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 September 26, 2020

OR

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

FOR THE TRANSITION PERIOD FROM TO

Commission File No. 001-15943

charles river

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware			**06-1397316**
(State or Other Jurisdiction of Incorporation or Organization)			(I.R.S. Employer Identification No.)
251 Ballardvale Street	**Wilmington**	**Massachusetts**	**01887**
(Address of Principal Executive Offices)			(Zip Code)

(Registrant's telephone number, including area code): **(781) 222-6000**

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

Title of each class	**Ticker symbol(s)**	**Name of each exchange on which registered**
Common stock, $0.01 par value	CRL	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 such files. Yes ☑ No ☐

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

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

If an emerging growth company, indicate by a 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 ☑

As of October 23, 2020, there were 49,742,626 shares of the Registrant’s common stock outstanding.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.

QUARTERLY REPORT ON FORM 10-Q
FOR THE QUARTERLY PERIOD ENDED SEPTEMBER 26, 2020

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Special Note on Factors Affecting Future Results

This Quarterly Report on Form 10-Q contains forward-looking statements regarding future events and the future results of Charles River Laboratories International, Inc. that are based on our current expectations, estimates, forecasts and projections about the industries in which we operate and the beliefs and assumptions of our management. Words such as "expect," "anticipate," "target," "goal," "project," "intend," "plan," "believe," "seek," "estimate," "will," "likely," "may," "designed," "would," "future," "can," "could," and other similar expressions which are predictions of, indicate future events and trends or which do not relate to historical matters, are intended to identify such forward-looking statements. These statements are based on our current expectations and beliefs and involve a number of risks, uncertainties and assumptions that are difficult to predict.

For example, we may use forward-looking statements when addressing topics such as: the COVID-19 pandemic, its duration, its impact on our business, results of operations, financial condition, liquidity, use of our borrowings, business practices, operations, suppliers, third party service providers, customers, employees, industry, ability to meet future performance obligations, ability to efficiently implement advisable safety precautions, and internal controls over financial reporting; the COVID-19 pandemic's impact on demand, the global economy and financial markets; goodwill and asset impairments still under review; changes and uncertainties in the global economy; future demand for drug discovery and development products and services, including the outsourcing of these services; our expectations regarding stock repurchases, including the number of shares to be repurchased, expected timing and duration, the amount of capital that may be expended and the treatment of repurchased shares; the impact of unauthorized access into our information systems, including the timing and effectiveness of any enhanced security and monitoring; present spending trends and other cost reduction activities by our clients; future actions by our management; the outcome of contingencies; changes in our business strategy, business practices and methods of generating revenue; the development and performance of our services and products; market and industry conditions, including competitive and pricing trends; our strategic relationships with leading pharmaceutical and biotechnology companies, venture capital investments, and opportunities for future similar arrangements; our cost structure; the impact of acquisitions, including HemaCare and Cellero, LLC; our expectations with respect to revenue growth and operating synergies (including the impact of specific actions intended to cause related improvements); the impact of specific actions intended to improve overall operating efficiencies and profitability (and our ability to accommodate future demand with our infrastructure), including gains and losses attributable to businesses we plan to close, consolidate, divest or repurpose; changes in our expectations regarding future stock option, restricted stock, performance share units, and other equity grants to employees and directors; expectations with respect to foreign currency exchange; assessing (or changing our assessment of) our tax positions for financial statement purposes; and our liquidity. In addition, these statements include the impact of economic and market conditions on us and our clients; the effects of our cost saving actions and the steps to optimize returns to shareholders on an effective and timely basis; and our ability to withstand the current market conditions.

Forward-looking statements are predictions and are subject to risks, uncertainties and assumptions that are difficult to predict. Therefore, actual results may differ materially and adversely from those expressed in any forward-looking statements. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this document, or in the case of statements incorporated by reference, on the date of the document incorporated by reference.

Factors that might cause or contribute to such differences include, but are not limited to, those discussed in our Annual Report on Form 10-K for the year ended December 28, 2019, under the sections entitled "Our Strategy," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and in this Quarterly Report on Form 10-Q, under the sections entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Risk Factors," in our press releases, and other financial filings with the Securities and Exchange Commission. We have no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events, or risks. New information, future events, or risks may cause the forward-looking events we discuss in this report not to occur.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
CONDENSED CONSOLIDATED STATEMENTS OF INCOME (UNAUDITED)
(in thousands, except per share amounts)

	Three Months Ended		Nine Months Ended	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
Service revenue	$ 580,774	$ 523,169	$ 1,677,927	$ 1,479,991
Product revenue	162,526	144,782	455,016	450,097
Total revenue	743,300	667,951	2,132,943	1,930,088
Costs and expenses:				
Cost of services provided (excluding amortization of intangible assets)	377,226	351,894	1,124,988	1,014,063
Cost of products sold (excluding amortization of intangible assets)	76,800	69,941	234,382	220,028
Selling, general and administrative	128,289	129,509	385,902	388,024
Amortization of intangible assets	28,232	23,805	83,869	65,611
Operating income	132,753	92,802	303,802	242,362
Other income (expense):				
Interest income	179	385	771	838
Interest expense	(18,867)	(5,698)	(53,286)	(36,520)
Other income (expense), net	21,211	(14,254)	23,400	(8,161)
Income from operations, before income taxes	135,276	73,235	274,687	198,519
Provision (benefit) for income taxes	32,665	(317)	53,571	24,970
Net income	102,611	73,552	221,116	173,549
Less: Net (expense) income attributable to noncontrolling interests	(298)	742	3	1,878
Net income attributable to common shareholders	$ 102,909	$ 72,810	$ 221,113	$ 171,671
Earnings per common share				
Net income attributable to common shareholders:				
Basic	$ 2.07	$ 1.49	$ 4.47	$ 3.53
Diluted	$ 2.03	$ 1.46	$ 4.39	$ 3.46
Weighted-average number of common shares outstanding:				
Basic	49,703	48,818	49,482	48,682
Diluted	50,702	49,715	50,371	49,627

See Notes to Unaudited Condensed Consolidated Financial Statements.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (UNAUDITED)
(in thousands)

	Three Months Ended		Nine Months Ended	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
Net income	$ 102,611	$ 73,552	$ 221,116	$ 173,549
Other comprehensive income (loss):				
Foreign currency translation adjustment and other	20,112	(15,889)	(17,993)	(9,075)
Amortization of net loss and prior service benefit included in net periodic cost for pension and other post-retirement benefit plans	1,411	365	4,150	1,113
Comprehensive income, before income taxes	124,134	58,028	207,273	165,587
Less: Income tax expense (benefit) related to items of other comprehensive income	3,201	(2,511)	3,024	(1,381)
Comprehensive income, net of income taxes	120,933	60,539	204,249	166,968
Less: Comprehensive income (loss) related to noncontrolling interests, net of income taxes	591	(37)	399	1,064
Comprehensive income attributable to common shareholders, net of income taxes	$ 120,342	$ 60,576	$ 203,850	$ 165,904

See Notes to Unaudited Condensed Consolidated Financial Statements.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)
(in thousands, except per share amounts)

	September 26, 2020	December 28, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 242,879	$ 238,014
Trade receivables, net	572,058	514,033
Inventories	181,367	160,660
Prepaid assets	69,481	52,588
Other current assets	74,489	56,030
Total current assets	1,140,274	1,021,325
Property, plant and equipment, net	1,037,212	1,044,128
Operating lease right-of-use assets, net	168,379	140,085
Goodwill	1,777,642	1,540,565
Client relationships, net	732,408	613,573
Other intangible assets, net	70,370	75,840
Deferred tax assets	39,515	44,659
Other assets	247,538	212,615
Total assets	$ 5,213,338	$ 4,692,790
Liabilities, Redeemable Noncontrolling Interests and Equity		
Current liabilities:		
Current portion of long-term debt and finance leases	$ 47,946	$ 38,545
Accounts payable	96,758	111,498
Accrued compensation	191,295	158,617
Deferred revenue	172,336	171,805
Accrued liabilities	151,061	139,118
Other current liabilities	127,618	90,598
Total current liabilities	787,014	710,181
Long-term debt, net and finance leases	1,968,161	1,849,666
Operating lease right-of-use liabilities	146,578	116,252
Deferred tax liabilities	202,392	167,283
Other long-term liabilities	183,695	182,933
Total liabilities	3,287,840	3,026,315
Commitments and contingencies (Notes 2, 9, 11, 12, 16 and 17)		
Redeemable noncontrolling interests	24,033	28,647
Equity:		
Preferred stock, $0.01 par value; 20,000 shares authorized; no shares issued and outstanding	—	—
Common stock, $0.01 par value; 120,000 shares authorized; 49,882 shares issued and 49,736 shares outstanding as of September 26, 2020, and 48,936 shares issued and 48,936 shares outstanding as of December 28, 2019	499	489
Additional paid-in capital	1,614,185	1,531,785
Retained earnings	501,442	280,329
Treasury stock, at cost, 146 and 0 shares, as of September 26, 2020 and December 28, 2019, respectively	(23,905)	—
Accumulated other comprehensive loss	(195,281)	(178,019)
Total equity attributable to common shareholders	1,896,940	1,634,584
Noncontrolling interest	4,525	3,244
Total equity	1,901,465	1,637,828
Total liabilities, redeemable noncontrolling interests and equity	$ 5,213,338	$ 4,692,790

See Notes to Unaudited Condensed Consolidated Financial Statements.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)
(in thousands)

	Nine Months Ended	
	September 26, 2020	**September 28, 2019**
Cash flows relating to operating activities		
Net income	$ 221,116	$ 173,549
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	174,048	146,262
Stock-based compensation	40,973	43,429
Deferred income taxes	(3,131)	(25,092)
Gain on venture capital and strategic equity investments, net	(32,226)	(5,724)
Other, net	16,902	4,865
Changes in assets and liabilities:		
Trade receivables, net	(51,456)	(24,491)
Inventories	(14,055)	(12,981)
Accounts payable	(12,327)	24,481
Accrued compensation	29,438	(23,320)
Deferred revenue	(1,308)	(1,556)
Customer contract deposits	9,887	(7,586)
Other assets and liabilities, net	30,335	8,423
Net cash provided by operating activities	408,196	300,259
Cash flows relating to investing activities		
Acquisition of businesses and assets, net of cash acquired	(419,146)	(515,647)
Capital expenditures	(78,706)	(76,675)
Purchases of investments and contributions to venture capital investments	(19,887)	(17,664)
Proceeds from sale of investments	5,810	15
Other, net	(1,192)	(660)
Net cash used in investing activities	(513,121)	(610,631)
Cash flows relating to financing activities		
Proceeds from long-term debt and revolving credit facility	1,411,954	2,071,175
Proceeds from exercises of stock options	43,806	26,982
Payments on long-term debt, revolving credit facility, and finance lease obligations	(1,320,961)	(1,798,620)
Purchase of treasury stock	(23,905)	(18,040)
Other, net	(4,417)	(10,516)
Net cash provided by financing activities	106,477	270,981
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	5,825	8,793
Net change in cash, cash equivalents, and restricted cash	7,377	(30,598)
Cash, cash equivalents, and restricted cash, beginning of period	240,046	197,318
Cash, cash equivalents, and restricted cash, end of period	$ 247,423	$ 166,720
Supplemental cash flow information:		
Cash and cash equivalents	$ 242,879	$ 164,759
Restricted cash included in Other current assets	2,968	534
Restricted cash included in Other assets	1,576	1,427
Cash, cash equivalents, and restricted cash, end of period	$ 247,423	$ 166,720

See Notes to Unaudited Condensed Consolidated Financial Statements.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (UNAUDITED)
(in thousands)

	Common Stock		Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock		Total Equity Attributable to Common Shareholders	Noncontrolling Interest	Total Equity
	Shares	Amount				Shares	Amount			
December 28, 2019	**48,936**	**$ 489**	**$ 1,531,785**	**$ 280,329**	**$ (178,019)**	**—**	**$ —**	**$ 1,634,584**	**$ 3,244**	**$ 1,637,828**
Net income	—	—	—	50,769	—	—	—	50,769	399	51,168
Other comprehensive loss	—	—	—	—	(40,898)	—	—	(40,898)	—	(40,898)
Buy-out and contingent consideration recognition in connection with redeemable noncontrolling interest	—	—	(2,379)	—	—	—	—	(2,379)	—	(2,379)
Issuance of stock under employee compensation plans	694	7	22,616	—	—	—	—	22,623	—	22,623
Acquisition of treasury shares	—	—	—	—	—	144	(23,675)	(23,675)	—	(23,675)
Stock-based compensation	—	—	10,960	—	—	—	—	10,960	—	10,960
March 28, 2020	**49,630**	**496**	**1,562,982**	**331,098**	**(218,917)**	**144**	**(23,675)**	**1,651,984**	**3,643**	**1,655,627**
Net income	—	—	—	67,435	—	—	—	67,435	441	67,876
Other comprehensive income	—	—	—	—	6,203	—	—	6,203	—	6,203
Issuance of stock under employee compensation plans	174	2	13,992	—	—	—	—	13,994	—	13,994
Acquisition of treasury shares	—	—	—	—	—	1	(118)	(118)	—	(118)
Stock-based compensation	—	—	13,143	—	—	—	—	13,143	—	13,143
June 27, 2020	**49,804**	**498**	**1,590,117**	**398,533**	**(212,714)**	**145**	**(23,793)**	**1,752,641**	**4,084**	**1,756,725**
Net income	—	—	—	102,909	—	—	—	102,909	441	103,350
Other comprehensive income	—	—	—	—	17,433	—	—	17,433	—	17,433
Issuance of stock under employee compensation plans	78	1	7,198	—	—	—	—	7,199	—	7,199
Acquisition of treasury shares	—	—	—	—	—	1	(112)	(112)	—	(112)
Stock-based compensation	—	—	16,870	—	—	—	—	16,870	—	16,870
September 26, 2020	**49,882**	**$ 499**	**$ 1,614,185**	**$ 501,442**	**$ (195,281)**	**146**	**$ (23,905)**	**$ 1,896,940**	**$ 4,525**	**$ 1,901,465**

	Common Stock		Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock		Total Equity Attributable to Common Shareholders	Noncontrolling Interest	Total Equity
	Shares	Amount				Shares	Amount			
December 29, 2018	**48,210**	**$ 482**	**$ 1,447,512**	**$ 42,096**	**$ (172,703)**	**1**	**$ (55)**	**$ 1,317,332**	**$ 2,446**	**$ 1,319,778**
Net income	—	—	—	55,133	—	—	—	55,133	469	55,602
Other comprehensive income	—	—	—	—	9,903	—	—	9,903	—	9,903
Adjustment of redeemable noncontrolling interest to redemption value	—	—	(1,451)	—	—	—	—	(1,451)	—	(1,451)
Issuance of stock under employee compensation plans	674	7	22,051	—	—	—	—	22,058	—	22,058
Acquisition of treasury shares	—	—	—	—	—	136	(17,760)	(17,760)	—	(17,760)
Stock-based compensation	—	—	12,899	—	—	—	—	12,899	—	12,899
March 30, 2019	**48,884**	**489**	**1,481,011**	**97,229**	**(162,800)**	**137**	**(17,815)**	**1,398,114**	**2,915**	**1,401,029**
Net income	—	—	—	43,728	—	—	—	43,728	383	44,111
Other comprehensive loss	—	—	—	—	(3,436)	—	—	(3,436)	—	(3,436)
Purchase of additional equity interest in and modification of Vital River redeemable noncontrolling interest	—	—	(1,870)	—	—	—	—	(1,870)	—	(1,870)
Issuance of stock under employee compensation plans	53	—	2,148	—	—	—	—	2,148	—	2,148
Acquisition of treasury shares	—	—	—	—	—	1	(123)	(123)	—	(123)
Stock-based compensation	—	—	16,505	—	—	—	—	16,505	—	16,505
June 29, 2019	**48,937**	**489**	**1,497,794**	**140,957**	**(166,236)**	**138**	**(17,938)**	**1,455,066**	**3,298**	**1,458,364**
Net income	—	—	—	72,810	—	—	—	72,810	776	73,586
Other comprehensive loss	—	—	—	—	(12,234)	—	—	(12,234)	—	(12,234)
Issuance of stock under employee compensation plans	39	1	2,801	—	—	—	—	2,802	—	2,802
Acquisition of treasury shares	—	—	—	—	—	1	(156)	(156)	—	(156)
Stock-based compensation	—	—	14,025	—	—	—	—	14,025	—	14,025
September 28, 2019	**48,976**	**$ 490**	**$ 1,514,620**	**$ 213,767**	**$ (178,470)**	**139**	**$ (18,094)**	**$ 1,532,313**	**$ 4,074**	**$ 1,536,387**

See Notes to Unaudited Condensed Consolidated Financial Statements.

1. BASIS OF PRESENTATION

The accompanying condensed consolidated financial statements are unaudited and have been prepared by Charles River Laboratories International, Inc. (the Company) in accordance with accounting principles generally accepted in the United States (U.S. GAAP) and pursuant to the rules and regulations of the Securities and Exchange Commission (SEC). The year-end condensed consolidated balance sheet data was derived from the Company's audited consolidated financial statements, but does not include all disclosures required by U.S. GAAP. These unaudited condensed consolidated financial statements should be read in conjunction with the Company's Annual Report on Form 10-K for fiscal year 2019. The unaudited condensed consolidated financial statements, in the opinion of management, reflect all normal and recurring adjustments necessary for a fair statement of the Company's financial position and results of operations.

Use of Estimates

The preparation of unaudited condensed consolidated financial statements in accordance with U.S. GAAP requires that the Company make estimates and judgments that may affect the reported amounts of assets, liabilities, revenues, expenses and related disclosure of contingent assets and liabilities. On an on-going basis, the Company evaluates its estimates, judgments, and methodologies. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions. Changes in estimates are reflected in reported results in the period in which they become known.

On March 11, 2020, the World Health Organization declared the outbreak of a strain of novel coronavirus disease, COVID-19, a global pandemic. The COVID-19 pandemic is dynamic and expanding, and its ultimate scope, duration and effects are uncertain. This pandemic has and continues to result in, and any future epidemic or pandemic crises may potentially result in, direct and indirect adverse effects on the Company's industry and customers, which in turn has (with respect to COVID-19) and may (with respect to future epidemics or crises) impact the Company's business, results of operations and financial condition. Further, the COVID-19 pandemic may also affect the Company's operating and financial results in a manner that is not presently known to the Company or that the Company currently does not expect to present significant risks to its operations or financial results. As of the date of issuance of these unaudited condensed consolidated financial statements, the Company is not aware of any specific event or circumstance that would require the Company to update estimates, judgments or revise the carrying value of any assets or liabilities. These estimates may change, as new events occur and additional information is obtained, and are recognized in the condensed consolidated financial statements as soon as they become known. Actual results could differ from those estimates and any such differences may be material to the Company's condensed consolidated financial statements.

Consolidation

The Company's unaudited condensed consolidated financial statements reflect its financial statements and those of its subsidiaries in which the Company holds a controlling financial interest. For consolidated entities in which the Company owns or is exposed to less than 100% of the economics, the Company records net income (loss) attributable to noncontrolling interests in its consolidated statements of income equal to the percentage of the economic or ownership interest retained in such entities by the respective noncontrolling parties. Intercompany balances and transactions are eliminated in consolidation.

The Company's fiscal year is typically based on 52-weeks, with each quarter composed of 13 weeks ending on the last Saturday on, or closest to, March 31, June 30, September 30, and December 31.

Segment Reporting

The Company reports its results in three reportable segments: Research Models and Services (RMS), Discovery and Safety Assessment (DSA), and Manufacturing Support (Manufacturing). The Company's RMS reportable segment includes the Research Models, Research Model Services, and Research Products businesses. Research Models includes the commercial production and sale of small research models, as well as the supply of large research models. Research Model Services includes: Genetically Engineered Models and Services (GEMS), which performs contract breeding and other services associated with genetically engineered models; Research Animal Diagnostic Services (RADS), which provides health monitoring and diagnostics services related to research models; and Insourcing Solutions (IS), which provides colony management of its clients' research operations (including recruitment, training, staffing, and management services). Research Products supplies controlled, consistent, customized primary cells and blood components derived from normal and mobilized peripheral blood, bone marrow, and cord blood. The Company's DSA reportable segment includes services required to take a drug through the early development process including discovery services, which are non-regulated services to assist clients with the identification, screening, and selection of a lead compound for drug development, and regulated and non-regulated (GLP and non-GLP) safety assessment services. The Company's Manufacturing reportable segment includes Microbial Solutions, which provides *in vitro* (non-animal) lot-release testing products, microbial detection products, and species identification

services; Biologics Testing Services (Biologics), which performs specialized testing of biologics; and Avian Vaccine Services (Avian), which supplies specific-pathogen-free chicken eggs and chickens.

