, respectively. The increase in our gross unrecognized tax benefits is attributable to increases of uncertain tax accruals in various jurisdictions, partially offset by the release of accruals due to the lapse of statute of limitations.

As of June 30, 2022, based on the expected outcome of certain examinations or as a result of the expiration of statutes of limitations for certain jurisdictions, we believe that within the next twelve months it is reasonably possible that our previously unrecognized tax benefits could decrease by up to \$5.4 million.

10. SEGMENT INFORMATION

Information regarding operating segments for the three months ended June 30, 2022 and 2021 is as follows (in millions):

			Life Science	Clinical Diagnostics	Other Operations
Segment net sales	2022	\$	322.4	\$ 367.8	\$ 0.9
	2021	\$	334.2	\$ 380.2	\$ 1.5
Segment net profit (loss)	2022	\$	50.8	\$ 59.2	\$ (0.5)
	2021	\$	64.6	\$ 60.1	\$ (0.3)

Information regarding operating segments for the six months ended June 30, 2022 and 2021 is as follows (in millions):

		Life Science	Clinical Diagnostics	Other Operations
Segment net sales	2022	\$ 669.5	\$ 719.5	\$ 2.2
	2021	\$ 700.7	\$ 738.8	\$ 3.2
Segment net profit (loss)	2022	\$ 137.7	\$ 112.0	\$ (0.8)
	2021	\$ 166.9	\$ 58.2	\$ (0.2)

Segment results are presented in the same manner as we manage our business internally to make operating decisions and assess performance. Our chief operating decision maker ("CODM") views all operating expenses, interest expense and corporate overhead as directly supporting the strategies of our segments.

The following reconciles total segment profit to consolidated income (loss) before income taxes (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Total segment profit	\$ 109.5	\$ 124.4	\$ 248.9	\$ 224.9
Foreign currency exchange gains (losses), net	(0.9)	1.8	1.2	1.7
Gains (losses) from change in fair market value of equity securities and loan receivable	(1,338.2)	1,030.7	(5,883.3)	2,210.1
Other income (expense), net	6.7	(0.1)	39.3	17.3
Consolidated income (loss) before income taxes	\$ (1,222.9)	\$ 1,156.8	\$ (5,593.9)	\$ 2,454.0

11. LEGAL PROCEEDINGS

We are a party to various claims, legal actions and complaints arising in the ordinary course of business. While we do not believe, at this time, that any ultimate liability resulting from any of these matters will have a material adverse effect on our results of operations, financial position or liquidity, we cannot give any assurance regarding the ultimate outcome of these matters and their resolution could be material to our operating results for any particular period, depending on the level of income for the period.

12. RESTRUCTURING COSTS

In February 2021, we announced our strategy-driven restructuring plan in furtherance of our ongoing program to improve operating performance. The restructuring plan primarily impacts our operations in EMEA and includes the elimination of certain positions, the consolidation of certain functions, and the relocation of certain manufacturing operations from EMEA to APAC. The restructuring plan is being implemented in phases and is expected to be substantially complete by mid-2023. The liability of \$37.8 million as of June 30, 2022 consisted of \$37.4 million recorded in Accrued payroll and employee benefits and \$0.4 million recorded in Other long-term liabilities in the condensed consolidated balance sheets. Adjustments to expense, which were recorded to Selling, general and administrative expense and Research and development expense in the condensed consolidated statements of income (loss), were immaterial for the three and six months ended June 30, 2022. From February 2021 to June 30, 2022, total expenses were \$64.4 million.

The following table summarizes the activity of our European reorganization restructuring reserves (in millions):

	Life Science	Clinical Diagnostics	Total
Balances as of December 31, 2021:	\$ 5.2	\$ 41.9	\$ 47.1
Adjustment to expense	(0.1)	0.1	—
Cash payments	(1.7)	(4.3)	(6.0)
Foreign currency translation gains	(0.2)	(3.1)	(3.3)
Balances as of June 30, 2022:	\$ 3.2	\$ 34.6	\$ 37.8

13. LEASES

We have operating leases and to a lesser extent finance leases, for buildings, vehicles and equipment. Our leases have remaining lease terms of 1 year to 17 years, which includes our determination to exercise renewal options.

We determine if an arrangement is a lease at inception. Operating leases are included in Operating lease right-of-use (“ROU”) assets, Current operating lease liabilities, and Operating lease liabilities in our condensed consolidated balance sheets. Finance leases are included in Property, plant and equipment, Current maturities of long-term debt, and Long-term debt, net of current maturities in our condensed consolidated balance sheets.

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. As our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. ROU assets also include any lease payments made and excludes lease incentives. Our lease terms may include options to extend or terminate the lease. For purposes of determining the lease term used in the measurement of ROU assets and operating lease liabilities, we include the noncancellable period of the lease together with those periods covered by the option to extend the lease if we are reasonably certain to exercise that option, the periods covered by an option to terminate the lease if we are reasonably certain not to exercise that option, and the periods covered by the option to extend (or to not terminate) the lease in which exercise of the option is controlled by the lessor. Lease expense is recognized on a straight-line basis over the lease term. Where we act as lessee, we elected not to separate lease and non-lease components.

The components of lease expense were as follows (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Operating lease cost	\$ 14.7	\$ 11.8	\$ 29.0	\$ 23.5
Finance lease cost:				
Amortization of right-of-use assets	\$ 0.1	\$ 0.1	\$ 0.2	\$ 0.3
Interest on lease liabilities	0.2	0.2	0.4	0.4
Total finance lease cost	\$ 0.3	\$ 0.3	\$ 0.6	\$ 0.7
Sublease income	\$ 0.7	\$ 0.7	\$ 1.5	\$ 1.5

The sublease is for a building with a term that ends in 2025, with no options to extend or renew.

Operating lease cost includes original reduction in the carrying amount of ROU assets, the impact of remeasurements, modifications, impairments and abandonments.

Our short-term leases are expensed as incurred, reflecting leases with a lease term of one year or less, and are not significant for the three and six months ended June 30, 2022 and 2021. Operating lease variable cost is primarily comprised of reimbursed actual common area maintenance, property taxes and insurance, which are immaterial for the three and six months ended June 30, 2022 and 2021.

Supplemental cash flow information related to leases was as follows (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Cash paid for amounts included in the measurement of lease liabilities:				
Operating cash flows from operating leases	\$ 9.1	\$ 11.9	\$ 18.6	\$ 23.7
Operating cash flows from finance leases	\$ 0.2	\$ 0.1	\$ 0.4	\$ 0.3
Financing cash flows from finance leases	\$ 0.1	\$ 0.2	\$ 0.2	\$ 0.4
Right-of-use assets obtained in exchange for new lease obligations:				
Operating leases	\$ 1.6	\$ 2.3	\$ 7.1	\$ 6.5
Finance leases	\$ —	\$ —	\$ —	\$ —

Supplemental balance sheet information related to leases was as follows (in millions):

	June 30, 2022	December 31, 2021
Operating Leases		
Operating lease right-of-use assets	\$ 185.2	\$ 204.8
Current operating lease liabilities	\$ 35.7	\$ 36.4
Operating lease liabilities	158.5	175.9
Total operating lease liabilities	\$ 194.2	\$ 212.3

Finance leases are included in Property, plant and equipment, Current maturities of long-term debt, and Long-term debt, net of current maturities (in millions):

	June 30, 2022	December 31, 2021
Finance Leases		
Property, plant and equipment, gross	\$ 11.7	\$ 11.8
Less: accumulated depreciation and amortization	(5.2)	(5.1)
Property, plant and equipment, net	\$ 6.5	\$ 6.7
Current maturities of long-term debt and notes payable	\$ 0.5	\$ 0.5
Long-term debt, net of current maturities	10.2	10.5
Total finance lease liabilities	\$ 10.7	\$ 11.0

	June 30, 2022	December 31, 2021
Weighted Average Remaining Lease Term		
Operating leases - in years	7	8
Finance leases - in years	15	15.5
Weighted Average Discount Rate		
Operating leases	3.2 %	3.3 %
Finance leases	6.3 %	6.3 %

Maturities of lease liabilities were as follows (in millions):

Year Ending December 31,	Operating Leases	Finance Leases
2022 (excluding the six months ended June 30, 2022)	\$ 20.7	\$ 1.2
2023	39.2	1.2
2024	33.0	1.1
2025	29.5	1.1
2026	23.8	1.1
Thereafter	74.5	12.4
Total lease payments	220.7	18.1
Less imputed interest	(26.5)	(7.4)
Total	\$ 194.2	\$ 10.7

The value of our operating lease portfolio is principally for facilities with longer durations than the lesser value vehicles, and other equipment with shorter terms and higher turn-over.

As of June 30, 2022, operating leases that have not commenced are not material.

14. SUBSEQUENT EVENT

In July 2022, the Board of Directors authorized increasing the amount available under our Share Repurchase Program ("Share Repurchase Program") to allow us to repurchase up to an additional \$200.0 million of stock. As of June 30, 2022, \$98.1 million of stock remained available for repurchases under the current Share Repurchase Program which was authorized by the Board in July 2020 and in November 2017. Repurchases under the Share Repurchase Program may be made at management's discretion from time to time on the open market or through privately negotiated transactions. The Share Repurchase Program has no time limit.

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

This discussion should be read in conjunction with the information contained in both our consolidated financial statements for the year ended December 31, 2021 and the condensed consolidated financial statements for the three and six months ended June 30, 2022.