Summary of Significant Accounting Policies

The Company's significant accounting policies are described in Note 1, "Description of Business and Summary of Significant Accounting Policies" in the Company's Annual Report on Form 10-K for fiscal year 2019.

Newly Adopted Accounting Pronouncements

In August 2018, the Financial Accounting Standards Board (FASB) issued ASU 2018-15, "Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computer Arrangement that is a Service Contract." ASU 2018-15 aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). This standard became effective for the Company in the three months ended March 28, 2020 and did not have a significant impact on the unaudited condensed consolidated financial statements and related disclosures.

In August 2018, the FASB issued ASU 2018-13, "Fair Value Measurement (Topic 820) - Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement." ASU 2018-13 removes the disclosure requirement for the amount and reasons for transfers between Level 1 and Level 2 fair value measurements as well as the process for Level 3 fair value measurements. In addition, the ASU adds the disclosure requirements for changes in unrealized gains and losses included in Other comprehensive income (loss) for recurring Level 3 fair value measurements held at the end of the reporting period as well as the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. This standard became effective for the Company in the three months ended March 28, 2020 and did not have a significant impact on the unaudited condensed consolidated financial statements and related disclosures.

In August 2018, the FASB issued ASU 2018-14, "Compensation Retirement Benefits - Defined Benefit Plans -General (Subtopic 715-20)." ASU 2018-14 removes the requirements to disclose the amounts in Accumulated other comprehensive income (loss) expected to be recognized as components of net periodic benefit cost over the next fiscal year and the related party disclosures about the amount of future annual benefits covered by insurance contracts. In addition, the ASU adds the requirement to disclose an explanation for any significant gains and losses related to changes in the benefit obligation for the period. This standard became effective for the Company in the three months ended March 28, 2020 and did not have a significant impact on the unaudited condensed consolidated financial statements and related disclosures.

In January 2017, the FASB issued ASU 2017-04, "Simplifying the Test for Goodwill Impairment." The standard simplifies the accounting for goodwill impairment by removing Step 2 of the goodwill impairment test, which requires a hypothetical purchase price allocation. This standard became effective for the Company in the three months ended March 28, 2020 and did not have an impact on the unaudited condensed consolidated financial statements and related disclosures. The Company performs its annual impairment test during the fourth quarter of a fiscal year and does not expect any significant impact on the consolidated financial statements and related disclosures.

In June 2016, the FASB issued ASU 2016-13, "Financial Instruments - Credit Losses". The standard, including subsequently issued amendments, requires a financial asset measured at amortized cost basis, such as trade and notes receivables, to be presented at the net amount expected to be collected based on relevant information about past events, including historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. This standard became effective for the Company in the three months ended March 28, 2020 and did not have a significant impact on the unaudited condensed consolidated financial statements and related disclosures.

Newly Issued Accounting Pronouncements

In March 2020, the FASB issued ASU 2020-04, "Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting." The ASU offers temporary optional expedients and exceptions for applying U.S. GAAP to modifications to agreements such as loans, debt securities, derivatives, and borrowings which reference LIBOR or another reference rate that is expected to be discontinued by December 31, 2021. The expedients and exceptions provided by the standard do not apply to modifications made and hedging relationships entered into or evaluated after December 31, 2022, except for hedging relationships existing as of December 31, 2022 that an entity has elected certain optional expedients for and are retained through the end of the hedging relationship. The ASU is effective until December 31, 2022 when the replacement for LIBOR is expected to be completed. The interest rate on the Company's senior credit facility, which matures in fiscal year 2023, is linked to LIBOR. The Company is in the process of evaluating options for transitioning away from the senior credit facility's use of LIBOR and expects to be completed by the time LIBOR is phased out. The Company did not elect to apply any of the expedients or exceptions as of and for the three and nine months ended September 26, 2020 and is currently evaluating the impact this new standard will have on the unaudited condensed consolidated financial statements and related disclosures.

In January 2020, the FASB issued ASU 2020-01, "Investments-Equity Securities (Topic 321), Investments-Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815)." ASU 2020-01 states any equity security transitioning

from the alternative method of accounting under Topic 321 to the equity method, or vice versa, due to an observable transaction will be remeasured immediately before the transition. In addition, the ASU clarifies the accounting for certain non-derivative forward contracts or purchased call options to acquire equity securities stating such instruments will be measured using the fair value principles of Topic 321 before settlement or exercise. The ASU is effective for fiscal years beginning after December 15, 2020, and will be applied on a prospective basis. Early adoption is permitted. The Company is still evaluating the impact this standard will have on its consolidated financial statements and related disclosures, but does not believe there will be a material impact upon adoption.

In December 2019, the FASB issued ASU 2019-12, "Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes." ASU 2019-12 simplifies the accounting for income taxes by removing exceptions within the general principles of Topic 740 regarding the calculation of deferred tax liabilities, the incremental approach for intraperiod tax allocation, and calculating income taxes in an interim period. In addition, the ASU adds clarifications to the accounting for franchise tax (or similar tax), which is partially based on income, evaluating tax basis of goodwill recognized from a business combination, and reflecting the effect of any enacted changes in tax laws or rates in the annual effective tax rate computation in the interim period that includes the enactment date. The ASU is effective for fiscal years beginning after December 15, 2020, and will be applied either retrospectively or prospectively based upon the applicable amendments. Early adoption is permitted. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial statements and related disclosures.

2. BUSINESS COMBINATIONS

Cellero, LLC

On August 6, 2020, the Company acquired Cellero, LLC (Cellero), a provider of cellular products for cell therapy developers and manufacturers worldwide. The addition of Cellero enhances the Company's unique, comprehensive solutions for the high-growth cell therapy market, strengthening the ability to help accelerate clients' critical programs from basic research and proof-of-concept to regulatory approval and commercialization. It also expands the Company's access to high-quality, human-derived biomaterials with Cellero's donor sites in the United States. The purchase price for Cellero was $37.5 million in cash, subject to certain post-closing adjustments that may change the purchase price. The acquisition was funded through cash on hand. This business is reported as part of the Company's RMS reportable segment.

The preliminary purchase price allocation of $37.0 million, net of $0.5 million of cash acquired was as follows:

	August 6, 2020
	(in thousands)
Trade receivables	$ 1,525
Inventories	551
Other current assets (excluding cash)	182
Property, plant and equipment	1,648
Goodwill	19,532
Definite-lived intangible assets	16,230
Other long-term assets	849
Current liabilities	(1,360)
Deferred tax liabilities	(1,467)
Other long-term liabilities	(740)
Total purchase price allocation	$ 36,950

The preliminary purchase price allocation is subject to change as additional information becomes available concerning the fair value and tax basis of the assets acquired and liabilities assumed, including certain contracts and obligations. Any additional adjustments to the purchase price allocation will be made as soon as practicable but no later than one year from the date of acquisition.

The breakout of definite-lived intangible assets acquired was as follows:

	Definite-Lived Intangible Assets	Weighted Average Amortization Life
	(in thousands)	(in years)
Client relationships	$ 14,740	13
Other intangible assets	1,490	3
Total definite-lived intangible assets	$ 16,230	12

The goodwill resulting from the transaction, $10.8 million of which is deductible for tax purposes due to a prior asset acquisition, is primarily attributable to the potential growth of the Company's RMS business from customers introduced through Cellero and the assembled workforce of the acquired business.

The Company incurred transaction and integration costs in connection with the acquisition of $2.0 million for the three and nine months ended September 26, 2020, which was primarily included in Selling, general and administrative expenses within the unaudited condensed consolidated statements of income.

Pro forma financial information as well as the disclosure of actual revenue and operating income (loss) have not been included because Cellero's financial results are not significant when compared to the Company's consolidated financial results.

HemaCare Corporation

On January 3, 2020, the Company acquired HemaCare Corporation (HemaCare), a business specializing in the production of human-derived cellular products for the cell therapy market. The acquisition of HemaCare expands the Company's comprehensive portfolio of early-stage research and manufacturing support solutions to encompass the production and customization of high-quality, human derived cellular products to better support clients' cell therapy programs. The purchase price of HemaCare was $379.8 million in cash. The acquisition was funded through a combination of cash on hand and proceeds from the Company's Credit Facility under the multi-currency revolving facility. See Note 9, "Long-Term Debt and Finance Leases." This business is reported as part of the Company's RMS reportable segment.

The preliminary purchase price allocation of $376.7 million, net of $3.1 million of cash acquired was as follows:

	January 3, 2020
	(in thousands)
Trade receivables	$ 6,451
Inventories	8,468
Other current assets (excluding cash)	3,494
Property, plant and equipment	10,033
Goodwill	210,196
Definite-lived intangible assets	183,540
Other long-term assets	5,920
Current liabilities	(5,188)
Deferred tax liabilities	(38,529)
Other long-term liabilities	(7,664)
Total purchase price allocation	$ 376,721

The purchase price allocation is subject to change as additional information becomes available concerning the fair value and tax basis of the assets acquired and liabilities assumed, including certain contracts and obligations. Any additional adjustments to the purchase price allocation will be made as soon as practicable but no later than one year from the date of acquisition.

The breakout of definite-lived intangible assets acquired was as follows:

	Definite-Lived Intangible Assets	Weighted Average Amortization Life
	(in thousands)	(in years)
Client relationships	$ 170,390	19
Trade name	7,330	10
Other intangible assets	5,820	3
Total definite-lived intangible assets	$ 183,540	18

The goodwill resulting from the transaction is primarily attributable to the potential growth of the Company's RMS business from customers introduced through HemaCare and the assembled workforce of the acquired business. The goodwill attributable to HemaCare is not deductible for tax purposes.

The Company incurred transaction and integration costs in connection with the acquisition of $0.1 million and $5.9 million for the three and nine months ended September 26, 2020, respectively, which were primarily included in Selling, general and administrative expenses within the unaudited condensed consolidated statements of income.

Beginning on January 3, 2020, HemaCare has been included in the operating results of the Company. HemaCare revenue for the three and nine months ended September 26, 2020 was $12.8 million and $31.5 million, respectively. HemaCare operating income for the three months ended September 26, 2020 was $0.4 million and its operating loss for the nine months ended September 26, 2020 was $7.7 million.

The following selected unaudited pro forma consolidated results of operations are presented as if the HemaCare acquisition had occurred as of the beginning of the period immediately preceding the period of acquisition, which is December 30, 2018, after giving effect to certain adjustments. For the nine months ended September 26, 2020, these adjustments included additional amortization of intangible assets and depreciation of fixed assets of $0.6 million, elimination of intercompany activity and other one-time costs, and the tax impacts of these adjustments. For the nine months ended September 28, 2019, these adjustments included additional amortization of intangible assets and depreciation of fixed assets of $9.6 million, additional interest expense on borrowings of $8.8 million, elimination of intercompany activity and other one-time costs, and the tax impacts of these adjustments.

	Three Months Ended		Nine Months Ended	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
	(in thousands)			
	(unaudited)			
Revenue	$ 743,300	$ 677,993	$ 2,132,961	$ 1,959,544
Net income attributable to common shareholders	102,802	70,722	225,890	165,376

These unaudited pro forma results of operations have been prepared for comparative purposes only, and they do not purport to be indicative of the results of operations that actually would have resulted ad the acquisition occurred on the dates indicated or that may result in the future. No effect has been given for synergies, if any, that may be realized through the acquisition.

Citoxlab

On April 29, 2019, the Company acquired Citoxlab, a non-clinical CRO, specializing in regulated safety assessment services, non-regulated discovery services, and medical device testing. With operations in Europe and North America, the acquisition of Citoxlab further strengthens the Company's position as a leading, global, early-stage CRO by expanding its scientific portfolio and geographic footprint, which enhances the Company's ability to partner with clients across the drug discovery and development continuum. The purchase price for Citoxlab was $527.1 million in cash. The acquisition was funded through a combination of cash on hand and proceeds from the Company's Credit Facility under the multi-currency revolving facility. This business is reported as part of the Company's DSA reportable segment.

The purchase price allocation of $490.4 million, net of $36.7 million of cash acquired was as follows:

	April 29, 2019
	(in thousands)
Trade receivables	$ 35,405
Inventories	5,282
Other current assets (excluding cash)	13,917
Property, plant and equipment	88,605
Goodwill	280,161
Definite-lived intangible assets	162,400
Other long-term assets	20,063
Deferred revenue	(15,278)
Current liabilities	(46,081)
Deferred tax liabilities	(27,458)
Other long-term liabilities	(22,624)
Redeemable noncontrolling interest	(4,035)
Total purchase price allocation	$ 490,357

From the date of the acquisition through March 28, 2020, the Company recorded measurement-period adjustments related to the acquisition that resulted in an immaterial change to the purchase price allocation on a consolidated basis. No further adjustments will be made to the purchase price allocation.

The breakout of definite-lived intangible assets acquired was as follows:

	Definite-Lived Intangible Assets	Weighted Average Amortization Life
	(in thousands)	(in years)
Client relationships	$ 134,600	13
Developed technology	19,900	3
Backlog	7,900	1
Total definite-lived intangible assets	$ 162,400	12

The goodwill resulting from the transaction, $7.2 million of which is deductible for tax purposes due to a prior asset acquisition, is primarily attributable to the potential growth of the Company's DSA business from customers introduced through Citoxlab and the assembled workforce of the acquired business.

The Company incurred transaction and integration costs in connection with the acquisition of $0.6 million and $1.9 million for the three months ended September 26, 2020 and September 28, 2019, respectively, which were primarily included in Selling, general and administrative expenses within the unaudited condensed consolidated statements of income. The Company incurred transaction and integration costs in connection with the acquisition of $3.1 million and $19.1 million for the nine months ended September 26, 2020 and September 28, 2019, respectively, which were primarily included in Selling, general and administrative expenses within the unaudited condensed consolidated statements of income.

The following selected unaudited pro forma consolidated results of operations are presented as if the Citoxlab acquisition had occurred as of the beginning of the period immediately preceding the period of acquisition, which is December 31, 2017, after giving effect to certain adjustments. For the nine months ended September 28, 2019, these adjustments included additional amortization of intangible assets and depreciation of fixed assets of $4.8 million, additional interest expense on borrowings of $1.2 million, elimination of intercompany activity and other one-time costs, and the tax impacts of these adjustments.

	September 28, 2019	
	Three Months Ended	Nine Months Ended
Revenue	$ 667,951	$ 1,992,472
Net income attributable to common shareholders	74,948	189,601

These unaudited pro forma results of operations have been prepared for comparative purposes only, and they do not purport to be indicative of the results of operations that actually would have resulted had the acquisition occurred on the dates indicated or that may result in the future. No effect has been given for synergies, if any, that may be realized through the acquisition.

Other Acquisition

On August 28, 2019, the Company acquired an 80% ownership interest in a supplier that supports the Company's DSA reportable segment. The remaining 20% interest is a redeemable non-controlling interest. See Note 10, "Equity and Noncontrolling Interests." The purchase price was $23.4 million, net of a $4.0 million pre-existing relationship for a supply agreement settled upon acquisition. The acquisition was funded through a combination of cash on hand and proceeds from the Company's Credit Facility under the multi-currency revolving facility. The business is reported as part of the Company's DSA reportable segment.

The purchase price allocation of $23.1 million, net of $0.3 million of cash acquired was as follows:

	August 28, 2019
	(in thousands)
Trade receivables	$ 189
Inventories	7,644
Property, plant and equipment	1,462
Goodwill	12,591
Other long-term assets	11,849
Current liabilities	(441)
Deferred tax liabilities	(1,253)
Other long-term liabilities	(238)
Redeemable noncontrolling interest	(8,740)
Total purchase price allocation	$ 23,063

From the date of the acquisition through June 27, 2020, the Company recorded measurement-period adjustments related to the acquisition that resulted in an immaterial change to the purchase price allocation on a consolidated basis. No further adjustments will be made to the purchase price allocation.

No significant integration costs were incurred with the acquisition for the three and nine months ended September 26, 2020. The Company incurred transaction and integration costs in connection with the acquisition of $2.1 million and $3.2 million for the three and nine months ended September 28, 2019, respectively, which were primarily included in Selling, general and administrative expenses within the unaudited condensed consolidated statements of income.

Pro forma financial information as well as the disclosure of actual results have not been included because these financial results are not significant when compared to the Company's consolidated financial results.

3. REVENUE FROM CONTRACTS WITH CUSTOMERS

Disaggregation of Revenue

The following tables disaggregate the Company's revenue by major business line and timing of transfer of products or services:

	Three Months Ended		Nine Months Ended	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
	(in thousands)			
Major Products/Service Lines:				
RMS	$ 151,910	$ 132,546	$ 414,455	$ 405,772
DSA	461,177	420,079	1,342,424	1,179,793
Manufacturing	130,213	115,326	376,064	344,523
Total revenue	$ 743,300	$ 667,951	$ 2,132,943	$ 1,930,088

	Three Months Ended		Nine Months Ended	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
	(in thousands)			
Timing of Revenue Recognition:				
RMS				
Services and products transferred over time	$ 60,225	$ 56,243	$ 177,623	$ 168,377
Services and products transferred at a point in time	91,685	76,303	236,832	237,395
DSA				
Services and products transferred over time	460,821	419,445	1,341,832	1,178,874
Services and products transferred at a point in time	356	634	592	919
Manufacturing				
Services and products transferred over time	47,457	36,308	126,088	102,674
Services and products transferred at a point in time	82,756	79,018	249,976	241,849
Total revenue	$ 743,300	$ 667,951	$ 2,132,943	$ 1,930,088

RMS

The RMS business generates revenue through the commercial production and sale of research models, research products, and the provision of services related to the maintenance and monitoring of research models and management of clients' research operations. Revenue from the sale of research models and products is recognized at a point in time when the customer obtains control of the product, which may be upon shipment or upon delivery based on the shipping terms of a contract. Revenue generated from research models services is recognized over time and is typically based on a right-to-invoice measure of progress (output method) as invoiced amounts correspond directly to the value of the Company's performance to date.

DSA

The Discovery and Safety Assessment business provides a full suite of integrated drug discovery services directed at the identification, screening and selection of a lead compound for drug development and offers a full range of safety assessment services including bioanalysis, drug metabolism, pharmacokinetics, toxicology and pathology. Discovery and Safety Assessment services revenue is generally recognized over time using the cost-to-cost or right to invoice measures of progress, primarily representing fixed fee service contracts and per unit service contracts, respectively.

Manufacturing

The Manufacturing business includes Microbial Solutions, which provides *in vitro* (non-animal) lot-release testing products, microbial detection products, and species identification services; Biologics Testing Services (Biologics), which performs specialized testing of biologics; and Avian Vaccine Services (Avian), which supplies specific-pathogen-free chicken eggs and chickens. Species identification service revenue is generally recognized at a point in time as identifications are completed by the Company. Biologics service revenue is generally recognized over time using the cost-to-cost measure of progress. Microbial Solutions and Avian product sales are generally recognized at a point in time when the customer obtains control of the product, which may be upon shipment or upon delivery based on the contractual shipping terms of a contract.

Transaction Price Allocated to Future Performance Obligations

The Company discloses the aggregate amount of transaction price that is allocated to performance obligations that have not yet been satisfied as of September 26, 2020. Excluded from the disclosure is the value of unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which revenue is recognized at the amount to which the Company has the right to invoice for services performed. The Company has assessed future performance obligations with respect to the COVID-19 pandemic uncertainties and believes there is an insignificant impact on the ability to meet future performance obligations and the amount of revenue to be recognized.

The following table includes estimated revenue expected to be recognized in the future related to performance obligations that are unsatisfied (or partially satisfied) as of September 26, 2020:

	Revenue Expected to be Recognized in Future Periods				
	Less than 1 Year	1 to 3 Years	4 to 5 Years	Beyond 5 Years	Total
	(in thousands)				
DSA	$ 250,855	$ 106,704	$ 4,265	$ 15	$ 361,839
Manufacturing	8,044	8,121	53	40	16,258
Total	$ 258,899	$ 114,825	$ 4,318	$ 55	$ 378,097

Contract Balances from Contracts with Customers

The timing of revenue recognition, billings and cash collections results in billed receivables (client receivables), contract assets (unbilled revenue), and contract liabilities (current and long-term deferred revenue and customer contract deposits) on the unaudited condensed consolidated balance sheets. The Company's payment terms are generally 30 days in the United States and consistent with prevailing practice in international markets. A contract asset is recorded when a right to consideration in exchange for goods or services transferred to a customer is conditioned other than the passage of time. Client receivables are recorded separately from contract assets since only the passage of time is required before consideration is due. A contract liability is recorded when consideration is received, or such consideration is unconditionally due, from a customer prior to transferring goods or services to the customer under the terms of a contract. Contract liabilities are recognized as revenue after control of the products or services is transferred to the customer and all revenue recognition criteria have been met. The following table provides information about client receivables, contract assets, and contract liabilities from contracts with customers:

	September 26, 2020	December 28, 2019
	(in thousands)	
Balances from contracts with customers:		
Client receivables	$ 429,935	$ 395,740
Contract assets (unbilled revenue)	148,034	121,957
Contract liabilities (current and long-term deferred revenue)	191,459	192,788
Contract liabilities (customer contract deposits)	42,990	33,080

When the Company does not have the unconditional right to advanced billings, both advanced client payments and unpaid advanced client billings are excluded from deferred revenue, with the advanced billings also being excluded from client receivables. The Company excluded approximately $13 million and $27 million of unpaid advanced client billings from both client receivables and deferred revenue in the accompanying unaudited condensed consolidated balance sheets as of September 26, 2020 and December 28, 2019, respectively. Advanced client payments of approximately $43 million and $33 million have been presented as customer contract deposits within other current liabilities in the accompanying unaudited condensed consolidated balance sheets as of September 26, 2020 and December 28, 2019, respectively.

Other changes in the contract asset and the contract liability balances during the nine months ended September 26, 2020 were as follows:

(i) Changes due to business combinations:

See Note 2. "Business Combinations" for client receivables that were acquired as part of the HemaCare acquisition on January 3, 2020 and Cellero acquisition on August 6, 2020. No significant contract assets or contract liabilities were acquired as part of these acquisitions.

(ii) Cumulative catch-up adjustments to revenue that affect the corresponding contract asset or contract liability, including adjustments arising from a change in the measure of progress, a change in an estimate of the transaction price (including any changes in the assessment of whether an estimate of variable consideration is constrained), or a contract modification:

During the nine months ended September 26, 2020, an immaterial cumulative catch-up adjustment to revenue was recorded.

(iii) A change in the time frame for a right to consideration to become unconditional (that is, for a contract asset to be recorded as a client receivable):

Approximately 85% of unbilled revenue as of December 28, 2019 was billed during the nine months ended September 26, 2020.

(iv) A change in the time frame for a performance obligation to be satisfied (that is, for the recognition of revenue arising from a contract liability):

Approximately 80% of contract liabilities as of December 28, 2019 were recognized as revenue during the nine months ended September 26, 2020.

4. SEGMENT INFORMATION

The Company's three reportable segments are RMS, DSA, and Manufacturing. The following table presents revenue and other financial information by reportable segment:

	Three Months Ended		Nine Months Ended	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
	(in thousands)			
RMS				
Revenue	$ 151,910	$ 132,546	$ 414,455	$ 405,772
Operating income	37,108	34,385	68,325	103,729
Depreciation and amortization	9,455	4,895	27,333	14,198
Capital expenditures	3,552	5,818	15,585	14,979
DSA				
Revenue	$ 461,177	$ 420,079	$ 1,342,424	$ 1,179,793
Operating income	90,348	64,995	234,872	175,214
Depreciation and amortization	42,707	39,898	125,138	111,231
Capital expenditures	15,532	21,141	46,436	45,130
Manufacturing				
Revenue	$ 130,213	$ 115,326	$ 376,064	$ 344,523
Operating income	48,246	39,253	132,288	103,893
Depreciation and amortization	6,655	5,990	19,257	17,577
Capital expenditures	5,787	6,421	13,985	14,299

Reconciliations of segment operating income, depreciation and amortization, and capital expenditures to the respective consolidated amounts are as follows:

	Operating Income		Depreciation and Amortization		Capital Expenditures	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
	(in thousands)					
Three Months Ended:						
Total reportable segments	$ 175,702	$ 138,633	$ 58,817	$ 50,783	$ 24,871	$ 33,380
Unallocated corporate	(42,949)	(45,831)	763	975	1,314	1,783
Total consolidated	$ 132,753	$ 92,802	$ 59,580	$ 51,758	$ 26,185	$ 35,163
Nine Months Ended:						
Total reportable segments	$ 435,485	$ 382,836	$ 171,728	$ 143,006	$ 76,006	$ 74,408
Unallocated corporate	(131,683)	(140,474)	2,320	3,256	2,700	2,267
Total consolidated	$ 303,802	$ 242,362	$ 174,048	$ 146,262	$ 78,706	$ 76,675

Revenue for each significant product or service offering is as follows:

	Three Months Ended		Nine Months Ended	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
	(in thousands)			
RMS	$ 151,910	$ 132,546	$ 414,455	$ 405,772
DSA	461,177	420,079	1,342,424	1,179,793
Manufacturing	130,213	115,326	376,064	344,523
Total revenue	$ 743,300	$ 667,951	$ 2,132,943	$ 1,930,088

A summary of unallocated corporate expense consists of the following:

	Three Months Ended		Nine Months Ended	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
	(in thousands)			
Stock-based compensation	$ 10,116	$ 8,752	$ 25,023	$ 27,744
Compensation, benefits, and other employee-related expenses	20,812	18,770	63,541	54,561
External consulting and other service expenses	3,088	4,156	10,474	12,060
Information technology	4,937	3,534	12,888	10,811
Depreciation	763	975	2,320	3,256
Acquisition and integration	2,124	5,679	9,976	23,621
Other general unallocated corporate	1,109	3,965	7,461	8,421
Total unallocated corporate expense	$ 42,949	$ 45,831	$ 131,683	$ 140,474

Other general unallocated corporate expense consists of costs associated with departments such as senior executives, corporate accounting, legal, tax, human resources, treasury, and investor relations.

Revenue by geographic area is as follows:

	U.S.	Europe	Canada	Asia Pacific	Other	Consolidated
	(in thousands)					
Three Months Ended:						
September 26, 2020	$ 406,975	$ 214,194	$ 78,995	$ 41,553	$ 1,583	$ 743,300
September 28, 2019	373,094	184,685	71,984	36,698	1,490	667,951
Nine Months Ended:						
September 26, 2020	$ 1,196,605	$ 595,391	$ 227,171	$ 109,347	$ 4,429	$ 2,132,943
September 28, 2019	1,091,194	533,820	194,865	106,090	4,119	1,930,088

Included in the Other category above are operations located in Brazil and Israel. Revenue represents sales originating in entities physically located in the identified geographic area.

5. SUPPLEMENTAL BALANCE SHEET INFORMATION

The composition of trade receivables, net is as follows:

	September 26, 2020	December 28, 2019
	(in thousands)	
Client receivables	$ 429,935	$ 395,740
Unbilled revenue	148,034	121,957
Total	577,969	517,697
Less: Allowance for doubtful accounts	(5,911)	(3,664)
Trade receivables, net	$ 572,058	$ 514,033

The composition of inventories is as follows:

	September 26, 2020	December 28, 2019
	(in thousands)	
Raw materials and supplies	$ 26,300	$ 24,613
Work in process	34,672	35,852
Finished products	120,395	100,195
Inventories	$ 181,367	$ 160,660

The composition of other current assets is as follows:

	September 26, 2020	December 28, 2019
	(in thousands)	
Prepaid income tax	$ 70,258	$ 54,358
Short-term investments	963	941
Restricted cash	2,968	431
Other	300	300
Other current assets	$ 74,489	$ 56,030

The composition of other assets is as follows:

	September 26, 2020	December 28, 2019
	(in thousands)	
Venture capital investments	$ 142,998	$ 108,983
Strategic equity investments	21,019	13,996
Life insurance policies	38,339	38,207
Other long-term income tax assets	21,376	20,570
Restricted cash	1,576	1,601
Other	22,230	29,258
Other assets	$ 247,538	$ 212,615

The composition of other current liabilities is as follows:

	September 26, 2020	December 28, 2019
	(in thousands)	
Current portion of operating lease right-of-use liabilities	$ 24,870	$ 20,357
Accrued income taxes	36,978	26,066
Customer contract deposits	42,990	33,080
Other	22,780	11,095
Other current liabilities	$ 127,618	$ 90,598

The composition of other long-term liabilities is as follows:

	September 26, 2020	December 28, 2019
	(in thousands)	
U.S. Transition Tax	$ 48,781	$ 52,066
Long-term pension liability, accrued executive supplemental life insurance retirement plan and deferred compensation plan	75,960	80,833
Long-term deferred revenue	19,123	20,983
Other	39,831	29,051
Other long-term liabilities	$ 183,695	$ 182,933

6. VENTURE CAPITAL AND STRATEGIC EQUITY INVESTMENTS

Venture capital investments were $143.0 million and $109.0 million as of September 26, 2020 and December 28, 2019, respectively. The Company's total commitment to the venture capital funds as of September 26, 2020 was $130.8 million, of which the Company funded $92.0 million through that date. The Company received dividends totaling $6.3 million and $0.2 million for the three months ended September 26, 2020 and September 28, 2019, respectively. The Company received dividends totaling $9.6 million and $1.8 million for the nine months ended September 26, 2020 and September 28, 2019, respectively.

The Company recognized gains of $19.9 million and losses of $0.6 million related to the venture capital investments for the three months ended September 26, 2020 and September 28, 2019, respectively. The Company recognized gains of $31.6 million and $5.7 million related to the venture capital investments for the nine months ended September 26, 2020 and September 28, 2019, respectively.

The Company also invests, with minority positions, directly in equity of predominantly privately-held companies. Strategic equity investments were $21.0 million and $14.0 million as of September 26, 2020 and December 28, 2019, respectively. The Company recognized insignificant gains and losses for the three and nine months ended September 26, 2020 and September 28, 2019, respectively.

7. FAIR VALUE

The Company has certain assets and liabilities recorded at fair value, which have been classified as Level 1, 2, or 3 within the fair value hierarchy:

- Level 1 - Fair values are determined utilizing prices (unadjusted) in active markets for identical assets or liabilities that the Company has the ability to access,
- Level 2 - Fair values are determined by utilizing quoted prices for identical or similar assets and liabilities in active markets or other market observable inputs such as interest rates, yield curves, and foreign currency spot rates,
- Level 3 - Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable.

The fair value hierarchy level is determined by asset and class based on the lowest level of significant input. The observability of inputs may change for certain assets or liabilities. This condition could cause an asset or liability to be reclassified between levels. The Company recognizes transfers between levels within the fair value hierarchy, if any, at the end of each quarter. During the nine months ended September 26, 2020 and September 28, 2019, there were no transfers between levels.

Valuation methodologies used for assets and liabilities measured or disclosed at fair value are as follows:

- Cash equivalents - Valued at market prices determined through third-party pricing services;
- Foreign currency forward contracts - Valued using market observable inputs, such as forward foreign exchange points and foreign exchanges rates;
- Life insurance policies - Valued at cash surrender value based on the fair value of underlying investments;
- Debt instruments - The book value of the Company's term and revolving loans, which are variable rate loans carried at amortized cost, approximates the fair value based on current market pricing of similar debt. The book value of the Company's 5.5% Senior Notes due in 2026 and the 4.25% Senior Notes due in 2028 (Senior Notes), which are fixed rate debt, are carried at amortized cost. Fair value of the Senior Notes is based on quoted market prices and on borrowing rates available to the Company; and
- Contingent consideration - Valued based on a probability weighting of the future cash flows associated with the potential outcomes.

Assets and liabilities measured at fair value on a recurring basis are summarized below:

	September 26, 2020			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Cash equivalents	$ —	$ 1,678	$ —	$ 1,678
Other assets:				
Life insurance policies	—	30,459	—	30,459
Total assets measured at fair value	$ —	$ 32,137	$ —	$ 32,137
Other current liabilities measured at fair value:				
Contingent consideration	$ —	$ —	$ 2,220	$ 2,220
Total liabilities measured at fair value	$ —	$ —	$ 2,220	$ 2,220

	December 28, 2019			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Cash equivalents	$ —	$ 55,278	$ —	$ 55,278
Other assets:				
Life insurance policies	—	30,454	—	30,454
Total assets measured at fair value	$ —	$ 85,732	$ —	$ 85,732
Other current liabilities measured at fair value:				
Contingent consideration	$ —	$ —	$ 712	$ 712
Foreign currency forward contract	—	876	—	876
Total liabilities measured at fair value	$ —	$ 876	$ 712	$ 1,588

Contingent Consideration

The following table provides a rollforward of the contingent consideration related to previous business acquisitions. See Note 2, “Business Combinations.”

	Nine Months Ended	
	September 26, 2020	September 28, 2019
	(in thousands)	
Beginning balance	$ 712	$ 3,033
Additions	2,131	2,869
Payments	(230)	(5,252)
Adjustment of previously recorded contingent liability	(468)	—
Foreign currency	75	42
Ending balance	$ 2,220	$ 692

The unobservable inputs used in the fair value measurement of the Company’s contingent consideration are the probabilities of successful achievement of certain financial targets and a discount rate. Increases or decreases in any of the probabilities of success would result in a higher or lower fair value measurement, respectively. Increases or decreases in the discount rate would result in a lower or higher fair value measurement, respectively.

Debt Instruments

The book value of the Company’s term and revolving loans, which are variable rate loans carried at amortized cost, approximates the fair value based on current market pricing of similar debt. As the fair value is based on significant other observable inputs, including current interest and foreign currency exchange rates, it is deemed to be Level 2 within the fair value hierarchy.

The book value of the Company’s 2026 and 2028 Senior Notes is a fixed rate obligation carried at amortized cost. Fair value is based on quoted market prices as well as borrowing rates available to the Company. As the fair value is based on significant other observable outputs, it is deemed to be Level 2 within the fair value hierarchy. The book value and fair value of the Company’s 2026 and 2028 Senior Notes is summarized below:

	September 26, 2020		December 28, 2019	
	Book Value	Fair Value	Book Value	Fair Value
2026 Senior Notes	$ 500,000	$ 519,450	$ 500,000	$ 537,500
2028 Senior Notes	500,000	515,000	500,000	510,000

8. GOODWILL AND INTANGIBLE ASSETS

Goodwill

The following table provides a rollforward of the Company's goodwill:

	December 28, 2019	Adjustments to Goodwill: Acquisitions	Adjustments to Goodwill: Foreign Exchange	September 26, 2020
		(in thousands)		
RMS	$ 56,586	$ 229,728	$ 618	$ 286,932
DSA	1,345,223	(629)	7,484	1,352,078
Manufacturing	138,756	—	(124)	138,632
Goodwill	$ 1,540,565	$ 229,099	$ 7,978	$ 1,777,642

The increase in goodwill during the nine months ended September 26, 2020 related primarily to the acquisitions of HemaCare and Cellero in the RMS reportable segment.

Intangible Assets, Net

The following table displays intangible assets, net by major class:

	September 26, 2020			December 28, 2019		
	Gross	Accumulated Amortization	Net	Gross	Accumulated Amortization	Net
			(in thousands)			
Backlog	$ 28,875	$ (28,382)	$ 493	$ 28,865	$ (26,895)	$ 1,970
Technology	127,288	(74,045)	53,243	122,106	(57,737)	64,369
Trademarks and trade names	15,622	(5,374)	10,248	8,430	(4,901)	3,529
Other	20,600	(14,214)	6,386	18,279	(12,307)	5,972
Other intangible assets	192,385	(122,015)	70,370	177,680	(101,840)	75,840
Client relationships	1,116,222	(383,814)	732,408	934,668	(321,095)	613,573
Intangible assets	$ 1,308,607	$ (505,829)	$ 802,778	$ 1,112,348	$ (422,935)	$ 689,413

The increase in intangible assets, net during the nine months ended September 26, 2020 related primarily to the acquisitions of HemaCare and Cellero.

9. LONG-TERM DEBT AND FINANCE LEASE OBLIGATIONS

Long-term debt, net and finance leases consists of the following:

	September 26, 2020	December 28, 2019
	(in thousands)	
Term loans	$ 160,938	$ 193,750
Revolving facility	836,767	676,134
2026 Senior Notes	500,000	500,000
2028 Senior Notes	500,000	500,000
Other debt	5,867	5,781
Finance leases (Note 16)	27,783	30,527
Total debt and finance leases	2,031,355	1,906,192
Less:		
Current portion of long-term debt	45,017	35,548
Current portion of finance leases (Note 16)	2,929	2,997
Current portion of long-term debt and finance leases	47,946	38,545
Long-term debt and finance leases	1,983,409	1,867,647
Debt discount and debt issuance costs	(15,248)	(17,981)
Long-term debt, net and finance leases	$ 1,968,161	$ 1,849,666

As of September 26, 2020 and December 28, 2019, the weighted average interest rate on the Company's debt was 3.21% and 3.46%, respectively.

Term Loans and Revolving Facility

The Company has a credit facility consisting of a $750 million term loan and a $2.05 billion multi-currency revolving facility (Credit Facility). The term loan facility matures in 19 quarterly installments with the last installment due March 26, 2023. On October 23, 2019, the Company prepaid $500.0 million of the term loan with proceeds from a $500.0 million unregistered private offering (see 2028 Senior Notes below). The revolving facility matures on March 26, 2023, and requires no scheduled payment before that date.

Under specified circumstances, the Company has the ability to increase the term loan and/or revolving facility by up to $1.0 billion in the aggregate.

The interest rates applicable to the term loan and revolving facility under the Credit Facility are, at the Company's option, equal to either the base rate (which is the higher of (1) the prime rate, (2) the federal funds rate plus 0.50%, or (3) the one-month adjusted LIBOR rate plus 1.0%) or the adjusted LIBOR rate, plus an interest rate margin based upon the Company's leverage ratio.

The Credit Facility includes certain customary representations and warranties, events of default, notices of material adverse changes to the Company's business and negative and affirmative covenants. These covenants include (1) maintenance of a ratio of consolidated earnings before interest, taxes, depreciation and amortization (EBITDA) less capital expenditures to consolidated cash interest expense, for any period of four consecutive fiscal quarters, of no less than 3.50 to 1.0 as well as (2) maintenance of a ratio of consolidated indebtedness to consolidated EBITDA for any period of four consecutive fiscal quarters, of no more than 4.00 to 1.0. As of September 26, 2020, the Company was compliant with all covenants.

The obligations of the Company under the Credit Facility are collateralized by substantially all of the assets of the Company.

During the nine months ended September 26, 2020 and September 28, 2019, the Company had multiple U.S. dollar denominated loans borrowed by a non-U.S. Euro functional currency entity under the Company's Credit Facility, which ranged from $300 million to $400 million. This resulted in foreign currency losses recognized in Other income, net of $4.2 million and $14.9 million during the nine months ended September 26, 2020 and September 28, 2019, respectively, related to the remeasurement of the underlying debt. The Company entered into foreign exchange forward contracts to limit its foreign currency exposures related to these borrowings and recognized gains of $6.1 million and $21.6 million during the nine months ended September 26, 2020 and September 28, 2019, respectively, within Interest expense. As of September 26, 2020, the Company did not have any outstanding borrowings in a currency different than its respective functional currency. See Note 14, "Foreign Currency Contracts", for further discussion.

Base Indenture for Senior Notes

The Company has an indenture (Base Indenture) with MUFG Union Bank, N.A., (Trustee). The purpose of the Indenture was to allow the Company the ability to issue senior notes. The Company has entered into two supplemental indentures in connection with the senior notes described below.

2026 Senior Notes

In fiscal year 2018, the Company entered into the first supplemental indenture (First Supplemental Indenture) with the Trustee in connection with an offering of $500 million in aggregate principal amount of the Company's 5.5% Senior Notes (2026 Senior Notes), due in 2026, in an unregistered offering. Under the terms of the First Supplemental Indenture, interest on the Senior Notes is payable semi-annually on April 1 and October 1, beginning on October 1, 2018.

2028 Senior Notes

In fiscal year 2019, the Company entered into a second supplemental indenture (Second Supplemental Indenture) with the Trustee in connection with the offering of $500 million in aggregate principal amount of the Company's 4.25% Senior Notes (2028 Senior Notes), due in 2028, in an unregistered offering. Under the terms of the Second Supplemental Indenture, interest on the 2028 Senior Notes is payable semi-annually on May 1 and November 1, beginning on May 1, 2020.

Letters of Credit

As of September 26, 2020 and December 28, 2019, the Company had $8.1 million and $7.5 million, respectively, in outstanding letters of credit.