Overview. We are a multinational manufacturer and worldwide distributor of our own life science research and clinical diagnostics products. Our business is organized into two reportable segments, Life Science and Clinical Diagnostics, with the mission to provide scientists with specialized tools needed for biological research and health care specialists with products needed for clinical diagnostics.

We sell more than 12,000 products and services to a diverse client base comprised of scientific research, healthcare, education and government customers worldwide. We do not disclose quantitative information about our different products and services as it is impractical to do so based primarily on the numerous products and services that we sell and the global markets that we serve.

We manufacture and supply our customers with a range of reagents, apparatus and equipment to separate complex chemical and biological materials and to identify, analyze and purify components. As our customers require standardization for their experiments and test results, much of our revenues are recurring in nature.

We are impacted by the support of many governments for both research and healthcare. The current global economic outlook is still uncertain as the need to control government social spending by many governments limits opportunities for growth. Approximately 41% of our year-to-date 2022 consolidated net sales are derived from the United States and approximately 59% are derived from international locations, with Europe being our largest international region. The international sales are largely denominated in local currencies such as the Euro, Swiss Franc, Japanese Yen, Chinese Yuan and British Sterling. As a result, our consolidated net sales expressed in dollars benefit when the U.S. dollar weakens and suffer when the dollar strengthens. When the U.S. dollar strengthens, we benefit from lower cost of sales from our own international manufacturing sites, and from lower international operating expenses. We regularly discuss our changes in revenue and expense categories in terms of both changing foreign exchange rates and in terms of a currency neutral basis, if notable, to explain the impact currency has on our results.

Senior Notes due 2027 and 2032

In March 2022, pursuant to an indenture we issued \$400.0 million in principal amount of Senior Notes due March 2027 (the "2027 Notes") and \$800.0 million in principal amount of Senior Notes due March 2032 (the "2032 Notes" and, together with the 2027 Notes, the "Notes"). The issuance of the 2027 Notes yielded net cash proceeds of \$395.7 million at an effective rate of 3.5346% and the sale of the 2032 Notes yielded net cash proceeds of \$790.5 million at an effective rate of 3.8429%. The 2027 Notes and the 2032 Notes pay a fixed rate of interest of 3.3% and 3.7% per annum, respectively. Interest on the Notes is payable semi-annually in arrears on March 15 and September 15 of each year, beginning on September 15, 2022 until the principal is paid or made available for payment.

COVID-19 and Supply Chain Impact

The full impact of the COVID-19 pandemic and supply constraints continues to be inherently uncertain at the time of this report. The COVID-19 pandemic has impacted and, we expect to some extent, will continue to impact parts of our business, operations, financial condition and results of operations in a variety of ways. During the second quarter of 2022, we saw continued but moderating demand for products associated with COVID-19 testing and related research. In addition, supply chain constraints and the lockdown in China have negatively impacted sales, particularly instrument placements. We continue to experience delays and shortages in the supply of components and raw materials. These shortages have caused backorders, some of which we consider to be significant, and some delays in certain new product development activities. While we are putting significant effort into procuring required materials and we expect improvement relative to the first half of the year, we expect backorders to continue through the remainder of 2022. For more discussion relating to the impacts of the COVID-19 pandemic and supply chain constraints, please see "Item 1A. Risk Factors" to this Form 10-Q.

Results of Operations

The following table shows cost of goods sold, gross profit, components of operating expense, (gains) losses from change in fair market value of equity securities and loan receivable, and net income (loss) as a percentage of net sales:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Net sales	100.0 %	100.0 %	100.0 %	100.0 %
Cost of goods sold	42.7	43.9	42.5	44.4
Gross profit	57.3	56.1	57.5	55.6
Selling, general and administrative expense	30.2	29.8	29.2	30.4
Research and development expense	9.7	8.9	9.3	9.5
(Gains) losses from change in fair market value of equity securities and loan receivable	193.6	(144.0)	422.9	(153.2)
Net income (loss)	(134.2)	127.7	(308.9)	131.1

Critical Accounting Policies and Estimates

An accounting policy is deemed to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made, if different estimates reasonably could have been used, or if changes in the estimate that are reasonably likely to occur could materially impact the financial statements. Management believes that there have been no significant changes during the three and six months ended June 30, 2022 to the items that we disclosed as our critical accounting policies and estimates in Management's Discussion and Analysis of Financial Condition and Results of Operations in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021.

Other than the recent accounting pronouncement adoptions as discussed in Note 1 to the condensed consolidated financial statements, there have been no substantial changes in our significant accounting policies during the three and six months ended June 30, 2022, compared with the significant accounting policies described in our Annual Report on Form 10-K for the year ended December 31, 2021.

Three Months Ended June 30, 2022 Compared to
Three Months Ended June 30, 2021

Results of Operations – Sales, Margins and Expenses

Percentage sales growth in currency neutral amounts are calculated by translating prior period sales in each local currency using the current period monthly average foreign exchange rates for that currency and comparing that to current period sales.

Net sales (sales) for the second quarter of 2022 were \$691.1 million compared to \$715.9 million in the second quarter of 2021, a decrease of 3.5%.

COVID-related sales were approximately \$33.2 million in the second quarter of 2022 compared to approximately \$69.0 million reported in the second quarter of 2021. Excluding the impact of foreign currency, second quarter 2022 sales increased by approximately 0.5% compared to the same period in 2021. Currency neutral sales increased in both the Americas and EMEA, partially offset by decreased sales in Asia due to COVID lockdowns in China during the second quarter of 2022 that negatively impacted our diagnostics business. Excluding COVID-related sales, revenue increased 5.7% on a currency neutral basis from the second quarter of 2021.

The Life Science segment sales for the second quarter of 2022 were \$322.4 million, a decrease of 3.5% compared to the same period last year. On a currency neutral basis, sales increased 0.5% compared to the second quarter in 2021. The currency neutral sales growth was primarily attributed to increased sales of Process Media, Western Blotting, and Droplet Digital PCR products, despite supply chain constraints having an impact on instrument placements. The sales increases were partially offset by lower qPCR product revenue due to the decline in COVID-19 related demand. Currency neutral sales increased in both Asia Pacific and the Americas, while Europe was essentially flat.

The Clinical Diagnostics segment sales for the second quarter of 2022 were \$367.8 million, a decrease of 3.3% compared to the same period last year. On a currency neutral basis, sales increased 0.7% compared to the second quarter in 2021. The currency neutral sales increase was primarily driven by Blood Typing, Quality Control, and Clinical Immunology products, despite supply chain constraints having an impact on instrument placements. Currency neutral sales increased in both EMEA and the Americas, partially offset by a decrease in Asia Pacific mainly due to COVID lockdowns in China during the second quarter of 2022.

Consolidated gross margins were 57.3% for the second quarter of 2022 compared to 56.1% for the second quarter of 2021. Life Science segment gross margins for the second quarter of 2022 increased by approximately 0.1 percentage points, essentially flat compared to the same period last year. Clinical Diagnostics segment gross margins for the second quarter of 2022 increased by approximately 2.3 percentage points from the same period last year. The increase in gross margins was primarily driven by a strong US dollar, favorable product mix, and continued operational efficiencies, partially offset by the continued increase in logistics costs.

Selling, general and administrative expenses (SG&A) decreased to \$208.7 million or 30.2% of sales for the second quarter of 2022 compared to \$213.4 million or 29.8% of sales for the second quarter of 2021. The decrease to SG&A was primarily driven by lower employee related expenses, partially offset by higher discretionary spending. The second quarter 2022 also benefitted from the impact of a stronger dollar.

Research and development (R&D) expenses increased to \$67.0 million or 9.7% of sales in the second quarter of 2022 compared to \$63.4 million or 8.9% of sales in the second quarter of 2021. Life Science segment R&D expense increased in the second quarter of 2022 compared to the prior year period, primarily from increased personnel costs from the Dropworks, Inc. acquisition in October of 2021, and increased investment in outside services to complete strategic projects in key investment areas. Clinical Diagnostics segment R&D expense increased in the second quarter of 2022 from the prior year period driven by continued investment in research and product development projects.

Results of Operations – Non-operating

Interest expense for the second quarter of 2022 and 2021 was \$10.7 million and \$0.4 million, respectively, an increase of \$10.3 million compared to the prior year period. The increase was primarily due to the sale in March 2022 of the \$1.2 billion Senior Notes (see Note 5, "Long-term Debt" in the condensed consolidated financial statements).

Foreign currency exchange (gains) and losses consist primarily of foreign currency transaction gains and losses on intercompany net receivables and payables and the change in fair value of our forward foreign exchange contracts used to manage our foreign currency exchange risk. Foreign currency exchange losses, net were \$0.9 million for the second quarter of 2022 compared to foreign currency exchange gains, net of \$1.8 million for the second quarter of 2021. Gains and losses are primarily due to the estimating process inherent in the timing of product shipments and intercompany debt payments, market volatility, and the change in the fair value of our foreign exchange contracts.

(Gains) losses from change in fair market value of equity securities and loan receivable was a loss of \$1.34 billion and a gain of \$1.03 billion for the second quarter of 2022 and 2021, respectively. The change in the fair market value primarily resulted from the recognition of holding losses of \$1.28 billion in the second quarter of 2022 compared to holding gains of \$1.02 billion in the second quarter of 2021 on our position in Sartorius AG. In addition, there were decreases of \$29.0 million for the change in fair market value of the Loan and \$10.7 million for the change in fair market value for the value appreciation right that were entered into with SHB during the fourth quarter of 2021.

Other (income) expense, net for the second quarter of 2022 was income, net of \$6.7 million compared to expense, net of \$0.1 million for the second quarter of 2021. The difference of income, net of \$6.8 million was primarily attributable to an increase in our investments as a result of cash invested from the \$1.2 billion Senior Note issued in March 2022.

Our effective income tax rate was 24.2% and 21.0% for the second quarter of 2022 and 2021, respectively. The effective tax rate reported in the second quarter of 2022 was primarily affected by an unrealized loss in equity securities and the tax rate reported in the second quarter of 2021 was primarily affected by an unrealized gain in equity securities. The difference in the rate is primarily driven by geographical mix of earnings.

Our income tax returns are routinely audited by U.S. federal, state and foreign tax authorities. We are currently under examination by many of these tax authorities. There are differing interpretations of tax laws and regulations, and as a result, significant disputes may arise with these tax authorities involving issues of the timing and amount of deductions and allocations of income among various tax jurisdictions.

We record liabilities for unrecognized tax benefits related to uncertain tax positions. We do not believe the resolution of our uncertain tax positions will have a material adverse effect on our condensed consolidated financial statements, although an adverse resolution of one or more of these uncertain tax positions in any period may have a material impact on the results of operations for that period.

As of June 30, 2022, based on the expected outcome of certain examinations or as a result of the expiration of statutes of limitation for certain jurisdictions, we believe that within the next twelve months it is reasonably possible that our previously unrecognized tax benefits could decrease by approximately \$5.4 million.

Six Months Ended June 30, 2022 Compared to
Six Months Ended June 30, 2021

Results of Operations – Sales, Margins and Expenses

Percentage sales growth in currency neutral amounts are calculated by translating prior period sales in each local currency using the current period monthly average foreign exchange rates for that currency and comparing that to current period sales.

Net sales (sales) for the first half of 2022 were \$1.39 billion compared to \$1.44 billion in the first half of 2021, a decrease of 3.6%. COVID-related sales were approximately \$78.5 million in the first half of 2022 compared to approximately \$163.0 million reported in the first half of 2021. On a currency neutral basis, the first half of 2022 sales decreased by approximately 0.1% compared to the same period in 2021. Currency neutral sales decreased in both APAC and EMEA, partially offset by increased sales in the Americas. Excluding COVID-related sales, sales increased 6.0% on a currency neutral basis from the first half of 2021.

The Life Science segment sales for the first half of 2022 were \$669.5 million, a decrease of 4.4% compared to the same period last year. On a currency neutral basis, sales decreased 1.1% compared to the first half of 2021. The currency neutral sales decline was primarily attributed to lower qPCR product sales due to the decline in COVID-19 related demand and the impact of supply chain constraints on instrument placements, partially offset by strong growth of Process Media, Western Blotting, and Droplet Digital PCR products. The currency neutral sales decrease was mainly in EMEA, while the Americas and Asia Pacific saw currency neutral growth.

The Clinical Diagnostics segment sales for the first half of 2022 were \$719.5 million, a decrease of 2.6% compared to the same period last year. On a currency neutral basis, sales increased 0.9% compared to the first half of 2021. The currency neutral sales increase was primarily driven by growth in Blood Typing, Clinical Immunology, and Quality Controls products, especially in EMEA and the Americas, despite supply chain constraints having an impact on instrument placements. The increase in currency neutral sales was partially offset by a decrease in sales due to the COVID lockdowns in China during the second quarter of 2022.

Consolidated gross margins were 57.5% for the first half of 2022 compared to 55.6% for the first half of 2021. Life Science segment gross margins for the first half of 2022 decreased by approximately 0.4 percentage points from the same period last year. The decrease in gross margins was primarily driven by higher logistics costs. Clinical Diagnostics segment gross margins for the first half of 2022 increased by approximately 4.1 percentage points from the same period last year. The increase in gross margins was primarily driven by a one-time restructuring expense related to the 2021 restructuring plan that was announced and recorded in the first quarter of 2021.

Selling, general and administrative expenses (SG&A) decreased to \$406.3 million or 29.2% of sales for the first half of 2022 compared to \$439.3 million or 30.4% of sales for the first half of 2021. The decrease to SG&A was primarily driven by a one-time restructuring expense related to the 2021 restructuring plan that was announced and recorded in the first quarter of 2021.

Research and development (R&D) expenses decreased to \$129.6 million or 9.3% of sales in the first half of 2022 compared to \$137.3 million or 9.5% of sales in the first half of 2021. Life Science segment R&D expense increased in the first half of 2022 compared to the prior year period, primarily from increased personnel costs from the Dropworks, Inc. acquisition in October of 2021, and increased investment in outside services to complete strategic projects in key investment areas. Clinical Diagnostics segment R&D expense decreased in the first half of 2022 from the prior year period, primarily due to a one-time restructuring expense related to the 2021 restructuring plan that was announced and recorded in the first quarter of 2021, partially offset by continued investment in research and product development projects.

Results of Operations – Non-operating

Interest expense for the first half of 2022 and 2021 was \$14.8 million and \$0.8 million, respectively, an increase of \$14.0 million compared to the prior year period. The increase was primarily due to the sale in March 2022 of the \$1.2 billion Senior Notes.

Foreign currency exchange (gains) and losses consist primarily of foreign currency transaction gains and losses on intercompany net receivables and payables and the change in fair value of our forward foreign exchange contracts used to manage our foreign currency exchange risk. Foreign currency exchange gains, net were \$1.2 million for the first half of 2022 compared to higher net gains of \$1.7 million for the first half of 2021. Gains and losses are primarily due to the estimating process inherent in the timing of product shipments and intercompany debt payments, market volatility, and the change in the fair value of our foreign exchange contracts.

(Gains) losses from change in fair market value of equity securities and loan receivable was a loss of \$5.88 billion and a gain of \$2.21 billion for the first half of 2022 and 2021, respectively. The change in the fair market value primarily resulted from the recognition of holding losses of 5.73 billion in the first half of 2022 compared to holding gains of \$2.19 billion in the first half of 2021 on our position in Sartorius AG. In addition, there were decreases of \$43.7 million for the change in fair market value for the Loan and \$85.9 million for the change in fair market value for the value appreciation right that were entered into with SHB during the fourth quarter of 2021.

Other income, net for the first half of 2022 was \$39.3 million compared to \$17.3 million for the first half of 2021. The difference of income of \$22.0 million was primarily due to \$12.6 million increase in the Sartorius AG dividends declared in the first quarter of 2022 compared to the first quarter of 2021 and an increase in our investment income primarily attributable to an increase in our investments as a result of cash invested from the \$1.2 billion Senior Notes issued in March 2022.

Our effective income tax rate was 23.2% and 22.9% for the first half of 2022 and 2021, respectively. The effective tax rate reported in the first half of 2022 was primarily affected by an unrealized loss in equity securities and the tax rate reported in the first half of 2021 was primarily affected by an unrealized gain in equity securities. The difference in the rate is primarily driven by geographical mix of earnings.

Liquidity and Capital Resources

Bio-Rad operates and conducts business globally, primarily through subsidiary companies established in the markets in which we trade. Goods are manufactured in a small number of locations, and are then shipped to local distribution facilities around the world. Our product mix is diversified, and certain products compete largely on product efficacy, while others compete on price. Gross margins are generally sufficient to exceed normal operating costs, and funding for research and development of new products, as well as routine outflows for capital expenditures, interest and taxes. In addition to the annual positive cash flow from operating activities, additional liquidity is readily available via the sale of short-term investments and access to our \$200.0 million unsecured revolving credit facility (Credit Agreement, as amended) that we entered into in April 2019, and to a lesser extent international lines of credit. Borrowings under the Credit Agreement, as amended, are available on a revolving basis and can be used to make permitted acquisitions, for working capital and for other general corporate purposes. We had no outstanding borrowings under the 2019 Credit Agreement, as amended, as of June 30, 2022, however, \$0.2 million was utilized for domestic standby letters of credit that reduced our borrowing availability. In March 2022, we sold \$400 million aggregate principal amount of 3.3% Senior Notes due 2027, and \$800 million aggregate principal amount of 3.7% Senior Notes due 2032. The sales yielded net cash proceeds after deducting the underwriting discount and estimated offering expenses payable by it, of \$1.186 billion. Interest will be payable semiannually in arrears on May 15 and September 15 of each year, beginning on September 15, 2022. Management believes that this availability, together with cash flow from operations, will be adequate to meet our current objectives for operations, research and development, capital additions for manufacturing and distribution, plant and equipment, information technology systems and acquisitions of reasonable proportion to our existing total available capital.

At June 30, 2022, we had available \$1.97 billion in cash, cash equivalents and short-term investments, of which approximately 12% was held in our foreign subsidiaries. The amount of funds held in the United States can fluctuate due to the timing of receipts and payments in the ordinary course of business and due to other reasons, such as acquisitions and borrowings. As part of our ongoing liquidity assessments, we regularly monitor the mix of domestic and foreign cash flows (both inflows and outflows).

It is generally our intention to repatriate certain foreign earnings to the extent that such repatriations are not restricted by local laws or accounting rules, and there are no substantial incremental costs.

Cash Flows from Operations

Net cash provided by operations was \$96.5 million compared to cash provided by operations of \$268.2 million for the six months ended June 30, 2022 and 2021, respectively. The decrease in operating cash flows was primarily due to lower cash received from customers, and higher cash paid to suppliers and to employees in the first half of 2022. These decreases were partially offset by higher proceeds from foreign exchange contracts and higher dividends in the first half of 2022.

Cash Flows from Investing Activities

Our investing activities have consisted primarily of cash used for purchases of marketable securities and investments.