10. EQUITY AND NONCONTROLLING INTERESTS

Earnings Per Share

The following table reconciles the numerator and denominator in the computations of basic and diluted earnings per share:

	Three Months Ended		Nine Months Ended	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
	(in thousands)			
Numerator:				
Net income	$ 102,611	$ 73,552	$ 221,116	$ 173,549
Less: Net (expense) income attributable to noncontrolling interests	(298)	742	3	1,878
Net income attributable to common shareholders	$ 102,909	$ 72,810	$ 221,113	$ 171,671
Denominator:				
Weighted-average shares outstanding - Basic	49,703	48,818	49,482	48,682
Effect of dilutive securities:				
Stock options, restricted stock units and performance share units	999	897	889	945
Weighted-average shares outstanding - Diluted	50,702	49,715	50,371	49,627

Options to purchase 0.3 million and 0.4 million shares for the three months ended September 26, 2020 and September 28, 2019, respectively, as well as a non-significant number of restricted stock units (RSUs) and performance share units (PSUs), were not included in computing diluted earnings per share because their inclusion would have been anti-dilutive. Options to purchase 0.3 million and 0.4 million shares for the nine months ended September 26, 2020 and September 28, 2019, respectively, as well as a non-significant number of RSUs and PSUs, were not included in computing diluted earnings per share because their inclusion would have been anti-dilutive. Basic weighted-average shares outstanding for the nine months ended September 26, 2020 and September 28, 2019 excluded the impact of 0.9 million and 1.0 million shares of non-vested RSUs and PSUs, respectively.

Treasury Shares

During the nine months ended September 26, 2020 and September 28, 2019, the Company did not repurchase any shares under its authorized stock repurchase program. As of September 26, 2020, the Company had $129.1 million remaining on the authorized stock repurchase program.

The Company's stock-based compensation plans permit the netting of common stock upon vesting of RSUs and PSUs in order to satisfy individual statutory tax withholding requirements. During the nine months ended September 26, 2020 and September 28, 2019, the Company acquired 0.1 million shares for $23.9 million and 0.1 million shares for $18.0 million, respectively, from such netting.

Accumulated Other Comprehensive Income (Loss)

Changes to each component of accumulated other comprehensive income (loss), net of income taxes, are as follows:

	Foreign Currency Translation Adjustment and Other	Pension and Other Post-Retirement Benefit Plans	Total
	(in thousands)		
December 28, 2019	$ (87,578)	$ (90,441)	$ (178,019)
Other comprehensive loss before reclassifications	(18,388)	—	(18,388)
Amounts reclassified from accumulated other comprehensive loss	—	4,150	4,150
Net current period other comprehensive income (loss)	(18,388)	4,150	(14,238)
Income tax expense	2,135	889	3,024
September 26, 2020	$ (108,101)	$ (87,180)	$ (195,281)

Nonredeemable Noncontrolling Interest

The Company has an investment in an entity whose financial results are consolidated in the Company's unaudited condensed consolidated financial statements, as it has the ability to exercise control over this entity. The interest of the noncontrolling party in this entity has been recorded as noncontrolling interest within Equity in the accompanying unaudited condensed consolidated balance sheets. The activity within the nonredeemable noncontrolling interest was immaterial during the three and nine months ended September 26, 2020 and September 28, 2019.

Redeemable Noncontrolling Interests

The Company has a 92% equity interest in Vital River with an 8% redeemable noncontrolling interest. The Company has the right to purchase, and the noncontrolling interest holders have the right to sell, the remaining 8% equity interest at a contractually defined redemption value, subject to a redemption floor, which represents a derivative embedded within the equity instrument. These rights are exercisable beginning in 2022 and are accelerated in certain events. The redeemable noncontrolling interest is measured at the greater of the amount that would be paid if settlement occurred as of the balance sheet date based on the contractually defined redemption value ($15.6 million as of September 26, 2020) and the carrying amount adjusted for net income (loss) attributable to the noncontrolling interest. As the noncontrolling interest holders have the ability to require the Company to purchase the remaining 8% interest, the noncontrolling interest is classified in the mezzanine section of the unaudited condensed consolidated balance sheets, which is presented above the equity section and below liabilities. The amount that the Company could be required to pay to purchase the remaining 8% equity interest is not limited.

As part of the Citoxlab acquisition in 2019, the Company acquired an approximate 90% equity interest in a subsidiary that was fully consolidated under the voting interest model, which included an approximate 10% redeemable noncontrolling interest. In February 2020, the Company purchased the remaining approximate 10% noncontrolling interest for approximately $4 million and assumption of a contingent consideration liability of approximately $2 million payable to the former shareholders. See Note 7. "Fair Value".

In 2019, the Company acquired an 80% equity interest in a supplier that is fully consolidated under the voting interest model, which includes a 20% redeemable noncontrolling interest. The Company has the right to purchase, and the noncontrolling interest holders have the right to sell, the remaining 20% equity interest at its appraised value. These rights are exercisable beginning in 2022. The redeemable noncontrolling interest is measured at the greater of the amount that would be paid if settlement occurred as of the balance sheet date based on the appraised value and the carrying amount adjusted for net income (loss) attributable to the noncontrolling interest or a predetermined floor value. As the noncontrolling interest holders have the ability to require the Company to purchase the remaining 20% interest, the noncontrolling interest is classified in the mezzanine section of the unaudited condensed consolidated balance sheets, which is presented above the equity section and below liabilities. The amount that the Company could be required to pay to purchase the remaining 20% equity interest is not limited.

The following table provides a rollforward of the activity related to the Company's redeemable noncontrolling interests:

	Nine Months Ended	
	September 26, 2020	September 28, 2019
	(in thousands)	
Beginning balance	$ 28,647	$ 18,525
Acquisition of noncontrolling interest	(3,732)	—
Adjustment to Vital River redemption value (three months ended March 30, 2019)	—	1,451
Purchase of Vital River 5% equity interest	—	(8,745)
Change in fair value of Vital River 8% equity interest, included in additional-paid-in-capital	—	2,708
Modification of Vital River 8% purchase option	—	2,196
Acquisition of a 10% non-controlling interest through acquiring Citoxlab	—	4,035
Acquisition of a 20% non-controlling interest through acquiring a supplier	—	8,740
Net (loss) income attributable to noncontrolling interests	(1,278)	249
Foreign currency translation	396	(814)
Ending balance	$ 24,033	$ 28,345

11. INCOME TAXES

The Company's effective tax rates for the three months ended September 26, 2020 and September 28, 2019 were 24.1% and (0.4)%, respectively. The Company's effective tax rates for the nine months ended September 26, 2020 and September 28, 2019

were 19.5% and 12.6%, respectively. For the three and nine months ended September 26, 2020, the increase in the effective tax rates from the prior year periods were primarily related to the recognition of $20.4 million of deferred tax assets expected to be utilized as a result of changes to the Company's international financing structure during the three months ended September 28, 2019. Partially offsetting the increase for the nine months ended September 26, 2020 was an increased tax benefit from stock-based compensation deductions in 2020 compared to the corresponding period in 2019.

For the three months ended September 26, 2020, the Company's unrecognized tax benefits increased by $0.5 million to $18.4 million, primarily due to an additional quarter of Canadian Scientific Research and Experimental Development Credit Reserves, partially offset by audit settlements of prior period positions. For the three months ended September 26, 2020, the amount of unrecognized income tax benefits that would impact the effective tax rate increased by $0.9 million to $16.0 million for the same reasons discussed above. The accrued interest on unrecognized tax benefits was $2.2 million at September 26, 2020. The Company estimates that it is reasonably possible that the unrecognized tax benefits will decrease by approximately $1.0 million over the next twelve-month period, primarily due to expiring statutes of limitations.

The Company conducts business in a number of tax jurisdictions. As a result, it is subject to tax audits on a regular basis including, but not limited to, such major jurisdictions as the U.S., the U.K., China, France, Germany, and Canada. With few exceptions, the Company is no longer subject to U.S. and international income tax examinations for years before 2017.

The Company and certain of its subsidiaries have ongoing tax controversies in the U.S., Canada, Germany, and France. The Company does not anticipate resolution of these audits will have a material impact on its consolidated financial statements.

12. PENSION AND OTHER POST-RETIREMENT BENEFIT PLANS

The following table provides the components of net periodic cost for the Company's pension, deferred compensation and executive supplemental life insurance retirement plans:

	Three Months Ended		Nine Months Ended	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
	(in thousands)			
Service cost	$ 797	$ 701	$ 2,392	$ 2,088
Interest cost	2,355	2,902	7,064	8,652
Expected return on plan assets	(2,981)	(3,236)	(8,944)	(9,706)
Amortization of prior service cost (credit)	(125)	92	(376)	274
Amortization of net loss	1,586	489	4,758	1,466
Other adjustments	125	—	375	—
Net periodic cost	$ 1,757	$ 948	$ 5,269	$ 2,774

Service cost is recorded as an operating expense within the accompanying unaudited condensed consolidated statements of income. All other components of net periodic costs are recorded in Other expense, net in the accompanying unaudited condensed consolidated statements of income. The net periodic cost for the Company's other post-retirement benefit plan for the three and nine months ended September 26, 2020 and September 28, 2019 was not significant.

U.S. Pension Plan Termination

The Charles River Laboratories, Inc. Pension Plan (U.S. Pension Plan) is a qualified, non-contributory defined benefit plan covering certain U.S. employees. The U.S. Pension Plan was amended in 2002 to exclude new participants and in 2008 the accrual of benefits was frozen. In January 2019, the Company commenced the process to terminate this plan and received regulatory approval in April 2020. In October 2020, the Company settled all remaining benefits directly with vested participants through either lump sum payouts or the purchase of a group annuity contract from a qualified insurance company to administer all future payments. Prior to the settlement, the U.S. Pension Plan was underfunded with a benefit obligation of approximately $94 million and plan assets of approximately $93 million. In the fourth quarter of fiscal year 2020, the Company made a contribution of approximately $1 million to fully fund this plan to cover the lump sum payments, purchase the group annuity contract, and settle remaining termination costs. Upon settlement of the pension liability, the Company recognized a non-cash settlement charge of approximately $10 million related to pension losses, reclassified from accumulated other comprehensive loss to other expense in the Company's consolidated statement of income subsequent to September 26, 2020.

13. STOCK-BASED COMPENSATION

The Company has stock-based compensation plans under which employees and non-employee directors may be granted stock-based awards such as stock options, restricted stock, RSUs, and PSUs.

The following table provides stock-based compensation by the financial statement line item in which it is reflected:

	Three Months Ended		Nine Months Ended	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
	(in thousands)			
Cost of revenue	$ 3,261	$ 2,354	$ 7,616	$ 6,792
Selling, general and administrative	13,609	11,671	33,357	36,637
Stock-based compensation, before income taxes	16,870	14,025	40,973	43,429
Provision for income taxes	(2,508)	(2,166)	(6,047)	(7,068)
Stock-based compensation, net of income taxes	$ 14,362	$ 11,859	$ 34,926	$ 36,361

During the nine months ended September 26, 2020, the Company granted stock options representing 0.3 million common shares with a per-share weighted-average grant date fair value of $53.20, RSUs representing 0.2 million common shares with a per-share weighted-average grant date fair value of $178.76, and PSUs representing 0.1 million common shares with a per-share weighted-average grant date fair value of $210.55. The maximum number of common shares to be issued upon vesting of PSUs granted during the nine months ended September 26, 2020 is 0.2 million.

14. FOREIGN CURRENCY CONTRACTS

Cross currency loans

The Company periodically enters into foreign exchange forward contracts to limit its foreign currency exposure related to U.S. dollar denominated loans borrowed by a non-U.S. Euro functional currency entity under the Credit Facility. These contracts are not designated as hedging instruments. Any gains or losses on these forward contracts are recognized immediately in Interest expense in the unaudited condensed consolidated statements of income.

The Company had no open forward contracts related to a U.S. dollar denominated loan borrowed by a non-U.S. Euro functional currency at September 26, 2020 or December 28, 2019. Additionally, the Company did not enter into any these contracts during the three months ended September 26, 2020.

The following table summarizes the effect of the foreign exchange forward contracts entered into to limit the Company's foreign currency exposure related to U.S. dollar denominated loans borrowed by a non-U.S. Euro functional currency entity under the Credit Facility on the Company's unaudited condensed consolidated statements of income:

	September 26, 2020		September 28, 2019	
Location of gain (loss)	Financial statement caption amount	Amount of gain (loss)	Financial statement caption amount	Amount of gain (loss)
		(in thousands)		
Three Months Ended:				
Interest expense	$ (18,867)	$ —	$ (5,698)	$ 14,311
Nine Months Ended:				
Interest expense	$ (53,286)	$ 6,067	$ (36,520)	$ 21,622

Intercompany loans

The Company periodically enters into foreign exchange forward contracts to limit its foreign currency exposure related to certain intercompany loans. These contracts are not designated as hedging instruments. Any gains or losses on forward contracts associated with intercompany loans are recognized immediately in Other income, net and are largely offset by the remeasurement of the underlying intercompany loans.

The Company entered into foreign currency forward contracts during 2020 and 2019. One contract remained open at December 28, 2019, which had a duration of less than one month and is recorded at fair value in the Company's accompanying unaudited condensed consolidated balance sheets. The Company did not have any open foreign currency forward contracts

related to certain intercompany loans at September 26, 2020. The notional amount and fair value of the open contract is summarized as follows:

	December 28, 2019		
Notional Amount	Fair Value	Balance Sheet Location	
(in thousand)			
$ 115,038	$ (876)	Other current liabilities	

The following table summarizes the effect of the foreign exchange forward contracts in connection with certain intercompany loans on the Company's unaudited condensed consolidated statements of income:

	September 26, 2020		September 28, 2019	
Location of gain (loss)	Financial statement caption amount	Amount of gain (loss)	Financial statement caption amount	Amount of gain (loss)
	(in thousands)			
Three Months Ended:				
Other income (expense), net	$ 21,211	$ —	$ (14,254)	$ 840
Nine Months Ended:				
Other income (expense), net	$ 23,400	$ (892)	$ (8,161)	$ 1,358

15. RESTRUCTURING AND ASSET IMPAIRMENTS

Global Restructuring Initiatives

In recent fiscal years, the Company has undertaken productivity improvement initiatives within all reportable segments at various locations across the U.S., Canada, Europe, China, and Japan. This includes workforce right-sizing and scalability initiatives, resulting in severance and transition costs; and cost related to the consolidation of facilities, resulting in asset impairment and accelerated depreciation charges.

The following table presents a summary of restructuring costs related to these initiatives within the unaudited condensed consolidated statements of income.

	Three Months Ended					
	September 26, 2020			September 28, 2019		
	Severance and Transition Costs	Asset Impairments and Other Costs	Total	Severance and Transition Costs	Asset Impairments and Other Costs	Total
	(in thousands)					
Cost of services provided and products sold (excluding amortization of intangible assets)	$ 606	$ 300	$ 906	$ 435	$ 180	$ 615
Selling, general and administrative	212	462	674	2,038	—	2,038
Total	$ 818	$ 762	$ 1,580	$ 2,473	$ 180	$ 2,653

	Nine Months Ended					
	September 26, 2020			September 28, 2019		
	Severance and Transition Costs	Asset Impairments and Other Costs	Total	Severance and Transition Costs	Asset Impairments and Other Costs	Total
Cost of services provided and products sold (excluding amortization of intangible assets)	$ 4,152	$ 558	$ 4,710	$ 1,074	$ 1,685	$ 2,759
Selling, general and administrative	2,384	3,395	5,779	3,110	18	3,128
Total	$ 6,536	$ 3,953	$ 10,489	$ 4,184	$ 1,703	$ 5,887

The following table presents restructuring costs by reportable segment for these productivity improvement initiatives:

	Three Months Ended		Nine Months Ended	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
	(in thousands)			
RMS	$ (33)	$ 381	$ 727	$ 1,323
DSA	1,074	1,843	7,572	2,529
Manufacturing	503	429	2,154	2,035
Unallocated corporate	36	—	36	—
Total	$ 1,580	$ 2,653	$ 10,489	$ 5,887

Rollforward of restructuring activities

The following table provides a rollforward for all of the Company's severance and transition costs, and lease obligation liabilities related to all restructuring activities:

	Three Months Ended		Nine Months Ended	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
	(in thousands)			
Beginning balance	$ 7,199	$ 2,758	$ 6,405	$ 2,921
Expense (excluding non-cash charges)	1,069	2,653	7,943	5,508
Payments / utilization	(1,592)	(1,604)	(7,509)	(4,608)
Foreign currency adjustments	42	(24)	(121)	(38)
Ending balance	$ 6,718	$ 3,783	$ 6,718	$ 3,783

As of September 26, 2020 and September 28, 2019, $6.8 million and $3.8 million of severance and other personnel related costs liabilities and lease obligation liabilities, respectively, were included in accrued compensation and accrued liabilities within the Company's unaudited condensed consolidated balance sheets and less than $0.1 million and zero, respectively, were included in other long-term liabilities within the Company's unaudited condensed consolidated balance sheets.

16. LEASES

Operating and Finance Leases

Right-of-use lease assets and lease liabilities are reported in the Company's unaudited condensed consolidated balance sheets as follows:

	September 26, 2020	December 28, 2019
	(in thousands)	
Operating leases		
Operating lease right-of-use assets, net	$ 168,379	$ 140,085
Other current liabilities	$ 24,870	$ 20,357
Operating lease right-of-use liabilities	146,578	116,252
Total operating lease liabilities	$ 171,448	$ 136,609
Finance leases		
Property, plant and equipment, net	$ 30,247	$ 32,519
Current portion of long-term debt and finance leases	$ 2,929	$ 2,997
Long-term debt, net and finance leases	24,854	27,530
Total finance lease liabilities	$ 27,783	$ 30,527

The components of operating and finance lease costs were as follows:

	Three Months Ended		Nine Months Ended	
	September 26, 2020	September 28, 2019	September 26, 2020	September 28, 2019
	(in thousands)			
Operating lease costs	$ 8,416	$ 7,839	$ 24,387	$ 23,433
Finance lease costs:				
Amortization of right-of-use assets	966	1,070	2,853	2,921
Interest on lease liabilities	323	360	986	1,001
Short-term lease costs	530	256	1,644	652
Variable lease costs	1,556	646	3,669	1,911
Sublease income	(440)	(383)	(1,216)	(474)
Total lease costs	$ 11,351	$ 9,788	$ 32,323	$ 29,444

Other information related to leases was as follows:

Supplemental cash flow information

	Nine Months Ended	
	September 26, 2020	September 28, 2019
	(in thousands)	
Cash flows included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 21,959	$ 20,084
Operating cash flows from finance leases	986	1,058
Finance cash flows from finance leases	3,474	2,862
Non-cash leases activity:		
Right-of-use lease assets obtained in exchange for new operating lease liabilities	$ 50,491	$ 20,805
Right-of-use lease assets obtained in exchange for new finance lease liabilities	735	4,741

Lease term and discount rate

	As of September 26, 2020
Weighted-average remaining lease term (in years)	
Operating lease	8.24
Finance lease	12.60
Weighted-average discount rate	
Operating lease	4.16
Finance lease	4.52

At the lease commencement date, the discount rate implicit in the lease is used to discount the lease liability if readily determinable. If not readily determinable or leases do not contain an implicit rate, the Company's incremental borrowing rate is used as the discount rate.

As of September 26, 2020, maturities of operating and finance lease liabilities for each of the following five years and a total thereafter were as follows:

	Operating Leases	Finance Leases
	(in thousands)	
2020 (excluding the nine months ended September 26, 2020)	$ 7,846	$ 1,134
2021	30,704	3,904
2022	26,432	3,342
2023	23,321	3,030
2024	22,636	2,810
Thereafter	94,238	22,511
Total minimum future lease payments	205,177	36,731
Less: Imputed interest	33,729	8,948
Total lease liabilities	$ 171,448	$ 27,783

Total minimum future lease payments (predominantly operating leases) of approximately $70 million for leases that have not commenced as of September 26, 2020, as the Company does not yet control the underlying assets, are not included in the unaudited condensed consolidated financial statements. These leases are expected to commence between fiscal years 2020 and 2024 with lease terms of approximately 8 to 16 years.

17. COMMITMENTS AND CONTINGENCIES

Litigation

Various lawsuits, claims and proceedings of a nature considered normal to its business are pending against the Company. While the outcome of any of these proceedings cannot be accurately predicted, the Company does not believe the ultimate resolution of any of these existing matters would have a material adverse effect on the Company’s business or financial condition.