Net cash used in investing activities was \$1,053.4 million and \$148.6 million for the six months ended June 30, 2022 and 2021, respectively. The increase was primarily attributable to the purchase of marketable securities and investments utilizing the cash proceeds from the sale of the senior notes as described below.

Cash Flows from Financing Activities

Our financing activities have consisted primarily of cash from the issuance of senior notes.

Net cash provided by financing activities was \$1,069.0 million compared to cash used for financing activities of \$44.5 million for the six months ended June 30, 2022, and 2021, respectively. This increase was primarily attributable to the sale in March 2022 of \$400 million aggregate principal amount of 3.3% Senior Notes due 2027, and \$800 million aggregate principal amount of 3.7% Senior Notes due 2032, which yielded net cash proceeds after deducting the underwriting discount and estimated offering expenses payable by it, of \$1.186.2 billion as of June 30, 2022. The increase was partially offset by a higher repurchase of our common stock by \$75.0 million in 2022 than in 2021 as described below.

Treasury Shares

During the second quarter of 2022, 11,609 shares of Class A treasury stock with an aggregate total cost of \$4.95 million were reissued to fulfill grants to employees under our restricted stock program and our Employee Stock Purchase Program. Upon reissuing the Class A treasury stock, a loss of \$13 thousand was incurred as they were reissued at a lower price than their average cost, which reduced Retained earnings, while \$0.7 million reduced Additional paid-in-capital.

During the second quarter of 2022, we repurchased 255,284 shares of Class A common stock for \$125.0 million under our Share Repurchase Program. We designated these repurchased shares as treasury stock. As of June 30, 2022, \$98.1 million remained available for repurchases under the Share Repurchase Program. In July 2022, the Board of Directors authorized increasing the amount available under the Share Repurchase Program to allow the Company to repurchase up to an additional \$200.0 million of stock.

During the second quarter of 2021, 1,164 shares of Class A treasury stock with an aggregate total cost of \$0.4 million were reissued to fulfill grants to employees under our restricted stock program. Upon reissuing the Class A treasury stock, a loss of \$65 thousand was incurred as they were reissued at a lower price than their average cost, which reduced Retained earnings, while \$0.4 million reduced Additional paid-in capital.

During the first quarter of 2021, we repurchased 89,506 shares of Class A common stock for \$50.0 million under our Share Repurchase Program. We designated these repurchased shares as treasury stock.

Recent Accounting Pronouncements Adopted

See Note 1 to the condensed consolidated financial statements for recent accounting pronouncements adopted.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

During the six months ended June 30, 2022, there have been no material changes from the disclosures about market risk provided in our Annual Report on Form 10-K for the year ended December 31, 2021.

Item 4. Controls and Procedures

Disclosure Controls and Procedures

We maintain “disclosure controls and procedures,” as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (“Exchange Act”), that are designed to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in Securities and Exchange Commission rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer (“CEO”) and Chief Financial Officer (“CFO”), as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating our disclosure controls and procedures, management recognized that disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the disclosure controls and procedures are met. Additionally, in designing disclosure controls and procedures, our management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible disclosure controls and procedures. The design of any disclosure controls and procedures also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions.

Subject to the limitations noted above, our management, with the participation of our CEO and CFO, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of the period covered by this Quarterly Report on Form 10-Q. Based on that evaluation, the CEO and CFO have concluded that, as of such date, our disclosure controls and procedures were effective to meet the objective for which they were designed and operate at the reasonable assurance level.

Changes to Internal Control Over Financial Reporting

We identified no changes in internal control over financial reporting that occurred during our quarter ended June 30, 2022 that have materially affected, or that are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

See Note 11, “Legal Proceedings” in the Notes to the condensed consolidated financial statements of Part I, Item 1 of this Quarterly Report on Form 10-Q.

Item 1A. Risk Factors

In evaluating our business and whether to invest in any of our securities, you should carefully read the following risk factors in addition to the other information contained in this report. We believe that any of the following risks could have a material effect on our business, results of operations or financial condition, our industry or the trading price of our common stock. We operate in a continually changing business environment, and new risks and uncertainties emerge from time to time. We cannot predict these new risks and uncertainties, nor can we assess the extent to which any such new risks and uncertainties or the extent to which the risks and uncertainties set forth below may adversely affect our business, results of operations, financial condition, our industry, the value of our equity holdings, or the trading price of our common stock. Please carefully consider the following discussion of significant factors, events and uncertainties that make an investment in our securities risky and provide important information for the understanding of the “forward-looking” statements discussed in this report. In addition to the effects of the COVID-19 pandemic and resulting global disruptions on our business and operations discussed in this report, additional or unforeseen effects from the COVID-19 pandemic and the global economic climate may give rise to or amplify many of these risks discussed below.

Business, Economic, Legal and Industry Risks

Pandemics or disease outbreaks, such as the COVID-19 pandemic, have affected and could materially adversely affect our business, operations, financial condition, and results of operations.

Although we expect that vaccinations and boosters for COVID-19 will continue to improve conditions, the COVID-19 pandemic has had and if conditions deteriorate again, could continue to have an adverse effect on the United States and global economies, as well as on aspects of our operations and those of third parties on whom we rely. The COVID-19 pandemic has impacted and, we expect, to some extent, will continue to impact parts of our business, operations, financial condition and results of operations in a variety of ways.

Although we have experienced increased demand for certain of our products being used in fighting the COVID-19 pandemic, we previously experienced some decreases in product demand in certain of our other businesses. Many of our customers reduced or modified operations to various extents, resulting in labs, universities and other customers' facilities being opened at reduced capacity, hospital visits declined as people delayed elective surgeries and avoided non-essential trips to the hospital, and routine diagnostic testing slowed. If conditions related to the pandemic were to deteriorate, we expect that parts of our business could again suffer negative impacts from the pandemic. For example, lockdowns and other COVID-19 related restrictions implemented by China starting in late March 2022 had a negative impact on our business in China for the second quarter of 2022 and we expect that if any similar lockdowns and restrictions in China are implemented in the future our business in China could be negatively impacted in future quarters. We expect that improvement in the COVID-19 pandemic conditions will continue to result in a decrease in demand for our products being used in fighting the COVID-19 pandemic which could have a negative impact on our financial results if the negative impact is not offset by the recovery of other parts of our businesses as a result of improved conditions related to the pandemic.

On the supply side, we are experiencing increased challenges with the supply of raw materials and components used in the production of our products, with some suppliers operating at reduced or modified capacity and otherwise unable to meet our demand for raw materials and inputs to manufacture our products. There are currently industry wide supply shortages of plastic materials, raw material resins, and certain electronic components as well. Shortages of raw materials have caused backorders, some of which we consider to be significant, and some delays in certain new product development activities, and we expect backorders to continue through the remainder of 2022. In addition, we continue to experience transportation challenges in moving goods across regions, including reduced freight availability as some airlines have scaled back flight operations, increased freight surcharges due to reduced freight capacity, and ocean freight capacity has been constrained by delays at ports on the West Coast of the U.S. and globally. Some countries continue to impose travel restrictions and may continue to impose measures that restrict the movement of our goods. We have experienced raw material cost increases as a result of the COVID-19 pandemic, which may continue. The invocation by the U.S. federal government of the Defense Production Act of 1950 with respect to our manufacturing operations, or the enforcement of comparable laws by other governmental entities, could disrupt our manufacturing and distribution operations.

With respect to our personnel, as a critical health care supplier, we have continued to keep essential production, distribution and service teams onsite working in manufacturing and supply chain facilities throughout the world. During the COVID-19 pandemic, many employees in our administrative functions have worked remotely, but as conditions improved in March 2022, many employees in our administrative functions returned to work under a hybrid remote and in person work schedule. Although we are adhering to government mandated and Environmental, Health and Safety protocols, an outbreak of COVID-19 at one or more of our facilities could nonetheless cause shutdowns of facilities and a reduction in our workforce, which could dramatically affect our ability to operate our business and our financial results.

The duration of the COVID-19 pandemic is unknown, even with the distribution of a vaccine and boosters, and it is difficult to predict the full extent of potential impacts the pandemic will have in the future on our business, operations, and financial results, or on our customers, suppliers, logistics providers, or on the global economy as a whole.

A reduction or interruption in the supply of components and raw materials could adversely affect our manufacturing operations and related product sales.

The manufacture of our products requires the timely delivery of sufficient amounts of quality components and materials. We manufacture our products in numerous manufacturing facilities around the world. We acquire our components and materials from many suppliers in various countries. We work closely with our suppliers to ensure the continuity of supply, but we cannot guarantee these efforts will always be successful. Further, while we seek to diversify our sources of components and materials, in certain instances we acquire components and materials from a sole supplier. The COVID-19 pandemic has created delays and shortages in the supply of components and raw materials. Shortages of raw materials have caused backorders, some of which we consider to be significant, and some delays in certain new product development activities, and we expect backorders to continue through the remainder of 2022. We also have experienced raw material cost increases as a result of the COVID-19 pandemic, which may continue. In addition, due to the regulatory environment in which we operate, we may be unable to quickly establish additional or replacement sources for some components or materials. If our supply is reduced or interrupted or of poor quality, and we are unable to develop alternative sources for such supply, our ability to manufacture our products in a timely or cost-effective manner could be adversely affected, which would adversely affect our ability to sell our products. See also our risk factor regarding the COVID-19 pandemic above.

Our international operations expose us to additional costs and legal and regulatory risks, which could have a material adverse effect on our business, results of operations and financial condition.

We have significant international operations. We have direct distribution channels in over 35 countries outside the United States, and during the six months ended June 30, 2022 our foreign entities generated 59% of our net sales. Compliance with complex foreign and U.S. laws and regulations that apply to our international operations increases our cost of doing business. These numerous and sometimes conflicting laws and regulations include, among others, data privacy requirements, labor relations laws, tax laws, anti-competition regulations, import and trade restrictions, tariffs, duties, quotas and other trade barriers, export requirements, U.S. laws such as the Foreign Corrupt Practices Act ("FCPA") and other U.S. federal laws and regulations established by the office of Foreign Asset Control, foreign laws such as the UK Bribery Act 2010 or other foreign laws which prohibit corrupt payments to governmental officials or certain payments or remunerations to customers. In addition, changes in laws or regulations potentially could be disruptive to our operations and business relationships in the affected regions. For example, the United Kingdom's withdrawal from the European Union (commonly referred to as "Brexit") has caused some disruption to the free movement of goods, services and people between the United Kingdom and the European Union and has resulted in increased regulatory complexities.

Given the high level of complexity of the foreign and U.S. laws and regulations that apply to our international operations, there is a risk that we may inadvertently breach some provisions, for example, through fraudulent or negligent behavior of individual employees, our failure to comply with certain formal documentation requirements, or otherwise. Our success depends, in part, on our ability to anticipate these risks and manage these challenges through policies, procedures and internal controls. However, we have a dispersed international sales organization, and we use distributors and agents in many of our international operations. This structure makes it more difficult for us to ensure that our international selling operations comply with laws and regulations, and our global policies and procedures.

Violations of these laws and regulations could result in fines, criminal sanctions against us, our officers or our employees, requirements to obtain export licenses, cessation of business activities in sanctioned countries, implementation of compliance programs, and prohibitions on the conduct of our business. Violations of laws and regulations also could result in prohibitions on our ability to offer our products in one or more countries and could materially damage our reputation, our brand, our international expansion efforts, our ability to attract and retain employees, or our business, results of operations and financial condition. See also our risk factors regarding the COVID-19 pandemic above and regarding government regulations and global economic conditions below.

The industries and market segments in which we operate are highly competitive, and we may not be able to compete effectively.

The life science and clinical diagnostics markets are each highly competitive. Some of our competitors have greater financial resources than we do, making them better equipped to license technologies and intellectual property from third parties or to fund research and development, manufacturing and marketing efforts. Moreover, competitive and regulatory conditions in many markets in which we operate restrict our ability to fully recover, through price increases, higher costs of acquired goods and services resulting from inflation and other drivers of cost increases. Many public tenders have become more competitive due to governments lengthening the commitments of their public tenders to multiple years, which reduce the number of tenders in which we can participate annually. Because the value of these multiple-year tenders is so high, our competitors have been more aggressive with their pricing. Our failure to compete effectively and/or pricing pressures resulting from competition could adversely affect our business, results of operations and financial condition.

We may not be able to grow our business because of our failure to develop new or improved products.

Our future growth depends in part on our ability to continue to improve our product offerings and develop and introduce new product lines and extensions that integrate technological advances. In particular, we may not be able to keep up with changes in the clinical diagnostics industry, such as the trend toward molecular diagnostics or point-of-care tests. If we are unable to integrate technological advances into our product offerings or to design, develop, manufacture and market new product lines and extensions successfully and in a timely manner, our business, results of operations and financial condition will be adversely affected. The COVID-19 pandemic has caused some delays to our ability to develop and introduce new products. We have experienced product launch delays in the past and may do so in the future. We cannot assure you that our product and process development efforts will be successful or that new products we introduce will achieve market acceptance. Failure to launch successful new products or improvements to existing products may cause our products to become obsolete, which could harm our business, results of operations and financial condition.

Breaches of our information systems could have a material adverse effect on our business and results of operations.

We have experienced and expect to continue to experience attempts by computer programmers and hackers to attack and penetrate our layered security controls, like the December 2019 Cyberattack that was previously discussed in Item 7 of our Annual Report for the period ended December 31, 2019. Through our sales and eCommerce channels, we collect and store confidential information that customers provide to, among other things, purchase products or services, enroll in promotional programs and register on our web site. We also acquire and retain information about suppliers and employees in the normal course of business. Such information on our systems includes personally identifiable information and, in limited instances, protected health information. We also create and maintain proprietary information that is critical to our business, such as our product designs and manufacturing processes. Despite recent initiatives to improve our technology systems, such as our enterprise resource planning implementation and the centralization of our global information technology organization, we could experience a significant data security breach. The Company is also subject to phishing and other fraud schemes including fraudulent vendor communications with requests for payments and fraudulent attempts to redirect payments to improper bank accounts. While the Company has adopted training and process changes to limit the success of such fraudulent activity, the Company may be unable to stop all such fraudulent activity which may lead to unrecoverable payments to criminal accounts. Increased use of remote work arrangements and rapidly evolving work scenarios in response to the COVID-19 pandemic expose us to additional risk of cyberattack and disruption. Because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently and often are not recognized until launched against a target, we may not be able to anticipate all of these techniques or to implement adequate preventive measures. Computer hackers have attempted to penetrate and will likely continue to attempt to penetrate our and our vendors' information systems and, if successful, could misappropriate confidential customer, supplier, employee or other business information, such as our intellectual property. Third parties could also gain control of our systems and use them for criminal purposes while appearing to be us. As a result, we could lose existing customers, have difficulty attracting new customers, be exposed to claims from customers and suppliers, financial institutions, payment card associations, employees and other persons, have regulatory sanctions or penalties imposed, incur additional expenses or lose revenues as a result of a data privacy breach, or suffer other adverse consequences. Our operations and ability to process sales orders, particularly through our eCommerce channels, could also be disrupted, as they were in the December 2019 Cyberattack. Any significant breakdown, intrusion, interruption, corruption, or destruction of our systems, as well as any data breaches, could have a material adverse effect on our business and results of operations. See also our risk factors regarding our information technology systems and our enterprise resource planning system (ERP) implementation below.

If our information technology systems are disrupted, or if we fail to successfully implement, manage and integrate our information technology and reporting systems, our business, results of operations and financial condition could be harmed.

Our information technology (IT) systems are an integral part of our business, and a serious disruption of our IT systems (which increasingly include cloud-based systems provided by third party vendors) could have a material adverse effect on our business, results of operations and financial condition. We depend on our IT systems to process orders, manage inventory and collect accounts receivable. Our IT systems also allow us to efficiently purchase products from our suppliers and ship products to our customers on a timely basis, maintain cost-effective operations and provide customer service. We may experience disruption of our IT systems due to redundancy issues with our network servers. We cannot assure you that our contingency plans will allow us to operate at our current level of efficiency.

Our ability to implement our business plan in a rapidly evolving market requires effective planning, reporting and analytical processes. We expect that we will need to continue to improve and further integrate our IT systems, reporting systems and operating procedures by training and educating our employees with respect to these improvements and integrations on an ongoing basis in order to effectively run our business. We may suffer interruptions in service, loss of data or reduced functionality when we upgrade or change systems or migrate to cloud-based systems. If we fail to successfully manage and integrate our IT systems, reporting systems and operating procedures, it could adversely affect our business, results of operations and financial condition. See also our risk factors regarding our data security above and ERP implementation and events beyond our control below.

We are subject to foreign currency exchange fluctuations, which could have a material adverse effect on our results of operations and financial condition.

As stated above, a significant portion of our operations and sales are outside of the United States. When we make purchases and sales in currencies other than the U.S. dollars, we are exposed to fluctuations in foreign currencies relative to the U.S. dollar that may adversely affect our results of operations and financial condition. Our international sales are largely denominated in local currencies. As a result, the strengthening of the U.S. dollar negatively impacts our consolidated net sales expressed in U.S. dollars. Conversely, when the U.S. dollar weakens, our expenses at our international sites increase. In addition, the volatility of other currencies may negatively impact our operations outside of the United States and increase our costs to hedge against currency fluctuations. In addition, we hold investments and a loan receivable that are subject to foreign exchange fluctuations. We cannot assure you that future shifts in currency exchange rates will not have a material adverse effect on our results of operations and financial condition.

Changes in the market value of our position in Sartorius AG materially impact our financial results and the value of our investments might cause us to be deemed an investment company.

Changes in the market value of our position in Sartorius AG will continue to materially impact our consolidated statements of income and other financial statements. A decline in the market value of our position in Sartorius AG will result in losses due to write-downs in the value of the equity securities. An increase in the market value of our position in Sartorius AG will result in a favorable impact to net income independent of the actual operating performance of our business. Depending on the extent of the decline or of the increase in the market value of our position in Sartorius AG, these negative or positive impacts on us could be significant and material. As a result of the market value of our position in Sartorius AG, we might be deemed to be an “investment company” under Section 3(a)(1)(C) of the Investment Company Act of 1940, as amended (the “Investment Company Act”), even though we are primarily engaged in a business other than that of investing, reinvesting, owning, holding or trading in securities. The Company does not believe it is an investment company and intends to continue to conduct our operations so that we will not be deemed an investment company. If the Company were deemed to be an investment company such determination could have a material adverse effect on our business.

Our share price may change significantly based upon changes in the market valuation of Sartorius AG, and such change are unrelated to the actual performance of our business. Non-operating income for a period may be significantly impacted by the timing of dividends paid by Sartorius AG, particularly in comparison to prior year periods.

We may incur losses in future periods due to write-downs in the value of financial instruments.