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

The following discussion should be read in conjunction with our unaudited condensed consolidated financial statements and related notes of this Quarterly Report on Form 10-Q and our audited consolidated financial statements and related notes included in our Annual Report on Form 10-K for fiscal year 2019. The following discussion contains forward-looking statements. Actual results may differ significantly from those projected in the forward-looking statements. Factors that might cause future results to differ materially from those projected in the forward-looking statements include, but are not limited to, those discussed in Item 1A, "Risk Factors" included elsewhere within this Form 10-Q. Certain percentage changes may not recalculate due to rounding.

Overview

We are a full service, early-stage contract research organization (CRO). For over 70 years, we have been in the business of providing the research models required in research and development of new drugs, devices, and therapies. Over this time, we have built upon our original core competency of laboratory animal medicine and science (research model technologies) to develop a diverse portfolio of discovery and safety assessment services, both Good Laboratory Practice (GLP) and non-GLP, that enable us to support our clients from target identification through non-clinical development. We also provide a suite of products and services to support our clients' manufacturing activities. Utilizing our broad portfolio of products and services enables our clients to create a more flexible drug development model, which reduces their costs, enhances their productivity and effectiveness, and increases speed to market.

Our client base includes all major global biopharmaceutical companies, many biotechnology companies, CROs, agricultural and industrial chemical companies, life science companies, veterinary medicine companies, contract manufacturing companies, medical device companies, and diagnostic and other commercial entities, as well as leading hospitals, academic institutions, and government agencies around the world.

Segment Reporting

Our three reportable segments are Research Models and Services (RMS), Discovery and Safety Assessment (DSA), and Manufacturing Support (Manufacturing). Our RMS reportable segment includes the Research Models, Research Model Services, and Research Products businesses. Research Models includes the commercial production and sale of small research models, as well as the supply of large research models. Research Model Services includes: Genetically Engineered Models and Services (GEMS), which performs contract breeding and other services associated with genetically engineered models; Research Animal Diagnostic Services (RADS), which provides health monitoring and diagnostics services related to research models; and Insourcing Solutions (IS), which provides colony management of our clients' research operations (including recruitment, training, staffing, and management services). Research Products supplies controlled, consistent, customized primary cells and blood components derived from normal and mobilized peripheral blood, bone marrow, and cord blood. Our DSA reportable segment includes services required to take a drug through the early development process including discovery services, which are non-regulated services to assist clients with the identification, screening, and selection of a lead compound for drug development, and regulated and non-regulated (GLP and non-GLP) safety assessment services. Our Manufacturing reportable segment includes Microbial Solutions, which provides *in vitro* (non-animal) lot-release testing products, microbial detection products, and species identification services; Biologics Testing Services (Biologics), which performs specialized testing of biologics; and Avian Vaccine Services (Avian), which supplies specific-pathogen-free chicken eggs and chickens.

COVID-19

Overview

On March 11, 2020, the World Health Organization declared the outbreak of a strain of novel coronavirus disease, COVID-19, a global pandemic. The COVID-19 pandemic is dynamic and expanding, and its ultimate scope, duration and effects are uncertain. This pandemic has had and may continue to result in direct and indirect adverse effects on our industry and customers, which in turn has impacted our business, results of operations, and financial condition. Further, the COVID-19 pandemic may also affect our operating and financial results in ways that are and are not presently known to us, or that we currently do not expect to present significant risks to our operations or financial results but which may in fact turn out to negatively affect us to a magnitude greater than anticipated. Refer to Item 1A, Risk Factors, included herein for risk factors reflecting the impact of the COVID-19 pandemic. Giving consideration to each of these risk factors, the following is our current estimate and belief of the impact of the COVID-19 pandemic during the three and nine months ended September 26, 2020 and how it may continue to affect us in subsequent periods.

Business continuity

To date, we generally have not experienced significant challenges in implementing our business continuity plans. Many government agencies have provided guidance permitting "essential" or "critical" business operations to remain open. As of the date of this quarterly report, in the geographies where business restrictions have been imposed, we believe all of our business operations have satisfied the requirements to be designated to be "essential" or "critical" according to the guidance provided by government, health and other regulatory agencies with authority over such matters. As a result, all of our operating sites remain

open and adequately staffed as of the date of this quarterly report. For certain operations or sites experiencing logistical delays, we have experienced some inefficiencies as it relates to completing work or fulfilling orders; however, we do not believe material expenditures will be required or material resource constraints will occur. Logistical delays include a small number of sites that have experienced reduced operations (including as a result of increased employee absenteeism) or voluntarily closed, as well as delays in transportation activities.

We have comprehensive business continuity plans in place for each site globally and are continuously updating these to address the evolving COVID-19 pandemic situation. We implemented our initial plans in China beginning in January 2020, and have continuously refined our plans for other regions as the virus has spread. We have encouraged and expressed our expectations that employees work remotely whenever possible; and for those employees who need to come into our sites to fulfill their responsibilities, we are adhering to guidelines from government, health, and other regulatory agencies. This includes social distancing, flexible scheduling such as split shifts, restricting visitors, enhanced cleaning, and providing personal protective equipment (PPE), such as masks and gloves, to employees. Due to the nature of our business, many employees already work in biosecure environments that require PPE and adhere to other procedures to safely accomplish their daily responsibilities. Accordingly, to date, we believe we have been able to efficiently implement the additional safety precautions.

Supply chain

We are focused on ensuring that we have adequate inventory and supplies on hand given the potential disruption of the COVID-19 pandemic to our suppliers and their supply chain. Accordingly, we have and expect to continue to increase inventory and supplies through 2020 and beyond as deemed appropriate. We proactively engaged with our suppliers beginning in January 2020 to limit any potential disruption to our supply chain. However, notwithstanding generally successful efforts to maintain supply chain continuity, we have experienced and expect to experience increased costs and potential delays throughout our supply chain during the pandemic.

Financial condition and results of our global operations

We are a global company that operates in over 90 facilities across over 20 countries worldwide. As we perform business across various borders, we are experiencing a continuum of impacts in each location as the COVID-19 pandemic has impacted the global economy in different phases. We are continuing to see demand for products and services across all of our businesses, although as described below the impact of the COVID-19 pandemic on the level of demand varies with our different businesses. While there is uncertainty, our clients are still in need of the products and services we provide to biomedical research to advance discovery and develop new therapies for the treatment of disease, including the COVID-19 pandemic. Due to certain restrictions in place at the various sites of our clients and suppliers (including client and supplier site closures), there have been challenges relating to timely receiving and shipping products globally in all businesses. Should these restrictions continue, demand/supply issues may persist and could impact revenue growth, operating income (including operating income margins) and cash flows. We have observed some impact due to constraints from internal site restrictions, remote work, resources, and productivity. However, we believe the impact to us has not been as significant as to companies in many other industries because of the nature of our businesses, the classification of our businesses as essential or critical, as the case may be, and our business continuity plans.

Our RMS business was meaningfully impacted by the COVID-19 pandemic during the nine months ended September 26, 2020. The impact accelerated during March 2020 and continued during the three months ended June 27, 2020. Demand for research models declined due primarily to the physical shutdown of our client's facilities, principally academic institutions. While many of our clients are deemed essential businesses as well, we experienced a slowdown, initially in China in January 2020, and then across Europe and North America later in the three months ended March 28, 2020, as measures were implemented by various governments to slow the spread of the COVID-19 pandemic. This trend of reduced demand for research models continued during the three months ended June 27, 2020, which negatively impacted revenue, operating income, operating income margins, and cash flows. During the three months ended September 26, 2020, we experienced an increase in demand as our clients reopened impacted sites and resumed their research activity, which positively impacted revenue, operating income, operating income margins, and cash flows. Research models services, specifically our GEMS and Insourcing Solutions businesses, experienced higher revenues in the nine months ended September 26, 2020 compared to the corresponding prior period and were not as adversely impacted by the COVID-19 pandemic.

Our DSA business was not significantly impacted by the COVID-19 pandemic during the nine months ended September 26, 2020. Towards the end of the first fiscal quarter of 2020, we experienced some client work shifting towards subsequent quarters of fiscal year 2020 due to the various actions and restrictions put in place by governments around the world intended to slow the spread of the COVID-19 pandemic. The work performed in our Discovery Services and Safety Assessment businesses are largely dependent on our internal sites being open. Therefore, to the extent that clients require work to be completed, we have
been able to continue to meet client demands and perform the work so long as our work force at the specific site the work is done is not significantly adversely impacted by the COVID-19 pandemic. This trend is expected to continue as government actions to slow the spread of the COVID-19 pandemic begin to subside, employees return to work, and economies across the

world begin to reopen. Costs of supply have and may continue to increase as we procure the materials required to perform our work.

Our Manufacturing business was not significantly impacted by the COVID-19 pandemic during the nine months ended September 26, 2020, however, some of our customers experienced disruptions in their manufacturing operations, which resulted in delays in instrument installations in our Microbial Solutions business. We expect Manufacturing products, such as Microbial Solutions endotoxin products and Avian products, to see continued demand through the remainder of fiscal 2020. Our Biologics testing facilities remain open and performing services for our clients. Similar to our other services businesses, our ability to perform work is contingent on our internal facilities and our work force not being significantly adversely impacted by the COVID-19 pandemic. We expect a small adverse impact to our revenue growth, operating income, operating income margin and cash flows through the rest of the year.

Liquidity, capital and financial resources

We require cash to fund working capital needs as well as capital expansion, acquisitions, venture capital and strategic investments, debt obligations, leases, and pension obligations. The principal sources of liquidity have been cash flows from operations, supplemented by long-term borrowings. In fiscal year 2019, we issued $500 million Senior Notes, repaid part of our term loan for $500 million, and increased our multi-currency revolving facility by $500 million, from $1.55 billion to $2.1 billion. As of September 26, 2020, we had $2.0 billion of debt and finance leases outstanding, of which $47.9 million is current. Available on the revolving line of credit (Revolver) is $1.2 billion, which matures on March 26, 2023 and does not require scheduled payments before that date should additional borrowings occur. The term loan facility matures in 19 quarterly installments with the last installment due March 26, 2023. The Senior Notes become due in 2026 and 2028.

Due to the uncertainty resulting from the COVID-19 pandemic, we borrowed an additional $150 million from the Revolver during the three months ended March 28, 2020 to protect against any prolonged adverse impacts on liquidity markets. While there remains uncertainty for the remainder of 2020, we currently do not anticipate needing to use these borrowings to fund operations and these funds were repaid during the three months ended September 26, 2020. We expect to generate cash inflows from our operating activities sufficient to satisfy our working capital needs as well as to service our debt, pension, and venture capital obligations. Due to this higher debt, we incurred immaterially higher interest expense. We do not currently anticipate we will need to borrow additional funds during 2020. However, we have analyzed the cash flows and debt balances noting there is significant capacity on the remaining Revolver assuming we achieve the results of operations consistent with what we have described herein. Accordingly, we do not anticipate a material risk of non-compliance with our debt covenants based on our current estimate of future earnings.

Our debt levels consist of a combination of fixed and variable debt, which include $1.0 billion of fixed senior notes (2026 and 2028 Senior Notes). To protect against adverse liquidity concerns, there are various mechanisms for us to improve cash flows. To date we have implemented cost reduction plans including delaying compensation related increases, implementing hiring restrictions, reducing working hours, reducing all non-essential travel, and reducing certain discretionary spending. Beginning in the third fiscal quarter of 2020, we reinstated certain annual compensation increases, which had previously been delayed from the beginning of the second quarter of 2020. Additionally, we had temporarily slowed our investment activity, including acquisitions and capital projects, but have since resumed certain of those activities, including the acquisition of Cellero, LLC (Cellero) during the third fiscal quarter of 2020.

As of the date these unaudited condensed consolidated financial statements are issued, based on our current and expected liquidity position, we do not believe there is significant uncertainty in our ability to continue as a going concern.

Recoverability and/or impairment of assets

The COVID-19 pandemic did not, nor is expected to impact, the ability to timely account for assets on our balance sheet. There are judgments involved as it relates to reviewing our allowance for doubtful accounts, valuation of inventory, and valuations/recovery of investments. We believe we have the necessary support for estimates derived for these account balances. We have reviewed the collectability and valuation of the assets through the date of financial statement issuance, noting no significant recoverability concerns or any impairments identified. Gains and losses on certain investments in venture capital funds are recorded on a quarterly lag due to the availability of the funds' financial information, which is consistent with our venture capital investment accounting policy described in our Annual Report on Form 10-K for fiscal 2019. We did not identify any triggering events when reviewing impairment indicators for our goodwill and long-lived assets (tangible and intangible) that would indicate an impairment may exist. Review of impairment indicators and quantifying any impact will continue to be a focus throughout fiscal year 2020. Should a prolonged disruption occur where there is a material change from our current expectation of future cash flows, we could experience additional write-offs of client receivables or impairments to certain asset balances due to collectability and valuation issues.

Internal controls over financial reporting in a remote work environment

Internal controls over financial reporting are a focus for us to ensure they continue to be designed and operating effectively. As of September 26, 2020 and through the issuance of these unaudited condensed consolidated financial statements, we did not

have any material changes to our internal controls over financial reporting. For personnel responsible for internal control activities and working remote, the ability to work effectively enabled us to continue to maintain effective internal control over financial reporting. System and efficiency programs implemented in recent years, as well as those implemented as part of business continuity plans, have enabled us to effectively complete our financial reporting process in a similar way we completed it prior to the COVID-19 pandemic despite a largely remote working environment. Although there is uncertainty over the duration of the COVID-19 pandemic disruption, we do not anticipate any adverse impact to relevant systems or to the operating effectiveness of internal controls over financial reporting.

Recent Acquisitions

Our strategy is to augment internal growth of existing businesses with complementary acquisitions. Our recent acquisitions are described below.

On August 6, 2020, we acquired Cellero, a provider of cellular products for cell therapy developers and manufacturers worldwide. The addition of Cellero enhances our unique, comprehensive solutions for the high-growth cell therapy market, strengthening our ability to help accelerate clients' critical programs from basic research and proof-of-concept to regulatory approval and commercialization. It also expands our access to high-quality, human-derived biomaterials with Cellero's donor sites in the United States. The purchase price for Cellero was $37.5 million in cash. The acquisition was funded through cash on hand. This business is reported as part of our RMS reportable segment.

On January 3, 2020, we acquired HemaCare Corporation (HemaCare), a business specializing in the production of human-derived cellular products for the cell therapy market. The acquisition of HemaCare expands our comprehensive portfolio of early-stage research and manufacturing support solutions to encompass the production and customization of high-quality, human derived cellular products to better support clients' cell therapy programs. The purchase price of HemaCare was $379.8 million in cash. The acquisition was funded through a combination of cash on hand and proceeds from our Credit Facility under the multi-currency revolving facility. This business is reported as part of our RMS reportable segment.

On August 28, 2019, we acquired an 80% ownership interest in a supplier that supports our DSA reportable segment. The remaining 20% interest is a redeemable non-controlling interest. The purchase price was $23.4 million, net of a $4.0 million pre-existing relationship for a supply agreement settled upon acquisition. The acquisition was funded through a combination of cash on hand and proceeds from our Credit Facility under the multi-currency revolving facility. The business is reported as part of our DSA reportable segment.

On April 29, 2019, we acquired Citoxlab, a non-clinical CRO, specializing in regulated safety assessment services, non-regulated discovery services, and medical device testing. With operations in Europe and North America, the acquisition of Citoxlab further strengthens our position as a leading, global, early-stage CRO by expanding our scientific portfolio and geographic footprint, which enhances our ability to partner with clients across the drug discovery and development continuum. The purchase price for Citoxlab was $527.1 million in cash. The acquisition was funded through a combination of cash on hand and proceeds from our Credit Facility under the multi-currency revolving facility. Citoxlab is reported as part of our DSA reportable segment.

Overview of Results of Operations and Liquidity

Revenue for the three months ended September 26, 2020 was $743.3 million compared to $668.0 million in the corresponding period in 2019. This increase of $75.3 million, or 11.3%, was primarily due to the recent acquisition of HemaCare as well as growth in our DSA and Manufacturing segments, and by the positive effect of changes in foreign currency exchange rates which increased revenue by $8.4 million, or 1.3%, when compared to the corresponding period in 2019. Revenue for the nine months ended September 26, 2020 was $2.1 billion compared to $1.9 billion in the corresponding period in 2019. The increase of $202.8 million, or 10.5%, was primarily due to the reasons described above and was partially offset by a reduction in RMS product revenue due to the impact of the COVID-19 pandemic when compared to the corresponding period in 2019.

In the three months ended September 26, 2020, our operating income and operating income margin were $132.8 million and 17.9%, respectively, compared with $92.8 million and 13.9%, respectively, in the corresponding period of 2019. The increases in operating income and operating income margin were primarily due to higher DSA and Manufacturing operating income and operating income margins, partially offset by increased amortization of intangible assets related to our recent acquisition of HemaCare. In the nine months ended September 26, 2020, our operating income and operating margin were $303.8 million and 14.2%, respectively, compared with $242.4 million and 12.6%, respectively, in the corresponding period of 2019. The increases in operating income and operating income margin were primarily due to contributions from our DSA and Manufacturing segments and lower acquisition related costs compared to the corresponding period in 2019, partially offset by lower RMS operating income and operating income margin due to the impact of the COVID-19 pandemic, as well as increased amortization of intangible assets related to our recent acquisition of HemaCare.

Net income attributable to common shareholders increased to $102.9 million in the three months ended September 26, 2020, from $72.8 million in the corresponding period of 2019. The increase in Net income attributable to common shareholders was primarily due the increase in operating income described above, as well as higher net gains on our venture capital investments

in 2020 as compared to net losses on our venture capital investments in the corresponding period in 2019. Net income attributable to common shareholders increased to $221.1 million in the nine months ended September 26, 2020, from $171.7 million in the corresponding period of 2019. The increase in Net income attributable to common shareholders was primarily due to higher operating income mentioned above and higher net gains on our venture capital investments compared to the corresponding period in 2019.

During the first nine months of 2020, our cash flows from operations was $408.2 million compared with $300.3 million for the same period in 2019. The increase was driven by higher net income and certain favorable changes in working capital items, including favorable timing of certain government deferrals of income and payroll tax payments, and deferrals of certain compensation related items in response to the COVID-19 pandemic; partially offset by the timing of vendor and supplier payments compared to the same period in 2019.

Results of Operations

Three Months Ended September 26, 2020 Compared to the Three Months Ended September 28, 2019

Revenue and Operating Income

The following tables present consolidated revenue by type and by reportable segment:

	Three Months Ended			
	September 26, 2020	September 28, 2019	$ change	% change
	(in millions, except percentages)			
Service revenue	$ 580.8	$ 523.2	$ 57.6	11.0 %
Product revenue	162.5	144.8	17.7	12.3 %
Total revenue	$ 743.3	$ 668.0	$ 75.3	11.3 %

	Three Months Ended				
	September 26, 2020	September 28, 2019	$ change	% change	Impact of FX
	(in millions, except percentages)				
RMS	$ 151.9	$ 132.6	$ 19.3	14.6 %	1.5 %
DSA	461.2	420.1	41.1	9.8 %	1.2 %
Manufacturing	130.2	115.3	14.9	12.9 %	1.4 %
Total revenue	$ 743.3	$ 668.0	$ 75.3	11.3 %	1.3 %

The following table presents operating income by reportable segment:

	Three Months Ended			
	September 26, 2020	September 28, 2019	$ change	% change
	(in millions, except percentages)			
RMS	$ 37.1	$ 34.4	$ 2.7	7.9 %
DSA	90.4	65.0	25.4	39.0 %
Manufacturing	48.2	39.2	9.0	22.9 %
Unallocated corporate	(42.9)	(45.8)	2.9	(6.3)%
Total operating income	$ 132.8	$ 92.8	$ 40.0	43.0 %
Operating income % of revenue	17.9 %	13.9 %		4.0 %

The following presents and discusses our consolidated financial results by each of our reportable segments:

RMS

	Three Months Ended				
	September 26, 2020	September 28, 2019	$ change	% change	Impact of FX
	(in millions, except percentages)				
Revenue	$ 151.9	$ 132.6	$ 19.3	14.6 %	1.5 %
Cost of revenue (excluding amortization of intangible assets)	89.3	81.9	7.4	9.1 %	
Selling, general and administrative	21.5	16.0	5.5	34.8 %	
Amortization of intangible assets	4.0	0.3	3.7	1,076.2 %	
Operating income	$ 37.1	$ 34.4	$ 2.7	7.9 %	
Operating income % of revenue	24.4 %	25.9 %		(1.5)%	

RMS revenue increased $19.3 million due primarily to the acquisitions of HemaCare and Cellero which contributed $12.8 million and $1.9 million, respectively, to research model product revenue; higher research model services revenue, specifically our GEMS and Insourcing Solutions businesses; and the effect of changes in foreign currency exchange rates. Partially offsetting these increases were lower research model product revenue in North America due to the impact of the COVID-19 pandemic.

RMS operating income increased $2.7 million compared to the corresponding period in 2019. RMS operating income as a percentage of revenue for the three months ended September 26, 2020 was 24.4%, a decrease of 1.5% from 25.9% for the corresponding period in 2019. Operating income increased primarily due to higher revenue described above. Operating income as a percentage of revenue decreased primarily due to increased amortization of intangible assets in connection with our recent acquisitions of HemaCare and Cellero.

DSA

	Three Months Ended				
	September 26, 2020	September 28, 2019	$ change	% change	Impact of FX
	(in millions, except percentages)				
Revenue	$ 461.2	$ 420.1	$ 41.1	9.8 %	1.2 %
Cost of revenue (excluding amortization of intangible assets)	306.4	285.8	20.6	7.2 %	
Selling, general and administrative	42.4	48.0	(5.6)	(11.7)%	
Amortization of intangible assets	22.0	21.3	0.7	3.8 %	
Operating income	$ 90.4	$ 65.0	$ 25.4	39.0 %	
Operating income % of revenue	19.6 %	15.5 %		4.1 %	

DSA revenue increased $41.1 million due primarily to service revenue which increased in both the Safety Assessment and Discovery Services businesses due to demand from biotechnology clients and the effect of changes in foreign currency exchange rates. DSA revenue was not significantly impacted by the COVID-19 pandemic during the three months ended September 26, 2020.

DSA operating income increased $25.4 million during the three months ended September 26, 2020 compared to the corresponding period in 2019. DSA operating income as a percentage of revenue for the three months ended September 26, 2020 was 19.6%, an increase of 4.1% from 15.5% for the corresponding period in 2019. Operating income and operating income as a percentage of revenue increased primarily due to the higher revenue described above, realizing the benefit from operating efficiency initiatives; implementing cost controls associated with the COVID-19 pandemic; and lower acquisition related and severance costs compared to the same period in 2019, primarily impacting selling, general and administrative costs.

Manufacturing

	Three Months Ended				
	September 26, 2020	September 28, 2019	$ change	% change	Impact of FX
	(in millions, except percentages)				
Revenue	$ 130.2	$ 115.3	$ 14.9	12.9 %	1.4 %
Cost of revenue (excluding amortization of intangible assets)	58.4	54.1	4.3	7.8 %	
Selling, general and administrative	21.4	19.7	1.7	8.7 %	
Amortization of intangible assets	2.2	2.3	(0.1)	(2.4)%	
Operating income	$ 48.2	$ 39.2	$ 9.0	22.9 %	
Operating income % of revenue	37.1 %	34.0 %		3.1 %	

Manufacturing revenue increased $14.9 million due primarily to higher service revenue in the Biologics business due to our facility in Pennsylvania being fully operational in 2020 compared to 2019 where work continued to be transitioned from a legacy facility; higher product revenue in our Microbial Solutions business; higher demand for products in our Avian business; and the effect of changes in foreign currency exchange rates; partially offset by delays in instrument installations caused by the COVID-19 pandemic. Overall, Manufacturing revenue was not significantly impacted by the COVID-19 pandemic during the three months ended September 26, 2020.

Manufacturing operating income increased $9.0 million during the three months ended September 26, 2020 compared to the corresponding period in 2019. Manufacturing operating income as a percentage of revenue for the three months ended September 26, 2020 was 37.1%, an increase of 3.1% from 34.0% for the corresponding period in 2019. The increases were due primarily to higher revenue as well as improved production efficiencies, including the absence of duplicative Biologics facilities in 2020 compared to 2019, and the impact of operating efficiencies in the three months ended September 26, 2020 compared to the same period in 2019.

Unallocated Corporate

	Three Months Ended			
	September 26, 2020	September 28, 2019	$ change	% change
	(in millions, except percentages)			
Unallocated corporate	$ 42.9	$ 45.8	$ (2.9)	(6.3)%
Unallocated corporate % of revenue	5.8 %	6.9 %		(1.1)%

Unallocated corporate costs consist of selling, general and administrative expenses that are not directly related or allocated to the reportable segments. The decrease in unallocated corporate costs of $2.9 million, or 6.3%, compared to the corresponding period in 2019 is predominantly associated with decreased costs associated with the evaluation and integration of our recent acquisition activity. Costs as a percentage of revenue for the three months ended September 26, 2020 was 5.8%, a decrease of 1.1% from 6.9% for the corresponding period in 2019.

Interest Income

Interest income, which represents earnings on cash, cash equivalents, and time deposits was $0.2 million and $0.4 million for the three months ended September 26, 2020 and the corresponding period in 2019, respectively.

Interest Expense

Interest expense for the three months ended September 26, 2020 was $18.9 million, an increase of $13.2 million, or 231.1%, compared to $5.7 million for the corresponding period in 2019. The increase results from a foreign currency gain recognized in connection with a debt-related foreign exchange forward contract in the three months ended September 28, 2019 that did not recur in the three months ended September 26, 2020.

Other Income (Expense), Net

Other income, net, was $21.2 million for the three months ended September 26, 2020, an increase of $35.5 million, compared to Other expense, net of $14.3 million for the corresponding period in 2019. The increase was due primarily to net gains on our venture capital investments for the three months ended September 26, 2020 as compared to net losses for these investments in

the corresponding period in 2019. The increase was also due to foreign currency losses recognized in connection with a U.S. dollar denominated loan borrowed by a non-U.S. entity with a different functional currency in the three months ended September 28, 2019 that did not recur in the three months ended September 26, 2020.

Income Taxes

Income tax expense for the three months ended September 26, 2020 was $32.7 million, an increase of $33.0 million compared to an income tax benefit of $0.3 million for the corresponding period in 2019. Our effective tax rate was 24.1% for the three months ended September 26, 2020, compared to (0.4)% for the corresponding period in 2019. The increase in our effective tax rate in the 2020 period compared to the 2019 period was primarily related to the recognition of $20.4 million of deferred tax assets expected to be utilized as a result of changes to the Company's international financing structure during the three months ended September 28, 2019.

Nine Months Ended September 26, 2020 Compared to the Nine Months Ended September 28, 2019

Revenue and Operating Income

The following tables present consolidated revenue by type and by reportable segment:

	Nine Months Ended			
	September 26, 2020	September 28, 2019	$ change	% change
	(in millions, except percentages)			
Service revenue	$ 1,677.9	$ 1,480.0	$ 197.9	13.4 %
Product revenue	455.0	450.1	4.9	1.1 %
Total revenue	$ 2,132.9	$ 1,930.1	$ 202.8	10.5 %

	Nine Months Ended				
	September 26, 2020	September 28, 2019	$ change	% change	Impact of FX
	(in millions, except percentages)				
RMS	$ 414.4	$ 405.8	$ 8.6	2.1 %	— %
DSA	1,342.4	1,179.8	162.6	13.8 %	— %
Manufacturing	376.1	344.5	31.6	9.2 %	(0.5)%
Total revenue	$ 2,132.9	$ 1,930.1	$ 202.8	10.5 %	— %

The following table presents operating income by reportable segment:

	Nine Months Ended			
	September 26, 2020	September 28, 2019	$ change	% change
	(in millions, except percentages)			
RMS	$ 68.3	$ 103.7	$ (35.4)	(34.1)%
DSA	234.9	175.2	59.7	34.0 %
Manufacturing	132.3	103.9	28.4	27.3 %
Unallocated corporate	(131.7)	(140.4)	8.7	(6.3)%
Total operating income	$ 303.8	$ 242.4	$ 61.4	25.4 %
Operating income % of revenue	14.2 %	12.6 %		1.6 %

The following presents and discusses our consolidated financial results by each of our reportable segments:

RMS

	Nine Months Ended				
	September 26, 2020	September 28, 2019	$ change	% change	Impact of FX
	(in millions, except percentages)				
Revenue	$ 414.4	$ 405.8	$ 8.6	2.1 %	— %
Cost of revenue (excluding amortization of intangible assets)	274.2	248.8	25.4	10.2 %	
Selling, general and administrative	60.5	52.2	8.3	15.9 %	
Amortization of intangible assets	11.4	1.1	10.3	1,002.1 %	
Operating income	$ 68.3	$ 103.7	$ (35.4)	(34.1)%	
Operating income % of revenue	16.5 %	25.6 %		(9.1)%	

RMS revenue increased $8.6 million due primarily to the recent acquisitions of HemaCare and Cellero, which contributed $31.5 million and $1.9 million, respectively, to revenue growth; and higher research model services revenue, specifically our Insourcing Solutions and GEMS businesses. Partially offsetting these increases were lower research model product revenue in North America, Europe, and Asia due to the impact of the COVID-19 pandemic.

RMS operating income decreased $35.4 million compared to the corresponding period in 2019. RMS operating income as a percentage of revenue for the nine months ended September 26, 2020 was 16.5%, a decrease of 9.1% from 25.6% for the corresponding period in 2019. Operating income and operating income as a percentage of revenue decreased primarily due to the lower sales volume for research model products due to the COVID-19 pandemic as described above and due to the recent acquisition of HemaCare and Cellero, which increased amortization of intangible assets and an inventory fair value adjustment within cost of revenue.

DSA

	Nine Months Ended				
	September 26, 2020	September 28, 2019	$ change	% change	Impact of FX
	(in millions, except percentages)				
Revenue	$ 1,342.4	$ 1,179.8	$ 162.6	13.8 %	— %
Cost of revenue (excluding amortization of intangible assets)	910.4	815.5	94.9	11.6 %	
Selling, general and administrative	131.4	131.3	0.1	— %	
Amortization of intangible assets	65.7	57.8	7.9	13.9 %	
Operating income	$ 234.9	$ 175.2	$ 59.7	34.0 %	
Operating income % of revenue	17.5 %	14.9 %		2.6 %	

DSA revenue increased $162.6 million due primarily to the acquisition of Citoxlab which contributed $60.2 million to service revenue growth. Additionally, service revenue increased in both the Safety Assessment and Discovery Services businesses due to demand from biotechnology clients and increased pricing of services. DSA revenue was not significantly impacted by the COVID-19 pandemic during the nine months ended September 26, 2020.

DSA operating income increased $59.7 million during the nine months ended September 26, 2020 compared to the corresponding period in 2019. DSA operating income as a percentage of revenue for the nine months ended September 26, 2020 was 17.5%, an increase of 2.6% from 14.9% for the corresponding period in 2019. These increases were primarily attributable to the higher revenue described above, realizing the benefit from operating efficiency initiatives; implementing cost controls associated with the COVID-19 pandemic; and lower acquisition related costs, primarily impacting selling, general and administrative costs. These increases were partially offset by increased costs in both cost of revenue and selling, general, and

administrative expenses related to recent site closures, which increased severance costs, site consolidation costs, and asset impairments; and higher amortization of intangible assets associated with our recent acquisitions.

Manufacturing

	Nine Months Ended				
	September 26, 2020	September 28, 2019	$ change	% change	Impact of FX
	(in millions, except percentages)				
Revenue	$ 376.1	$ 344.5	$ 31.6	9.2 %	(0.5)%
Cost of revenue (excluding amortization of intangible assets)	174.8	169.8	5.0	3.0 %	
Selling, general and administrative	62.4	64.0	(1.6)	(2.6)%	
Amortization of intangible assets	6.6	6.8	(0.2)	(2.7)%	
Operating income	$ 132.3	$ 103.9	$ 28.4	27.3 %	
Operating income % of revenue	35.2 %	30.2 %		5.0 %	

Manufacturing revenue increased $31.6 million due primarily to higher demand for products in both our Microbial Solutions' Endotoxin business and our Avian business, and higher service revenue in the Biologics business due to our facility in Pennsylvania being fully operational in 2020 compared to 2019 where work continued to be transitioned from a legacy facility; partially offset by lower product revenue in our Microbial Solutions' Bioburden business, specifically due to the timing of a large stocking order from a strategic partner in 2019, which did not recur in 2020, and delays in instrument installations caused by the COVID-19 pandemic; and the effect of changes in foreign currency exchange rates. Overall, Manufacturing revenue was not significantly impacted by the COVID-19 pandemic during the nine months ended September 26, 2020.

Manufacturing operating income increased $28.4 million during the nine months ended September 26, 2020 compared to the corresponding period in 2019. Manufacturing operating income as a percentage of revenue for the nine months ended September 26, 2020 was 35.2%, an increase of 5.0% from 30.2% for the corresponding period in 2019. The increases were due primarily to higher revenue as well as improved production efficiencies, including the absence of duplicative Biologics facilities in 2020 compared to 2019, and the impact of operating efficiencies in the nine months ended September 26, 2020 compared to the same period in 2019.

Unallocated Corporate

	Nine Months Ended			
	September 26, 2020	September 28, 2019	$ change	% change
	(in millions, except percentages)			
Unallocated corporate	$ 131.7	$ 140.4	$ (8.7)	(6.3)%
Unallocated corporate % of revenue	6.2 %	7.3 %		(1.1)%

Unallocated corporate costs consist of selling, general and administrative expenses that are not directly related or allocated to the reportable segments. The decrease in unallocated corporate costs of $8.7 million is predominantly associated with decreased costs associated with the evaluation and integration of our recent acquisition activity. Costs as a percentage of revenue for the nine months ended September 26, 2020 was 6.2%, a decrease of 1.1% from 7.3% for the corresponding period in 2019.

Interest Income

Interest income, which represents earnings on cash, cash equivalents, and time deposits was $0.8 million for both the nine months ended September 26, 2020 and the corresponding period in 2019.

Interest Expense

Interest expense for the nine months ended September 26, 2020 was $53.3 million, an increase of $16.8 million, or 45.9%, compared to $36.5 million for the corresponding period in 2019. The increase was due primarily to higher interest expense from increased debt to fund our recent acquisitions and a lower foreign currency gain recognized in connection with a debt-related foreign exchange forward contract in the nine months ended September 26, 2020 compared to the corresponding period in 2019.

Other Income (Expense), Net

Other income, net, was $23.4 million for the nine months ended September 26, 2020, an increase of $31.6 million, or 386.7%, compared to other expense, net of $8.2 million for the corresponding period in 2019. The increase was due to higher net gains on our venture capital investments and lower foreign currency losses recognized in connection with a U.S. dollar denominated loan borrowed by a non-U.S. entity with a different functional currency for the nine months ended September 26, 2020 as compared to the corresponding period in 2019.

Income Taxes

Income tax expense for the nine months ended September 26, 2020 was $53.6 million, an increase of $28.6 million compared to $25.0 million for the corresponding period in 2019. Our effective tax rate was 19.5% for the nine months ended September 26, 2020 compared to 12.6% for the corresponding period in 2019. The increase in our effective tax rate in the 2020 period compared to the 2019 period was primarily related to the recognition of $20.4 million of deferred tax assets expected to be utilized as a result of changes to the Company's international financing structure during the three months ended September 28, 2019, partially offset by an increased tax benefit from stock-based compensation deductions in 2020 compared to the corresponding period in 2019.

Liquidity and Capital Resources

We currently require cash to fund our working capital needs, capital expansion, acquisitions, and to pay our debt, lease, venture capital investment, and pension obligations. Our principal sources of liquidity have been our cash flows from operations, supplemented by long-term borrowings. Based on our current business plan, we believe that our existing funds, when combined with cash generated from operations and our access to financing resources, are sufficient to fund our operations for the foreseeable future as previously discussed in our section on the COVID-19 pandemic impacts.

The following table presents our cash, cash equivalents and short-term investments:

	September 26, 2020	December 28, 2019
	(in millions)	
Cash and cash equivalents:		
Held in U.S. entities	$ 40.0	$ 56.5
Held in non-U.S. entities	202.9	181.5
Total cash and cash equivalents	242.9	238.0
Short-term investments:		
Held in non-U.S. entities	0.9	1.0
Total cash, cash equivalents and short-term investments	$ 243.8	$ 239.0

Borrowings

We have a credit facility, which consists of a $750.0 million term loan, of which $160.9 million remains outstanding as of September 26, 2020, and a $2.05 billion multi-currency revolving facility (Credit Facility). The term loan facility matures in 19 quarterly installments with the last installment due March 26, 2023. The revolving facility matures on March 26, 2023, and requires no scheduled payment before that date. Under specified circumstances, we have the ability to increase the term loan and/or revolving facility by up to $1.0 billion in the aggregate.

We also have an indenture that allows for senior notes offerings under supplemental indentures. In 2018, we entered into our first supplemental indenture and raised $500.0 million in aggregate principal amount of 5.5% Senior Notes due in 2026 (2026 Senior Notes) in an unregistered offering. Under the terms of the first supplemental indenture, interest on the 2026 Senior Notes is payable semi-annually on April 1 and October 1, beginning on October 1, 2018. In 2019, we entered into our second supplemental indenture and raised an additional $500.0 million in aggregate principal amount of 4.25% Senior Notes due in 2028 (2028 Senior Notes) in an unregistered offering. Under the terms of the second supplemental indenture, interest on the 2028 Senior Notes is payable semi-annually on May 1 and November 1, beginning on May 1, 2020.

Amounts outstanding under our credit facilities and both the 2026 Senior Notes and the 2028 Senior Notes were as follows:

	September 26, 2020	December 28, 2019
	(in millions)	
Term loans	$ 160.9	$ 193.8
Revolving facility	836.8	676.1
2026 Senior Notes	500.0	500.0
2028 Senior Notes	500.0	500.0
Total	$ 1,997.7	$ 1,869.9

The interest rates applicable to the term loan and revolving facility under the Credit Facility are, at our option, equal to either the base rate (which is the higher of (1) the prime rate, (2) the federal funds rate plus 0.50%, or (3) the one-month adjusted LIBOR rate plus 1.0%) or the adjusted LIBOR rate, plus an interest rate margin based upon our leverage ratio.

Repurchases of Common Stock

During the nine months ended September 26, 2020, we did not repurchase any shares under our authorized stock repurchase program. As of September 26, 2020, we had $129.1 million remaining on the authorized $1.3 billion stock repurchase program and we do not intend to repurchase shares for the remainder of 2020. Our stock-based compensation plans permit the netting of common stock upon vesting of restricted stock, restricted stock units, and performance share units in order to satisfy individual statutory tax withholding requirements. During the nine months ended September 26, 2020, we acquired 0.1 million shares for $23.9 million through such netting.

Cash Flows

The following table presents our net cash provided by operating activities:

	Nine Months Ended	
	September 26, 2020	September 28, 2019
	(in millions)	
Net income	$ 221.1	$ 173.5
Adjustments to reconcile net income to net cash provided by operating activities	196.6	163.8
Changes in assets and liabilities	(9.5)	(37.0)
Net cash provided by operating activities	$ 408.2	$ 300.3

Net cash provided by cash flows from operating activities represents the cash receipts and disbursements related to all of our activities other than investing and financing activities. Operating cash flow is derived by adjusting our net income for (1) non-cash operating items such as depreciation and amortization, stock-based compensation, deferred income taxes, gains and/or losses on venture capital and strategic equity investments, as well as (2) changes in operating assets and liabilities, which reflect timing differences between the receipt and payment of cash associated with transactions and when they are recognized in our results of operations. For the nine months ended September 26, 2020, compared to the nine months ended September 28, 2019, the increase in net cash provided by operating activities was driven by higher net income and certain favorable changes in working capital items, including favorable timing of certain government deferrals of income and payroll tax payments, and deferrals of certain compensation related items in response to the COVID-19 pandemic; partially offset by the timing of vendor and supplier payments compared to the same period in 2019.

The following table presents our net cash used in investing activities:

	Nine Months Ended	
	September 26, 2020	September 28, 2019
	(in millions)	
Acquisitions of businesses and assets, net of cash acquired	$ (419.1)	$ (515.6)
Capital expenditures	(78.7)	(76.7)
Investments, net	(14.1)	(17.6)
Other, net	(1.2)	(0.7)
Net cash used in investing activities	$ (513.1)	$ (610.6)

For the nine months ended September 26, 2020, the primary use of cash used in investing activities related to the acquisitions of HemaCare and Cellero, capital expenditures to support the growth of the business, and investments in certain venture capital and strategic equity investments. For the nine months ended September 28, 2019, the primary use of cash used in investing activities related to the acquisition of Citoxlab, the acquisition of a supplier, capital expenditures to support the growth of the business, and investments in certain venture capital and strategic equity investments.