We have positions in a variety of financial instruments including asset backed securities and other similar instruments. Financial markets are volatile, particularly in light of the COVID-19 pandemic, and the markets for these securities can be illiquid. The value of these securities will continue to be impacted by external market factors including default rates, changes in the value of the underlying property, such as residential or commercial real estate, rating agency actions, the prices at which observable market transactions occur and the financial strength of various entities, such as financial guarantors who provide insurance for the securities. Should we need to convert these positions to cash, we may not be able to sell these instruments without significant losses due to current debtor financial conditions, low trading volume of the securities, or other market considerations.

As discussed further in Part 1, Item 1 of this Quarterly Report in Note 2 of the Notes to the condensed consolidated financial statements under the heading "*Level 3 Fair Value Investments*", we made a loan ("Loan") of 400 million Euros to Sartorius-Herbst Beteiligungen II GmbH in November 2021 that is secured by the pledge of certain trust interests which upon termination of the trust represent the right to receive Sartorius ordinary shares. Prior to a termination of the trust, the trust interests, which are provided as collateral for the Loan, are not tradable on the capital markets and may, in case of an enforcement, have to be sold with a significant discount to the value of the underlying shares.

We also have positions in equity securities, including our position in Sartorius AG. Financial markets are volatile and the markets for these equity securities can be illiquid as well. A decline in the market value of our investments in equity securities that we own could result in significant losses due to write-downs in the value of the equity securities. Also, if we need to convert these positions to cash, we may not be able to sell these equity securities without significant losses. In addition, a significant decline in the value of the Sartorius ordinary shares would reduce the value of the collateral for the Loan discussed in the previous paragraph, and in such circumstances the value of the collateral may be insufficient to cover the repayment of the Loan, and Sartorius-Herbst Beteiligungen II GmbH will likely have no other assets from which to repay the loan. Furthermore, the change in the market value of Sartorius ordinary shares will have an impact on the value appreciation rights acquired in connection with the Loan discussed in the previous paragraph.

We may experience difficulties implementing our new global enterprise resource planning system.

We are engaged in a multi-year implementation of a new global enterprise resource planning system (ERP). The ERP is designed to efficiently maintain our books and records and provide information important to the operation of our business to our management team. The ERP will continue to require significant investment of human and financial resources. In implementing the ERP, we may experience significant delays, increased costs and other difficulties, as we already have with some of our earlier deployments. Any significant disruption or deficiency in the design and implementation of the ERP could adversely affect our ability to process orders, ship product, send invoices and track payments, fulfill contractual obligations or otherwise operate our business. We expect to implement the remaining smaller phases of the ERP platform over the next few years. In addition, our efforts to centralize various business processes and functions within our organization in connection with our ERP implementation may continue to disrupt our operations and negatively impact our business, results of operations and financial condition.

Recent and planned changes to our organizational structure could negatively impact our business.

We made significant changes to our organizational structure over the past few years. At the beginning of 2020, we restructured the Clinical Diagnostics segment based on functional groups rather than product line divisions. We have continued to reorganize aspects of our European operations, including the reorganization announced in February 2021. These changes may have unintended consequences, such as distraction of our management and employees, labor unrest, business disruption, disruption of supply, attrition of our workforce, inability to attract or retain key employees, and reduced employee morale or productivity.

Risks relating to intellectual property rights may negatively impact our business.

We rely on a combination of copyright, trade secret, patent and trademark laws and third-party nondisclosure agreements to protect our intellectual property rights and products. However, we cannot assure you that our intellectual property rights will not be challenged, invalidated, circumvented or rendered unenforceable, or that meaningful protection or adequate remedies will be available to us. For instance, unauthorized third parties have attempted to copy our intellectual property, reverse engineer or obtain and use information that we regard as proprietary, or have developed equivalent technologies independently, and may do so in the future. Additionally, third parties have asserted patent, copyright and other intellectual property rights to technologies that are important to us and may do so in the future. If we are unable to license or otherwise access protected technology used in our products, or if we lose our rights under any existing licenses, we could be prohibited from manufacturing and marketing such products. From time to time, we also must enforce our patents or other intellectual property rights or defend ourselves against claimed infringement of the rights of others through litigation. As a result, we could incur substantial costs, be forced to redesign our products, or be required to pay damages or royalties to an infringing party. Any of the foregoing matters could adversely impact our business, results of operations and financial condition.

Global economic and geopolitical conditions could adversely affect our operations.

In recent years, we have been faced with very challenging global economic conditions. The COVID-19 pandemic, as discussed above, is currently causing disruptions to global economic conditions. Russia's invasion of Ukraine and sanctions against Russia also are causing disruptions to global economic conditions and limitations to our business in Russia. It is unknown how long such disruptions will continue and whether such disruptions will become more severe. A deterioration in the global economic environment may result in a decrease in demand for our products, increased competition, downward pressure on the prices for our products and longer sales cycles. A weakening of macroeconomic conditions may, and currently is, also adversely affecting our suppliers, which could continue to result in interruptions in the supply of the components and raw materials necessary for our products and raw material cost increases. Additionally, the United States and other countries, such as China and India, recently have imposed tariffs on certain goods. While tariffs imposed by other countries on U.S. goods have not yet had a significant impact on our business, further escalation of tariffs or other trade barriers could adversely impact our profitability and/or our competitiveness. See also our risk factors regarding the COVID-19 pandemic and our international operations above and regarding government regulations below.

Reductions in government funding and the capital spending programs of our customers could have a material adverse effect on our business, results of operations or financial condition.

Our customers include universities, clinical diagnostics laboratories, government agencies, hospitals and pharmaceutical, biotechnology and chemical companies. The capital spending programs of these institutions and companies have a significant effect on the demand for our products. Such programs are based on a wide variety of factors, including the resources available to make such purchases, the availability of funding from grants by governments or government agencies, the spending priorities for various types of equipment and the policies regarding capital expenditures during industry downturns or recessionary periods. If government funding to our customers were to decrease, or if our customers were to decrease or reallocate their budgets in a manner adverse to us, our business, results of operations or financial condition could be materially and adversely affected.

Changes in the healthcare industry could have an adverse effect on our business, results of operations and financial condition.

There have been, and will continue to be, significant changes in the healthcare industry in an effort to reduce costs. These changes include:

- The trend towards managed care, together with healthcare reform of the delivery system in the United States and efforts to reform in Europe, has resulted in increased pressure on healthcare providers and other participants in the healthcare industry to reduce selling prices. Consolidation among healthcare providers and consolidation among other participants in the healthcare industry has resulted in fewer, more powerful groups, whose purchasing power gives them cost containment leverage. In particular, there has been a consolidation of laboratories and a consolidation of blood transfusion centers. These industry trends and competitive forces place constraints on the levels of overall pricing, and thus could have a material adverse effect on our gross margins for products we sell in clinical diagnostic markets.
- Third party payors, such as Medicare and Medicaid in the United States, have reduced their reimbursements for certain medical products and services. Our Clinical Diagnostics business is impacted by the level of reimbursement available for clinical tests from third party payors. In the United States payment for many diagnostic tests furnished to Medicare fee-for-service beneficiaries is made based on the Medicare Clinical Laboratory Fee Schedule (CLFS), a fee schedule established and adjusted from time to time by the Centers for Medicare and Medicaid Services (CMS). Some commercial payors are guided by the CLFS in establishing their reimbursement rates. Laboratories and clinicians may decide not to order or perform certain clinical diagnostic tests if third party payments are inadequate, and we cannot predict whether third party payors will offer adequate reimbursement for tests utilizing our products to make them commercially attractive. Legislation, such as the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act (PPACA) and the Middle Class Tax Relief and Job Creation Act of 2012, has reduced the payments for clinical laboratory services paid under the CLFS. In addition, the Protecting Access to Medicare Act of 2014 (PAMA) has made significant changes to the way Medicare will pay for clinical laboratory services, which has further reduced reimbursement rates.

To the extent that the healthcare industry seeks to address the need to contain costs stemming from reform measures such as those contained in the PPACA and the PAMA, or in future legislation, by limiting the number of clinical tests being performed or the amount of reimbursement available for such tests, our business, results of operations and financial condition could be adversely affected. If these changes in the healthcare markets in the United States and Europe continue, we could be forced to alter our approach in selling, marketing, distributing and servicing our products.

We are subject to substantial government regulation, and any changes in regulation or violations of regulations by us could adversely affect our business, prospects, results of operations or financial condition.

Some of our products (primarily our Clinical Diagnostic products), production processes and marketing are subject to U.S. federal, state and local, and foreign regulation, including by the FDA in the United States and its foreign counterparts. The FDA regulates our Clinical Diagnostic products as medical devices, and we are subject to significant regulatory clearances or approvals to market our Clinical Diagnostic products and other requirements including, for example, recordkeeping and reporting requirements, such as the FDA's medical device reporting regulations and reporting of corrections and removals. The FDA has broad regulatory and enforcement powers. If the FDA determines that we have failed to comply with applicable regulatory requirements, it can impose a variety of enforcement actions ranging from public warning letters, fines, injunctions, consent decrees and civil penalties to suspension or delayed issuance of approvals, seizure or recall of our products, total or partial shutdown of production, withdrawal of approvals or clearances already granted, and criminal prosecution.

The FDA can also require us to repair, replace or refund the cost of devices that we manufactured or distributed. In addition, the FDA may change its clearance and approval policies, adopt additional regulations or revise existing regulations, or take other actions, which may prevent or delay approval or clearance of our products or impact our ability to modify our currently approved or cleared products on a timely basis. Any delay in, or failure to receive or maintain, clearance or approval for our products or changes in regulation could prevent us from generating revenue from these products and adversely affect our business operations and financial results. Additionally, the FDA and other regulatory authorities have broad enforcement powers. Regulatory enforcement or inquiries, or other increased scrutiny on us, could affect the perceived safety and efficacy of our products and dissuade our customers from using our products.

Many foreign governments have similar rules and regulations regarding the importation, registration, labeling, sale and use of our products. Such agencies may also impose new requirements that may require us to modify or re-register products already on the market or otherwise impact our ability to market our products in those countries. For example, the EU adopted the EU in-vitro Diagnostics Regulation (the "EU IVDR") which includes broad changes regarding in vitro diagnostic devices and medical devices. The implementation date for the EU IVDR is May 2022, though the EU Council and Parliament recently signed an amendment that delays certain previously mandated deadlines to allow more time for Notified Body to manage the entire portfolio of IVD products on the European market. The EU IVDR will require us to modify or re-register some products and will result in additional costs. Failure to meet these requirements could adversely impact our business in the EU and other regions that tie their product registrations to the EU requirements. In addition, Russia has enacted more stringent medical product registration and labeling regulations, China has enacted stricter labeling requirements, and we expect other countries, such as Brazil and India, to impose more regulations that impact our product registrations. Brexit is resulting in additional regulatory requirements associated with goods manufactured and sold in the United Kingdom and additional complexities and delays with respect to goods, raw materials and personnel moving between the United Kingdom and the European Union. In addition, new government administrations may interpret existing regulations or practices differently. Due to these evolving and diverse requirements, we face uncertain product approval timelines, additional time and effort to comply, as well as the potential for reduced sales and/or fines for noncompliance. Increasing protectionism in such countries also impedes our ability to compete with local companies. For example, we may not be able to participate in certain public tenders in Russia because of increasing measures to restrict access to such tenders for companies without local manufacturing capabilities. Certain tenders in China and India also are including local manufacturing preferences or requirements. Such regulations could adversely affect our business, results of operations and financial condition. See also our risk factors regarding our international operations and regarding global economic and geopolitical conditions above.

We are also subject to government regulation of the use and handling of a number of materials and controlled substances. The U.S. Drug Enforcement Administration establishes registration, security, recordkeeping, reporting, storage, distribution and other requirements for controlled substances pursuant to the Controlled Substances Act of 1970. Failure to comply with present or future laws and regulations could result in substantial liability to us, suspension or cessation of our operations, restrictions on our ability to expand at our present locations or require us to make significant capital expenditures or incur other significant expenses.

We cannot assure you that we will be able to integrate acquired companies, products or technologies into our company successfully, or we may not be able to realize the anticipated benefits from the acquisitions.

As part of our overall business strategy, we pursue acquisitions of and investments in complementary companies, products and technologies. The benefits of any acquisition may prove to be less than anticipated and may not outweigh the costs reported in our financial statements. Completing any potential future acquisitions could cause significant diversion of our management's time and resources. If we acquire new companies, products or technologies, we may be required to assume contingent liabilities or record impairment charges for goodwill and other intangible assets over time. Goodwill and non-amortizable intangible assets are subject to impairment testing, and potential periodic goodwill impairment charges, amortization expenses related to certain intangible assets, and other write-offs could harm our operating results. Impairment tests are highly sensitive to changes in assumptions and minor changes to assumptions could result in impairment losses. If the results forecast in our impairment tests are not achieved, or business trends vary from the assumptions used in forecasts, or external factors change detrimentally, future impairment losses may occur, as they have occurred in the past. Increased antitrust enforcement and greater government scrutiny of mergers in the healthcare sector may impact our ability to consummate acquisitions. We cannot assure you that we will successfully overcome these risks or any other problems we encounter in connection with any acquisitions, and any such acquisitions could adversely affect our business, results of operations and financial condition.

Product quality and liability issues could harm our reputation and negatively impact our business, results of operations and financial condition.

We must adequately address quality issues associated with our products, including defects in our engineering, design and manufacturing processes, as well as defects in third-party components included in our products. Our instruments, reagents and consumables are complex, and identifying the root cause of quality issues, especially those affecting reagents or third-party components, is difficult. We may incur significant costs and expend substantial time in researching and remediating such issues. Quality issues could also delay our launching or manufacturing of new products. In addition, quality issues, unapproved uses of our products, or inadequate disclosure of risks related to our products, could result in product recalls or product liability or other claims being brought against us. These issues could harm our reputation, impair our relationship with existing customers and harm our ability to attract new customers, which could negatively impact our business, results of operations and financial condition.

Lack of key personnel could hurt our business.

Our products are very technical in nature, and we operate in a complex and competitive business environment. In general, only highly qualified and well-trained scientists have the necessary skills to develop, market and sell our products, and many of our manufacturing positions require very specialized knowledge and skills. In addition, the global nature of our business also requires that we have sophisticated and experienced staff to comply with increasingly complex international laws and regulations. We face intense competition for these professionals from our competitors, customers, marketing partners and other companies throughout our industry. In particular, the job market in Northern California, where many of our employees are located, is very competitive. If we do not offer competitive compensation and benefits, we may fail to retain or attract a sufficient number of qualified personnel, which could impair our ability to properly run our business. We have experienced increased turnover since the start of the COVID-19 pandemic. As conditions improve from the pandemic and more employees return to the workplace from working remotely, we anticipate further increases to turnover. In addition, our recently mandated COVID-19 vaccine policy in the United States has resulted in a loss of personnel.

We may have higher than anticipated tax liabilities.

We are subject to income taxes in the United States and many foreign jurisdictions. We report our results of operations based on our determination of the amount of taxes owed in various tax jurisdictions in which we operate. The determination of our worldwide provision for income taxes and other tax liabilities requires estimation, judgment and calculations where the ultimate tax determination may not be certain. Our determination of our tax liabilities is subject to review or examination by tax authorities in various tax jurisdictions. Tax authorities have disagreed with our judgment in the past and may disagree with positions we take in the future resulting in assessments of additional taxes. Any adverse outcome of such review or examination could have a negative impact on our operating results and financial condition.

Economic and political pressures to increase tax revenues in various jurisdictions may make resolving tax disputes more difficult. For example, in recent years, the tax authorities in Europe have disagreed with our tax positions related to hybrid debt, research and development credits, transfer pricing and indirect taxes, among others. We regularly assess the likelihood of the outcome resulting from these examinations to determine the adequacy of our provision for income taxes. Although we believe our tax estimates are reasonable, the final determination of tax audits and any related litigation could be materially different from our historical income tax provisions and accruals.

Changes in tax laws or rates, changes in the interpretation of tax laws or changes in the jurisdictional mix of our earnings could adversely affect our financial position and results of operations.

On December 22, 2017, the U.S. enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the “Tax Act”) which made a number of substantial changes to how the United States imposes income tax on multinational corporations. The U.S. Treasury, Internal Revenue Service and other standard setting bodies continue to issue guidance and interpretation relating to the Tax Act. As future guidance is issued, we may make adjustments to amounts previously reported that could materially impact our financial statements.

The current U.S. presidential administration has proposed plans to create domestic jobs, rebuild national infrastructure and increase American competitiveness. To fund its cost, the administration also proposed changes to the U.S. corporate income tax code, including numerous changes to the U.S. taxation of multinational companies. If any of the provisions are enacted, our effective tax rate and cash tax liability may increase, which could materially impact our financial statements.

The tax effect of our position in Sartorius AG and the jurisdictional mix of our earnings could continue to materially affect our financial results and cash flow. In addition, the adoption of some or all of the recommendations set forth in the Organization for Economic Co-operation and Development's project on "Base Erosion and Profit Shifting" (BEPS) by tax authorities in the countries in which we operate, could negatively impact our effective tax rate. These recommendations focus on payments from affiliates in high tax jurisdictions to affiliates in lower tax jurisdictions and the activities that give rise to a taxable presence in a particular country.

Environmental, health and safety regulations and enforcement proceedings may negatively impact our business, results of operations and financial condition.

Our operations are subject to federal, state, local and foreign environmental laws and regulations that govern such activities as transportation of goods, emissions to air and discharges to water, as well as handling and disposal practices for solid, hazardous and medical wastes. In addition to environmental laws that regulate our operations, we are also subject to environmental laws and regulations that create liability and clean-up responsibility for spills, disposals or other releases of hazardous substances into the environment as a result of our operations or otherwise impacting real property that we own or operate. The environmental laws and regulations also subject us to claims by third parties for damages resulting from any spills, disposals or releases resulting from our operations or at any of our properties. We must also comply with various health and safety regulations in the United States and abroad in connection with our operations.

We may in the future incur capital and operating costs to comply with currently existing laws and regulations, and possible new statutory enactments, and these expenditures may be significant. We have incurred, and may in the future incur, fines related to environmental matters and/or liability for costs or damages related to spills or other releases of hazardous substances into the environment at sites where we have operated, or at off-site locations where we have sent hazardous substances for disposal. We cannot assure you, however, that such matters or any future obligations to comply with environmental or health and safety laws and regulations will not adversely affect our business, results of operations or financial condition.

Our current and future debt and related covenants may restrict our future operations.

We have substantial debt and have the ability to incur additional debt. As of June 30, 2022, we had approximately \$1,196.9 million of outstanding long-term indebtedness, primarily consisting of the 3.300% Senior Notes due in March 2027 and the 3.700% Senior Notes due in March 2032 as further discussed in Note 5 of the condensed consolidated financial statements. In addition, we have a revolving credit facility that provides for up to \$200.0 million in borrowing capacity, \$0.2 million of which has been utilized for domestic standby letters of credit. Our incurrence of substantial amounts of debt may have important consequences. For instance, it could:

- make it more difficult for us to satisfy our financial obligations, including those relating to our outstanding debt;
- require us to dedicate a substantial portion of our cash flow from operations to the payment of interest and principal due under our debt, which will reduce funds available for other business purposes;
- increase our vulnerability to general adverse economic and industry conditions;
- limit our flexibility in planning for, or reacting to, changes in our business and the industries in which we operate;
- place us at a competitive disadvantage compared with some of our competitors that have less debt; and
- limit our ability to obtain additional financing required to fund working capital and capital expenditures and for other general corporate purposes.