The following table presents our net cash provided by financing activities:

	Nine Months Ended	
	September 26, 2020	September 28, 2019
	(in millions)	
Proceeds from long-term debt and revolving credit facility	$ 1,412.0	$ 2,071.2
Payments on long-term debt, revolving credit facility, and finance lease obligations	(1,321.0)	(1,798.6)
Proceeds from exercises of stock options	43.8	27.0
Purchase of treasury stock	(23.9)	(18.0)
Other, net	(4.4)	(10.6)
Net cash provided by financing activities	$ 106.5	$ 271.0

For the nine months ended September 26, 2020, net cash provided by financing activities reflected the net proceeds of $91.0 million on our Credit Facility and finance lease obligations. Included in the net proceeds are the following amounts:

- Proceeds of approximately $415 million from our revolving Credit Facility to fund our recent acquisitions. Additionally, towards the end of the first fiscal quarter, we borrowed an additional $150 million from our revolving Credit Facility to secure cash on hand in response to uncertainties due to the COVID-19 pandemic; partially offset by,
- Payments of approximately $33 million on our term loan and net payments of $434 million to our revolving Credit Facility throughout the nine months ended September 26, 2020, which included the repayment of the $150 million additional borrowings during the first fiscal quarter of 2020;
- Additionally, we had $798 million of gross payments, partially offset by $794 million of gross proceeds in connection with a non-U.S. Euro functional currency entity repaying Euro loans and replacing the Euro loans with U.S. dollar denominated loans. A series of forward currency contracts were executed to mitigate any foreign currency gains or losses on the U.S. dollar denominated loans. These proceeds and payments are presented as gross financing activities.

Net cash provided by financing activities also reflected proceeds from exercises of employee stock options of $43.8 million, partially offset by treasury stock purchases of $23.9 million made due to the netting of common stock upon vesting of stock-based awards in order to satisfy individual statutory tax withholding requirements.

For the nine months ended September 28, 2019, net cash provided by financing activities reflected the net proceeds of $272.6 million on our Credit Facility and finance lease obligations. Included in the net proceeds are the following amounts:

- Borrowings of $581 million, which were primarily used for the purchase of Citoxlab and an 80% ownership interest in a supplier that supports the Company’s DSA reportable segment; partially offset by,
- Payments of approximately $28 million on our term loan and net payments of $44 million to our revolving Credit Facility course of business throughout the nine months ended September 28, 2019;
- Additionally, we had $1.6 billion of gross payments, partially offset by $1.4 billion of gross proceeds in connection with a non-U.S. Euro functional currency entity repaying Euro loans and replacing the Euro loans with U.S. dollar denominated loans. A series of forward currency contracts were executed to mitigate any foreign currency gains or losses on the U.S. dollar denominated loans. These proceeds and payments are presented as gross financing activities.

Net cash provided by financing activities also reflected proceeds from exercises of employee stock options of $27.0 million. Net cash provided by financing activities was partially offset by treasury stock purchases of $18.0 million made due to the netting of common stock upon vesting of stock-based awards in order to satisfy individual statutory tax withholding requirements and the purchase of an additional 5% equity interest in Vital River for $7.9 million which is included in Other, net.

Contractual Commitments and Obligations

The disclosure of our contractual commitments and obligations was reported in our Annual Report on Form 10-K for fiscal 2019. There have been no material changes from the contractual commitments and obligations previously disclosed in our Annual Report on Form 10-K for fiscal 2019 other than the changes described in Note 2, “Business Combinations,” Note 7, “Fair Value,” Note 9, “Long-Term Debt and Finance Lease Obligations,” Note 16, “Leases,” and Note 17, “Commitments and

Contingencies" in our notes to the unaudited condensed consolidated financial statements in this Quarterly Report on Form 10-Q.

Off-Balance Sheet Arrangements

As of September 26, 2020, we did not have any significant off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of SEC Regulation S-K promulgated under the Exchange Act, except as disclosed below.

Venture Capital Investments
We invest in several venture capital funds that invest in start-up companies, primarily in the life sciences industry. Our total commitment to the funds as of September 26, 2020 was $130.8 million, of which we funded $92.0 million through September 26, 2020. Refer to Note 6, "Venture Capital and Strategic Equity Investments" in this Quarterly Report on Form 10-Q for additional information.

Letters of Credit
Our off-balance sheet commitments related to our outstanding letters of credit as of September 26, 2020 were $8.1 million.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements prepared in accordance with generally accepted accounting principles in the U.S. The preparation of these financial statements requires us to make certain estimates and assumptions that may affect the reported amounts of assets and liabilities, the reported amounts of revenues and expenses during the reported periods and related disclosures. These estimates and assumptions are monitored and analyzed by us for changes in facts and circumstances, and material changes in these estimates could occur in the future. We base our estimates on our historical experience, trends in the industry, and various other factors that are believed to be reasonable under the circumstances. Actual results may differ from our estimates under different assumptions or conditions.

We believe that the application of our accounting policies, each of which require significant judgments and estimates on the part of management, are the most critical to aid in fully understanding and evaluating our reported financial results. Our significant accounting policies are described in Note 1, "Description of Business and Summary of Significant Accounting Policies" to our Annual Report on Form 10-K for fiscal year 2019.

Recent Accounting Pronouncements

For a discussion of recent accounting pronouncements please refer to Note 1, "Basis of Presentation," in this Quarterly Report on Form 10-Q. Other than as discussed in Note 1, "Basis of Presentation," we did not adopt any other new accounting pronouncements during the nine months ended September 26, 2020 that had a significant effect on our unaudited condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risk from changes in interest rates and currency exchange rates, which could affect our future results of operations and financial condition. We manage our exposure to these risks through our regular operating and financing activities.

Interest Rate Risk

We are exposed to changes in interest rates while conducting normal business operations as a result of ongoing financing activities. As of September 26, 2020, our debt portfolio was comprised primarily of floating interest rate borrowings. A 100-basis point increase in interest rates would increase our annual pre-tax interest expense by $10.0 million.

Foreign Currency Exchange Rate Risk

We operate on a global basis and have exposure to some foreign currency exchange rate fluctuations for our financial position, results of operations, and cash flows.

While the financial results of our global activities are reported in U.S. dollars, our foreign subsidiaries typically conduct their operations in their respective local currency. The principal functional currencies of the Company's foreign subsidiaries are the Euro, Canadian Dollar, British Pound and Chinese Yuan Renminbi. During the nine months ended September 26, 2020, the most significant drivers of foreign currency translation adjustment the Company recorded as part of Other comprehensive income (loss) were the British Pound, Canadian Dollar, Hungarian Forint, Chinese Yuan Renminbi, Euro, Brazilian real, Japanese Yen, and Danish Krone.

Fluctuations in the foreign currency exchange rates of the countries in which we do business will affect our financial position, results of operations, and cash flows. As the U.S. dollar strengthens against other currencies, the value of our non-U.S. revenue, expenses, assets, liabilities, and cash flows will generally decline when reported in U.S. dollars. The impact to net income as a

result of a U.S. dollar strengthening will be partially mitigated by the value of non-U.S. expenses, which will decline when reported in U.S. dollars. As the U.S. dollar weakens versus other currencies, the value of the non-U.S. revenue, expenses, assets, liabilities, and cash flows will generally increase when reported in U.S. dollars. For the nine months ended September 26, 2020, our revenue would have increased by $68.6 million and our operating income would have decreased by $0.7 million, if the U.S. dollar exchange rate had strengthened by 10.0%, with all other variables held constant.

We attempt to minimize this exposure by using certain financial instruments in accordance with our overall risk management and our hedge policy. We do not enter into speculative derivative agreements.

During the nine months ended September 26, 2020, we entered into foreign exchange forward contracts to limit our foreign currency exposure related to both intercompany loans and a U.S. dollar denominated loan borrowed by a non-U.S. Euro functional currency entity under our Credit Facility. Refer to Note 14, “Foreign Currency Contracts” in this Quarterly Report on Form 10-Q for additional information regarding these types of forward contracts.

Item 4. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

Based on their evaluation, required by paragraph (b) of Rules 13a-15 or 15d-15, promulgated by the Securities Exchange Act of 1934, as amended (Exchange Act), the Company’s principal executive officer and principal financial officer have concluded that the Company’s disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act, are effective, at a reasonable assurance level, as of September 26, 2020, to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company’s management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurances of achieving the desired control objectives, and management necessarily was required to apply its judgment in designing and evaluating the controls and procedures.

(b) Changes in Internal Controls

The Company continued to execute a plan to centralize certain accounting transaction processing functions to internal shared service centers during the three months ended September 26, 2020. There were no other material changes in the Company’s internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of the Exchange Act Rules 13a-15 or 15d-15 that occurred during the quarter ended September 26, 2020 that materially affected, or were reasonably likely to materially affect, the Company’s internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

Please refer to Note 17, “Commitments and Contingencies” in our notes to the unaudited condensed consolidated financial statements in this Quarterly Report on Form 10-Q.

Item 1A. Risk Factors

Set forth below, elsewhere in this Form 10-Q and in other documents we file with the SEC are risks and uncertainties that could cause actual results to differ materially from the results contemplated by the forward-looking statements contained in this Form 10-Q. We note that factors set forth below, individually or in the aggregate, as well as additional risks and uncertainties either not presently known or that are currently believed to not be material to the business, may cause our actual results to differ materially from expected and historical results. You should understand that it is not possible to predict or identify all such factors. Consequently, you should not consider the following to be a complete discussion of all potential risks or uncertainties and the risks described below should be carefully considered together with the other information set forth in this report and in future documents we file with the SEC.

The COVID-19 pandemic is dynamic and expanding. The continuation of this outbreak likely will have, and the emergence of other epidemic or pandemic crises could have, material adverse effects on our business, results of operations, or financial condition.

On March 11, 2020, the World Health Organization declared the outbreak of a strain of novel coronavirus disease, COVID-19, a global pandemic. The COVID-19 pandemic is dynamic and expanding, and its ultimate scope, duration and effects are uncertain. This pandemic has and continues to result in, and any future epidemic or pandemic crises may potentially result in, direct and indirect adverse effects on our industry and customers, which in turn has (with respect to COVID-19) and may (with respect to future epidemics or crises) impact our business, results of operations and financial condition. Further, the COVID-19 pandemic may also affect our operating and financial results in a manner that is not presently known to us. Effects of the current pandemic have included, or may in the future include, among others:

- deterioration of worldwide, regional or national economic conditions and activity, which adversely affects global demand for our products and services;
- disruptions to our operations as a result of the potential health impact on our employees and crew, and on the workforces of our customers and business partners;
- temporary and/or partial closures of our facilities or the facilities of our customers (including academic institutions, government laboratories and private foundations) and third-party service providers;
- interruption of the operations of global supply chains and those of our suppliers;
- disruptions to our business from, or additional costs related to, new regulations, directives or practices implemented in response to the pandemic, such as travel restrictions, shelter in place/stay in place/work from home orders, increased inspection regimes, hygiene measures (such as quarantining and physical distancing) or increased implementation of remote working arrangements;
- reduced cash flows and financial condition, including potential liquidity constraints;
- reduced access to capital, including the ability to refinance any existing obligations, as a result of any credit tightening generally or due to continued declines in global financial markets, including to the prices of publicly-traded equity securities of us, our peers and of listed companies generally;
- deterioration in the financial condition and prospects of our customers or attempts by customers, suppliers or service providers to invoke force majeure contractual clauses, or the legal doctrines of impossibility or impracticability (or other similar doctrines) as a result of delays or other disruptions;
- delays in the commencement of, or the suspension or cancellation of, client studies; and
- the effects described elsewhere in these Risk Factors.

The COVID-19 pandemic has caused us to modify our business practices, including but not limited to health management of employees, customers and suppliers, management of production inventory, supply chain risk management, compensation practices and capital expenditure planning. We have formed a tiered structure of designated COVID-19 crisis management teams throughout our organization to identify, implement and monitor such actions as required by the dynamic exigencies arising from the pandemic. Such measures and others may not be sufficient to mitigate all the risks posed by COVID-19, and our ability to perform critical functions could be materially adversely affected.

Although disruption and effects from the COVID-19 pandemic may be temporary, given the dynamic nature of these circumstances and the worldwide nature of our business and operations, the duration of any business disruption and the related financial impact to us cannot be reasonably estimated at this time but could materially affect our business, results of operations and financial condition.

Changes and uncertainties in the economy have harmed and could continue to harm our operating results.

As the COVID-19 pandemic is still ongoing and may worsen, there is significant uncertainty surrounding its developments and impacts, including whether the current epidemic or continued spread of COVID-19 will cause a broader economic slowdown or a global recession, and we cannot predict at this time the impact it will have on our business or results of operations. Changes and uncertainties in the economy have harmed and could continue to harm our operating results. As a result of the continuing economic uncertainties, our operating results, and the economic strength of our customers and suppliers, are increasingly difficult to predict. Sales of our products and services, as well as access to our products and services within our supply chain, are affected by many factors, including, among others, general economic conditions, interest rates, inflation, liquidity in the credit markets, unemployment trends, shipping costs, geopolitical events, and other factors. If economic conditions significantly weaken on a global scale it may cause some of our customers to experience a slowdown, from time to time, which may in turn have an adverse effect on our sales and operating results. Changes and uncertainties in the economy also increase the risk of uncollectible accounts receivable. The pricing we receive from suppliers may also be impacted by general economic conditions. Continued and future changes and uncertainties in the economic climate in the United States and elsewhere could have a similar negative impact on the rate and amounts of purchases by our current and potential customers, create price inflation for our products, or otherwise have a negative impact on our expenses, gross margins and revenues, and could hinder our growth.

A reduction in demand may adversely affect our business.

Our business could be adversely affected by any significant decrease in drug R&D expenditures by pharmaceutical and biotechnology companies, as well as by academic institutions, government laboratories or private foundations. Similarly, economic factors and industry trends that affect our clients in these industries (including the COVID-19 pandemic and the impact of measures intended to reduce the spread of COVID-19) also affect their R&D budgets and, consequentially, our business as well.

Our clients include researchers at pharmaceutical and biotechnology companies. Our ability to continue to grow and win new business is dependent in large part upon the ability and willingness of the pharmaceutical and biotechnology industries to continue to spend on molecules in the non-clinical phases of R&D (and in particular discovery and safety assessment) and to outsource the products and services we provide. Furthermore, our clients (particularly larger biopharmaceutical companies) continue to search for ways to maximize the return on their investments with a focus on lowering R&D costs per drug candidate. Fluctuations in the expenditure amounts in each phase of the R&D budgets of these researchers and their organizations could have a significant effect on the demand for our products and services. R&D budgets fluctuate due to changes in available resources, mergers of pharmaceutical and biotechnology companies, spending priorities (including available resources of our biotechnology clients, particularly those that are cash-negative, who may be highly focused on rationing their liquid assets in a challenging funding environment), general economic conditions, institutional budgetary policies and the impact of government regulations, including potential drug pricing legislation. Available funding for biotechnology clients in particular may be affected by the capital markets, investment objectives of venture capital investors and priorities of biopharmaceutical industry sponsors.

For additional discussion of the factors that we believe have recently been influencing R&D budgets at our clients, please see the section entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included elsewhere in this Form 10-Q in addition to the sections entitled “Our Strategy” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included in our Form 10-K for the fiscal year ended December 28, 2019, filed with the Commission on February 11, 2020.

Further, our Research Products operations are structured to produce particular blood products based on customers’ existing demand, and perceived potential changes in demand, for these products. Sudden or unexpected changes in demand for these products could have an adverse impact on our profitability. Increasing demand could harm relationships with customers if we are unable to alter production capacity, or purchase products from other suppliers, to fill orders adequately. This could result in a decrease in overall revenue and profits. The impact of measures intended to reduce the spread of COVID-19 caused us to temporarily suspend blood donations, which have since resumed, at our Research Products facilities, further limiting our ability to respond to changes in demand. Lack of access to sufficient capital, or lack of adequate time to properly (or the failure to adequately) respond to changes in demand, could result in declining revenue and profits, as customers transfer to other suppliers.

A reduction or delay in government funding of R&D may adversely affect our business.

A portion of revenue, predominantly in our RMS segment, is derived from clients at academic institutions and research laboratories whose funding is partially dependent on both the level and timing of funding from government sources such as the U.S. National Institutes of Health (NIH) and similar domestic and international agencies, which can be difficult to forecast. We also sell directly to the NIH and these other agencies. Government funding of R&D is subject to the political process, which is inherently fluid and unpredictable. Our revenue may be adversely affected if our clients delay purchases as a result of uncertainties surrounding the approval of government budget proposals, included reduced allocations to government agencies that fund R&D activities. Government proposals to reduce or eliminate budgetary deficits have sometimes included reduced allocations to the NIH and other government agencies that fund R&D activities, or NIH funding may not be directed towards projects and studies that require the use of our products and services, both of which could adversely affect our business and our financial results. Furthermore, changes in government budgetary priorities as a result of the COVID-19 pandemic and the impact of measures intended to reduce the spread of COVID-19 could reduce government funding of R&D that is unrelated to the disease, which could adversely affect our business and our financial results.

Several of our product and service offerings are dependent on a limited source of supply that, when interrupted, adversely affects our business.

We depend on a limited international source of supply for certain products, such as large research models. Disruptions to their continued supply from time to time arise from health problems (including as a result of the COVID-19 pandemic and the spread of other diseases), export or import laws/restrictions or embargoes, tariffs, international trade regulations, foreign government or economic instability, severe weather conditions, increased competition among suppliers for models, disruptions to the air travel system, activist campaigns, commercial disputes, supplier insolvency, geopolitical disputes, measures intended to slow the spread of COVID-19 or other ordinary course or unanticipated events. Any disruption of supply could materially harm our business if we cannot remove the disruption or are unable to secure an alternative or secondary supply source on comparable commercial terms. For example, as with other industry participants, certain of our activities rely on a sufficient supply of large research models, which has seen increasing demand as compared to supply in 2020 due to a variety of factors. First, the surge of research relating to COVID-19 has increased short term demand. Second, China supplies a significant portion of certain critical large research models, which have been subject to geographic export restrictions applicable to many animal species since the beginning of the COVID-19 pandemic. While we continue to take steps to find alternative supply channels and lock in supply with preferred sources through multi-year and/or minimum commitment contracts, such mitigating efforts may not prove successful at ensuring a steady and timely supply or may require (and in the past have required) us to pay significantly higher prices for such products during periods of global shortage or restrictions on the transportation of products. In addition, limited global supply or regional restrictions on transportation for certain products may require us to source products from non-preferred vendors.

Further, our Research Products business depends on the availability of appropriate donors. As a result of the COVID-19 pandemic and the impact of measures intended to reduce the spread of COVID-19 we have chosen to temporarily suspend blood donations at our Research Products facilities, thus limiting our access to new donors. As donor participation declines, we may not be able to reduce costs sufficiently to maintain profitability of the Research Products business. Regulations intended to reduce the risk of introducing infectious diseases in the blood supply (including COVID-19) could also result in a decreased pool of potential donors or integrity of inventory. Due to any pandemic, epidemic or outbreak in one or more regions in which our Research Products business operates, the portion of the public that typically donates may be unable, or unwilling to donate, thereby significantly reducing the availability of research products upon which we rely. In addition, the heightened fear and health concerns among the public resulting from widespread media coverage may result in a dramatic decline in donations when our blood donation facilities re-open.

We bear financial risk for contracts that may be terminated or reduced in scope, underpriced, subject to cost overruns or delayed.

Many of our agreements, including those which underlie our strategic relationships with some of our more significant clients, provide for termination or reduction in scope with little or no notice. In addition, we sell our products and services to our competitors, and similarly they sell products and services to us. For instance, we have historically entered into, and currently are party to, contracts with certain of our competitors to distribute specialty research models in locations where our competitors may not have distribution capabilities.

Our counterparties (including our clients who are competitors) may elect to terminate their agreements with us for various reasons including:

- the invocation of force majeure clauses, or the legal doctrines of impossibility or impracticability (or other similar legal doctrines), as a result of the COVID-19 pandemic;
- the products being tested fail to satisfy safety requirements;
- unexpected or undesired study results;

- production problems resulting in shortages of the drug being tested;
- a client's decision to forego or terminate a particular study;
- our competitors' establishment of alternative distribution channels;
- dissatisfaction with our performance under the agreement;
- the loss of funding for the particular research study; or
- general convenience/counterparty preference.

If a counterparty terminates a contract with us, we are typically entitled under the terms of the contract to receive revenue earned to date as well as certain other costs and, in some cases, termination fees; however, in many cases we are not entitled to any termination fees in the event of a termination as a result of force majeure. Cancellation of a large contract or proximate delay, cancellation or conclusion of multiple contracts could materially adversely affect our business and, therefore, may adversely affect our operating results.