Our existing credit facility, our 3.300% Senior Notes due in March 2027, our 3.700% Senior Notes due in March 2032 and agreements we may enter in the future, contain or may contain covenants imposing restrictions on our business. These restrictions may affect our ability to operate our business and may limit our ability to take advantage of potential business opportunities as they arise. Existing covenants place restrictions on our ability to, among other things: incur additional debt; acquire other businesses or assets through merger or purchase; create liens; make investments; enter into transactions with affiliates; sell assets; in the case of some of our subsidiaries, guarantee debt; and declare or pay dividends, redeem stock or make other distributions to stockholders. Our existing credit facility also requires that we comply with certain financial ratios, including a maximum consolidated leverage ratio test and a minimum consolidated interest coverage ratio test. Our ability to comply with these covenants may be affected by events beyond our control, including prevailing economic, financial and industry conditions. The breach of any of these restrictions could result in a default. An event of default under our debt agreements would permit some of our lenders to declare all amounts borrowed from them to be due and payable, together with accrued and unpaid interest. In addition, acceleration of our other indebtedness may cause us to be unable to make interest payments on our outstanding notes and repay the principal amount of our outstanding notes or may cause the future subsidiary guarantors, if any, to be unable to make payments under the guarantees.

We are subject to healthcare laws and regulations and could face substantial penalties if we are unable to fully comply with such laws.

We are subject to healthcare regulation and enforcement by both the U.S. federal government and the U.S. states and foreign governments in which we conduct our business. These healthcare laws and regulations include, for example:

- the U.S. federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from soliciting, receiving, offering or providing remuneration, directly or indirectly, in return for or to induce either the referral of an individual for, or the purchase order or recommendation of, any item or services for which payment may be made under a federal healthcare program such as the Medicare and Medicaid programs;
- U.S. federal false claims laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payors that are false or fraudulent. In addition, the U.S. federal government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the false claims statutes;
- the U.S. Physician Payment Sunshine Act, which requires certain manufacturers of drugs, biologics, devices and medical supplies to record any transfers of value to U.S. physicians and U.S. teaching hospitals;
- the Health Insurance Portability and Accountability Act ("HIPAA"), as amended by the Health Information Technology for Economic and Clinical Health Act, which governs the conduct of certain electronic healthcare transactions and protects the security and privacy of protected health information; and
- state or foreign law equivalents of each of the U.S. federal laws above, such as anti-kickback and false claims laws, which may apply to items or services reimbursed by any third-party payor, including commercial insurers.

These laws will continue to impose administrative, cost and compliance burdens on us. The shifting compliance environment and the need to build and maintain robust systems to comply with multiple jurisdictions with different compliance and/or reporting requirements increases the possibility that a healthcare company may violate one or more of these requirements. In addition, any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. If our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, exclusion from the Medicare and Medicaid programs, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business, results of operations and financial condition.

Risks Related to Being a Public Company

Our failure to establish and maintain effective internal control over financial reporting could result in material misstatements in our financial statements, our failure to meet our reporting obligations and cause investors to lose confidence in our reported financial information, which in turn could cause the trading price of our common stock to decline.

Maintaining effective disclosure controls and procedures and internal controls over financial reporting are necessary for us to produce reliable financial statements. Material weaknesses in our internal control over financial reporting have adversely affected us in the past and could affect us in the future, and the results of our periodic management evaluations and annual auditor attestation reports regarding the effectiveness of our internal control over financial reporting required by Section 404 of the Sarbanes-Oxley Act of 2002. Any failure to maintain or implement new or improved internal controls, or any difficulties that we may encounter in their maintenance or implementation, could result in additional material weaknesses, result in material misstatements in our consolidated financial statements and cause us to fail to meet our reporting obligations. This could cause us to lose public confidence and could cause the trading price of our common stock to decline.

General Business Risks

Natural disasters, terrorist attacks, acts of war or other events beyond our control may cause damage or disruption to us and our employees, facilities, information systems, security systems, vendors and customers, which could significantly impact our business, results of operations and financial condition.

We have significant manufacturing and distribution facilities, including in the western United States, France, Switzerland, Germany and Singapore. In particular, the western United States has experienced a number of earthquakes, wildfires, floods, landslides and other natural disasters in recent years, some of which may be associated with climate change. These occurrences could damage or destroy our facilities which may result in interruptions to our business and losses that exceed our insurance coverage. In addition, electricity outages, strikes or other labor unrest at any of our sites or surrounding areas could cause disruption to our business. Acts of terrorism, bioterrorism, violence or war (such as Russia's invasion of Ukraine), or public health issues such as the outbreak of a contagious disease like COVID-19 could also affect the markets in which we operate, our business operations and strategic plans. Political unrest may affect our sales in certain regions, such as in Southeast Asia, the Middle East and Eastern Europe. Any of these events could adversely affect our business, results of operations and financial condition.

Risks Related to Our Common Stock

A significant majority of our voting stock is held by the Schwartz family, which could lead to conflicts of interest.

We have two classes of voting stock: Class A Common Stock and Class B Common Stock. With a few exceptions, holders of Class A and Class B Common Stock vote as a single class. When voting as a single class, each share of Class A Common Stock is entitled to one-tenth of a vote, while each share of Class B Common Stock has one vote. In the election or removal of directors, the classes vote separately and the holders of Class A Common Stock are entitled to elect 25% of the Board of Directors, with holders of Class B Common Stock electing the remaining directors. As a result of the Schwartz family's ownership of our Class A and Class B Common Stock, they are able to elect a majority of our directors, effect fundamental changes in our direction and control matters affecting us, including the determination of business opportunities that may be suitable for our company. The Schwartz family may exercise its control over us according to interests that are different from other investors' or debtors' interests. In particular, this concentration of ownership and voting power may have the effect of delaying or preventing a change in control of our company.

The forum selection provision in our bylaws could increase costs to bring a claim, discourage claims or limit the ability of the Company's stockholders to bring a claim in a judicial forum viewed by the stockholders as more favorable for disputes with the Company or the Company's directors, officers or other employees.

Our bylaws provide that unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another state court located within the State of Delaware or, if no state court located within the State of Delaware has jurisdiction, the federal district court for the District of Delaware) shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Company, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Company to the Company or the Company's stockholders, (iii) any action arising pursuant to any provision of the General Corporation Law of the State of Delaware, the Certificate of Incorporation or the Bylaws (in each case, as may be amended from time to time) or (iv) any action asserting a claim against the Company or any of its directors, officers or other employees governed by the internal affairs doctrine of the State of Delaware. This choice of forum provision may increase costs to bring a claim, discourage claims or limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with the Company or the Company's directors, officers or other employees, which may discourage such lawsuits against the Company or the Company's directors, officers and other employees. Alternatively, if a court were to find the choice of forum provision contained in the Company's bylaws to be inapplicable or unenforceable in an action, the Company may incur additional costs associated with resolving such action in other jurisdictions.

Application of the choice of forum provision may be limited in some instances by applicable law. Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. As a result, the choice of forum provision will not apply to actions arising under the Exchange Act or the rules and regulations thereunder. Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder, subject to a limited exception for certain "covered class actions." There is uncertainty, particularly in light of current litigation, as to whether a court would enforce the choice of forum provision with respect to claims under the Securities Act. Our stockholders will not be deemed, by operation of the Company's choice of forum provision, to have waived claims arising under the federal securities laws and the rules and regulations thereunder.

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

As of June 30, 2022, \$98.1 million of stock remained available for repurchases under the Company's current Share Repurchase Program, which was authorized by the Board of Directors in July 2020 and in November 2017. In July 2022, the Board of Directors authorized increasing the amount available under the Company's Share Repurchase Program to allow the Company to repurchase up to an additional \$200.0 million of stock. Repurchases under the Share Repurchase Program may be made at management's discretion from time to time on the open market or through privately negotiated transactions. The authorization has no expiration.

The following table contains information on the shares of our common stock that we purchased or otherwise acquired during the three months ended June 30, 2022.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximate Dollar Value) of Shares that May yet be Purchased Under the Plans or Programs (in millions)
April 1 to April 30, 2022	—	\$ —	—	\$ 223.1
May 1 to May 31, 2022	255,284 Class A	\$ 489.65	255,284 Class A	\$ 98.1
June 1 to June 30, 2022	—	\$ —	—	\$ 98.1

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

(a) Exhibits

The following documents are filed as part of this report:

Exhibit No.	
31.1	Chief Executive Officer Section 302 Certification
31.2	Chief Financial Officer Section 302 Certification
32.1	Chief Executive Officer Certification pursuant to 18 U.S.C Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Chief Financial Officer Certification pursuant to 18 U.S.C Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	The instance document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Labels Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104.1	The cover page Interactive Data File is formatted in Inline XBRL and is contained in Exhibits 101

SIGNATURES

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

BIO-RAD LABORATORIES, INC.
(Registrant)

Date: July 29, 2022

/s/ Norman Schwartz

Norman Schwartz, Chairman of the Board,
President and Chief Executive Officer

Date: July 29, 2022

/s/ Ilan Daskal

Ilan Daskal, Executive Vice President,
Chief Financial Officer