Furthermore, many of our contracts provide for services on a fixed price or fee-for-service with a cap basis and, accordingly, we bear the financial risk if we initially underprice our contracts or otherwise overrun our cost estimates. Such underpricing or significant cost overruns could have an adverse effect on our business, results of operations, financial condition and cash flows.

We have in the past experienced and in the future could experience an unauthorized access into our information systems.

We operate large and complex information systems that contain significant amounts of client data. As a routine element of our business, we collect, analyze and retain substantial amounts of data pertaining to the non-clinical studies we conduct for our clients. Unauthorized third parties could attempt to gain entry to such information systems to steal data or disrupt the systems or for financial gain. Like other companies, we have on occasion experienced, and will continue to experience, threats and incursions to our data and systems, including malicious codes and viruses, phishing, business email compromise and social engineering attacks or other cyber-attacks. The number and complexity of these threats continue to increase over time.
While we have taken measures to protect our information systems from intrusion, in March 2019, we detected evidence that an unauthorized third party, who we believe was well resourced and highly sophisticated, accessed certain of our information systems and copied data. We worked with a leading cyber security firm to assist in our investigation and coordinated with law enforcement authorities. Our investigation indicated that the affected information included client information.

In December 2019, we disclosed that we had completed our remediation of the incident identified in March of 2019. While we have implemented additional security safeguards, including:

- remediation of the March 2019 incident;
- cooperation with U.S. Federal authorities' investigation into the incident and established an ongoing relationship to better understand the ever-changing nature of cybersecurity related threats;
- additional visibility into our network and environment;
- additional monitoring of our environment;
- active threat hunting in our environment;
- a reduction of our footprint of externally facing technology;
- enhanced protection for externally facing web applications;
- the addition of Multi-Factor Authentication to ingress points;
- the addition of denial of service attack protection; and
- increased network segmentation,

such efforts may not be successful, in which case we could suffer significant harm.

Further, we are at risk of being targeted, and we have in the past been victim to, business email compromise fraud, which results in payments being made to illegitimate bank accounts. Although these instances have not resulted in our incurring material losses, if similar instances occur in the future, we may incur such losses.

Our contracts with our clients typically contain provisions that require us to keep confidential the information generated from the studies we conduct. In the event the confidentiality of such information is compromised, whether by unauthorized access or other breaches, we could be exposed to significant harm, including termination of customer contracts, damage to our customer

relationships, damage to our reputation and potential legal claims from customers, employees and other parties. In addition, we may face investigations by government regulators and agencies as a result of a breach.

Further, we are required to comply with the data privacy and security laws in many jurisdictions. For example, we are required to comply with the European Union (EU) General Data Protection Regulation (GDPR), which became effective on May 25, 2018 and imposes heightened obligations and enhanced penalties for noncompliance (including up to four percent (4%) of global revenue). The cost of compliance, and the potential for fines and penalties for non-compliance, with GDPR may have a significant adverse effect on our business and operations. Also, the California legislature passed the California Consumer Privacy Act (CCPA), which became effective January 1, 2020. The CCPA creates new transparency requirements and grants California residents several new rights with regard their personal information. Failure to comply with the CCPA may result in, among other things, significant civil penalties and injunctive relief, or potential statutory or actual damages. We have made changes to, and investments in, our business practices and will continue to monitor developments and make appropriate changes to help attain compliance with these evolving and complex regulations. Additionally, while collecting research products from donors, we may collect, use, disclose, maintain and transmit patient information in ways that will be subject to many of the numerous state, federal and international laws and regulations governing the collection, use, disclosure, storage, transmission or confidentiality of patient-identifiable health information.

Contaminations in our animal populations can damage our inventory, harm our reputation for contaminant-free production, result in decreased sales and cause us to incur additional costs.

Our research models and fertile chicken eggs must be free of certain infectious agents, such as certain viruses and bacteria, because the presence of these contaminants can distort or compromise the quality of research results and could adversely impact human or animal health. The presence of these infectious agents in our animal production facilities and certain service operations could disrupt our contaminant-free research model and fertile egg production as well as our animal services businesses, including GEMS, harm our reputation for contaminant-free production and result in decreased sales. There also exists a risk that contaminations from models that we produce may affect our client's facilities, with similar impact to them for which we could be liable for damages. In some cases, we may produce or import animals carrying infectious agents capable of causing disease in humans; and in the case of such a contamination or undiagnosed infection, there could be a possible risk of human exposure and infection and liability for damages to infected persons.

We are also subject to similar contamination risks with respect to our large research models. While some of these models are owned by us and maintained at our facilities, others are reserved for us and maintained at sites operated by the original provider. Accordingly, risk of contamination may be outside of our control, and we depend on the practices and protocols of third parties to ensure a contamination-free environment. A contamination may require extended CDC quarantine with subsequent reduced sales as a result of lost client orders, as well as the potential for complete inventory loss and disinfection of the affected quarantine rooms. Furthermore, while we often negotiate for contractual risk indemnification, the third party may refuse to fulfill its indemnification obligation or may be unable to as a result of insolvency or other impediments.

Contaminations are unanticipated and difficult to predict and could adversely impact our financial results. If they occur, contaminations typically require cleaning up, renovating, disinfecting, retesting and restarting production or services. Such clean-ups result in inventory loss, clean-up and start-up costs, and reduced sales as a result of lost client orders and potentially credits for prior shipments. In addition to microbiological contaminations, the potential for genetic mix-ups or mis-matings also exists and may require us to restart the applicable colonies, and would likely result in inventory loss, additional start-up costs and possibly reduced sales. Contaminations also expose us to risks that clients will request compensation for damages in excess of our contractual indemnification requirements.

Further, many of our operations are comprised of complex mechanical systems that are subject to periodic failure, including aging fatigue. Such failures are unpredictable, and while we have made significant capital expenditures designed to create redundancy within these mechanical systems, strengthen our biosecurity, improve our operating procedures to protect against such contaminations, and replace impaired systems and equipment in advance of such events, failures and/or contaminations may still occur.

Any failure by us to comply with applicable regulations and related guidance could harm our reputation and operating results, and compliance with new regulations and guidance may result in additional costs.

Any failure on our part to comply with applicable regulations could result in the termination of ongoing research or the disqualification of data for submission on behalf of our clients to regulatory authorities. This could harm our reputation, our prospects for future work and our operating results. For example, the issuance of a notice of objectionable observations or a warning letter from the FDA based on a finding of a material violation affecting data integrity by us for GLP or cGMP requirements that are not addressed to the regulatory monitoring authorities' satisfaction could materially and adversely affect us. If our operations are found to violate any applicable law or other governmental regulations, we might be subject to civil and criminal penalties, damages and fines or the temporary closure of our facilities. Any action against us for violation of these laws

or regulations, even if we successfully defend against it, could cause us to incur significant legal expenses, divert our management's attention from the operation of our business and damage our reputation.

In recent years FDA has issued guidance that now requires submissions to be presented in a format that conforms with the FDA's SEND (Standardization for Exchange of Nonclinical Data) standards that apply to our clients' NDA and IND submissions and require us to provide electronic data in specific formats that will allow for more efficient, higher quality regulatory reviews. Accordingly, our clients expect us to timely deliver their nonclinical data compliant with SEND. Notwithstanding, some of these standards require additional operating and capital expenses that will impact not only us and our industry competitors, but clients in the biomedical research community. Non-compliance with any of these expectations could lead to official action by a government authority, damage to our reputation and a potential loss of business.

In addition, regulations and guidance worldwide concerning the production and use of laboratory animals for research purposes continue to evolve. Similarly, guidance has been and continues to be developed for other areas that impact the biomedical research community on both a national and international basis including transportation, mandated contingency planning, euthanasia guidance, import and export requirements of biological materials, health monitoring requirements and the use of disinfectants.

Our Research Products business is subject to extensive and complex regulation by federal, state and local governments in the U.S. and in the other countries in which it operates. This business requires us to obtain many licenses, permits, authorizations, approvals, certificates and other types of governmental permissions and to comply with various regulations in every jurisdiction in which we operate. Federal, state and local regulations change often, and new regulations are frequently adopted. Changes in the regulations could require us to change the way in which we operate our business and the cost of compliance with new or changed regulations could be significant.

Our donor collection centers are registered with the FDA and the FDA periodically conducts inspections of those facilities and operations. At the conclusion of each inspection, the FDA provides us with a list of observations of regulatory issues discovered during the inspection that could result in additional regulatory action. Failure to comply with the regulations of the FDA could result in sanctions and/or remedies and have a material adverse effect on us.

The outsourcing trend in non-clinical (discovery and safety assessment) stages of drug discovery and development may decrease, which could impair our growth.

Over the past decade, pharmaceutical and biotechnology companies have generally increased their outsourcing of non-clinical research support activities, such as discovery and safety assessment. While many industry analysts expect the outsourcing trend to continue to increase for the next several years (although with different growth rates for different phases of drug discovery and development), decreases in such outsourcing may result in a diminished growth rate in the sales of any one or more of our service lines and may adversely affect our financial condition and results of operations. For additional discussion of the factors that we believe have recently influenced outsourcing demand from our clients, please see the section entitled "Our Strategy" included in our Form 10-K for the fiscal year ended December 28, 2019, filed with the Commission on February 11, 2020.

Changes in government regulation or in practices relating to the pharmaceutical or biotechnology industries, including potential healthcare reform, could decrease the need for the services we provide.

Governmental agencies throughout the world strictly regulate the drug development process. Our business involves helping our customers navigate these regulatory processes. Accordingly, many regulations, and often new regulations, are expected to result in higher regulatory standards and often additional revenues for companies that service these industries. However, some changes in regulations, such as a relaxation in regulatory requirements or the introduction of streamlined or expedited drug approval procedures, or an increase in regulatory requirements that we have difficulty satisfying or that make our services less competitive, could eliminate or substantially reduce the demand for our services.

Although we believe we are currently in compliance in all material respects with applicable national, regional and local laws, as well as other accepted guidance used by oversight bodies (including the USDA, the standards set by the International Air Transport Association, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, U.S. Fish and Wildlife Service, The Centers for Disease Control, the Department of Transportation, the Department of State, the office of Laboratory Animal Welfare of NIH, the Drug Enforcement Agency, as well as numerous other oversight agencies in the jurisdictions in which we operate), failure to comply could subject us to denial of the right to conduct business, fines, criminal penalties and other enforcement actions. In addition, if regulatory authorities were to mandate a significant reduction in safety assessment procedures that utilize laboratory animals (as has been advocated by certain groups), certain segments of our business could be materially adversely affected.

In March 2010, the U.S. Congress enacted healthcare reform legislation, the Patient Protection and Affordable Care Act (ACA), which includes provisions impacting drug manufacturers, such as (1) the expansion of access to health insurance coverage, (2) the expansion of the Medicaid program, (3) the enactment of an industry fee on pharmaceutical companies and (4) the imposition of an excise tax on the sale of medical devices. In addition, the Tax Cuts and Jobs Act, enacted in 2017, repeals the

ACA's individual health insurance mandate, which is considered a key component of the ACA. Since the ACA and its implementation continue to face challenges in Congress and federal courts, and from certain state governments, opposition advocacy groups and some small business organizations, the ultimate effects of this legislation are unclear on our business and are unable to predict what legislative proposals will be adopted in the future.

Implementation of healthcare reform legislation may have certain benefits, but also may contain costs that could limit the profits that can be made from the development of new drugs. This could adversely affect R&D expenditures by pharmaceutical and biotechnology companies, which could in turn decrease the business opportunities available to us both in the U.S. and abroad. In addition, new laws or regulations may create a risk of liability, increase our costs or limit our service offerings. Furthermore, if health insurers were to change their practices with respect to reimbursements for pharmaceutical products, our clients may spend less or reduce their growth in spending on R&D.

While it is not possible to predict whether and when any such changes will occur, changes at the local, state or federal level, or in laws and regulations in effect in foreign jurisdictions in which we operate or have business relationships, may significantly impact our domestic and foreign businesses and/or those of our clients. Furthermore, modifications to international trade policy, public company reporting requirements, environmental regulation and antitrust enforcement may have a materially adverse impact on us, our suppliers or our clients.

If we are not successful in selecting and integrating the businesses and technologies we acquire, or in managing our current and future divestitures, our business may be adversely impacted.

During the last two decades, we have steadily expanded our business through numerous acquisitions, including our recent acquisitions of Citoxlab and HemaCare. However, businesses and technologies may not be available on terms and conditions we find acceptable. We risk spending time and money investigating and negotiating with potential acquisition or alliance partners, but not completing transactions.

Acquisitions and alliances involve numerous risks which may include:

- difficulties in achieving business and financial success (including as a result of COVID-19 pandemic and the long-term economic impact of the pandemic);
- difficulties and expenses incurred in assimilating and integrating operations, services, products, information technology platforms, technologies or pre-existing relationships with our clients, distributors and suppliers;
- challenges with developing and operating new businesses, including those that are materially different from our existing businesses and that may require the development or acquisition of new internal capabilities and expertise;
- potential losses resulting from undiscovered liabilities of acquired companies that are not covered by the indemnification we may obtain from the seller or the insurance we acquire in connection with the transaction;
- loss of key employees;
- the presence or absence of adequate internal controls and/or significant fraud in the financial systems of acquired companies;
- diversion of management's attention from other business concerns;
- a more expansive regulatory environment;
- acquisitions could be dilutive to earnings, or in the event of acquisitions made through the issuance of our common stock to the shareholders of the acquired company, dilutive to the percentage of ownership of our existing shareholders;
- differences in foreign business practices, customs and importation regulations, language and other cultural barriers in connection with the acquisition of foreign companies;
- new technologies and products may be developed that cause businesses or assets we acquire to become less valuable; and
- disagreements or disputes with prior owners of an acquired business, technology, service or product that may result in litigation expenses and diversion of our management's attention.

If an acquired business, technology or an alliance does not meet our expectations, our results of operations may be adversely affected.

Some of the same risks exist when we decide to sell a business, site or product line. In addition, divestitures could involve additional risks, including the following:

- difficulties in the separation of operations, services, products, and personnel;

- diversion of management's attention from other business concerns; and
- the need to agree to retain or assume certain current or future liabilities in order to complete the divestiture.

We continually evaluate the performance and strategic fit of our businesses (including specific product lines and service offerings) to determine whether any divestitures are appropriate. Any divestitures may result in significant write-offs, including those related to goodwill and other intangible assets and which could have an adverse effect on our results of operations and financial condition. In addition, we may encounter difficulty in finding buyers or alternative exit strategies at acceptable prices and terms, and in a timely manner. We may not be successful in managing these or any other significant risks that we encounter in divesting a business, site or product line or service offering and, as a result, we may not achieve some or all of the expected benefits of the divestiture.

Upgrading and integrating our business systems could result in implementation issues and business disruptions.

In recent years, we have been updating and consolidating systems and automating processes in many parts of our business with a variety of systems, including in connection with the integration of acquired businesses. The expansion and ongoing implementation of the systems may occur at a future date based on value to the business. In general, the process of planning and preparing for these types of integrated, wide-scale implementations is extremely complex and we are required to address a number of challenges, including information security assessment and remediation, data conversion, network and system cutover and user training. Problems in any of these areas could cause operational problems during implementation including delayed shipments, missed sales, billing errors and accounting errors.

Impairment of goodwill or other intangible assets may adversely impact future results of operations.

We have intangible assets, including goodwill, on our balance sheet due to our acquisitions of businesses. The initial identification and valuation of these intangible assets and the determination of the estimated useful lives at the time of acquisition involve use of management judgments and estimates. These estimates are based on, among other factors, projections of cash flows that arise from identifiable intangible assets of acquired businesses and discount rates based on an analysis of our weighted average cost of capital, adjusted for specific risks associated with the assets. Disruptions in global financial markets and deterioration of economic conditions (including as a result of the COVID-19 pandemic and the impact of measures intended to reduce the spread of COVID-19) could, among other things, impact the discount rate. Other assumptions used in the valuations and actual cash flows arising from a particular intangible asset could vary from projected cash flows, which could imply different carrying values from those established at the dates of acquisition and which could result in impairment of such assets.

If the future growth and operating results of our business are not as strong as anticipated, overall macroeconomic or industry conditions deteriorate and/or our market capitalization declines, this could impact the assumptions used in establishing the carrying value of goodwill or other intangible assets. Should the COVID-19 pandemic have a prolonged impact on our industry, triggering events may arise resulting in intangible asset or goodwill impairments. To the extent goodwill or other intangible assets are impaired, their carrying value will be written down to their implied fair values and a charge will be made to our income from continuing operations. Such an impairment charge could materially and adversely affect our operating results. As of September 26, 2020, the carrying amount of goodwill and other intangibles on our consolidated balance sheet was $2.6 billion.

Our business is subject to changes in foreign currency exchange rates and other risks relating to operating internationally.

A significant part of our revenue is derived from operations outside the U.S. We expect that international revenue will continue to account for a significant percentage of our total revenue for the foreseeable future.

Changes in foreign currency exchange rates, could materially adversely impact our results. Foreign currencies we receive for sales and in which we record expenses outside the U.S. could be subject to unfavorable exchange rates with the U.S. dollar, resulting in a reduction in the amount of revenue and cash flow (and an increase in the amount of expenses) that we recognize and causing fluctuations in reported financial results. We also carry foreign currency exposure associated with differences between where we conduct business. For example, certain contracts are frequently denominated in currencies other than the currency in which we incur expenses related to those contracts. Where expenses are incurred in currencies other than those in which contracts are priced, fluctuations in the relative value of those currencies could have a material adverse effect on our results of operations.

Our exposure to currency exchange rate fluctuations results from the currency translation exposure associated with the preparation of our consolidated financial statements, as well as from the exposure associated with transactions of our subsidiaries that are denominated in a currency other than the respective subsidiary's functional currency. While our financial results are reported in U.S. Dollars, the financial statements of many of our subsidiaries outside the U.S. are prepared using the local currency as the functional currency. During consolidation, these results are translated into U.S. Dollars by applying appropriate exchange rates. As a result, fluctuations in the exchange rate of the U.S. Dollar relative to the local currencies in

which our foreign subsidiaries report could cause significant fluctuations in our reported results. Moreover, as exchange rates vary, revenue and other operating results may differ materially from our expectations. Adjustments resulting from financial statement translations are included as a separate component of shareholders' equity.

Other risks associated with our international business include:

- general economic and political conditions in the markets in which we operate, including implications of Brexit and the COVID-19 pandemic;
- potentially negative consequences from changes in U.S. and/or foreign tax laws, or interpretations thereof, notably tax regulations issued and to-be-issued with respect to U.S. Tax Reform and the EU Anti-Tax Avoidance Directives I and II;
- potential international conflicts, including terrorist acts;
- exchange controls, adverse tax consequences and legal restrictions on the repatriation of funds into the U.S.;
- difficulties and costs associated with staffing and managing foreign operations, including risks of COVID-19 pandemic related suspensions of operations, work stoppages and/or strikes, as well as violations of local laws or anti-bribery laws such as the U.S. Foreign Corrupt Practices Act (FCPA), the U.K. Bribery Act and the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions;
- unexpected changes in regulatory requirements (including as a result of the COVID-19 pandemic);
- the difficulties of compliance with a wide variety of foreign laws and regulations (including those relating to the COVID-19 pandemic);
- unfavorable labor regulations in foreign jurisdictions (including those relating to the COVID-19 pandemic);
- longer accounts receivable cycles in certain foreign countries (including as a result of the COVID-19 pandemic and the impact of measures intended to reduce the spread of COVID-19); and
- compliance with export controls, import requirements and other trade regulations, including those relating to certain products of which there is limited supply.

These risks, individually or in the aggregate, could have an adverse effect on our results of operations and financial condition. For example, as mentioned above, we are subject to compliance with the FCPA and similar anti-bribery laws, which generally prohibit companies and their third-party intermediaries from making improper payments to foreign government officials for the purpose of obtaining or retaining business. While our employees, distributors and agents are required to comply with these laws, we cannot be sure that our internal policies and procedures will always protect us from violations of these laws despite our commitment to legal compliance and corporate ethics. The occurrence or allegation of these types of risks may adversely affect our business, performance, prospects, value, financial condition and results of operations.

Our operations might be affected by the occurrence of a natural disaster or other catastrophic event, and have been (and will continue to be) affected by the COVID-19 pandemic.

We depend on our customers and facilities for the continued operation of our business. While we maintain disaster recovery plans, they might not adequately protect us. Despite any precautions we take for natural disasters or other catastrophic events, these events, including terrorist attack, a pandemic (including the COVID-19 pandemic), epidemic or outbreak of a disease, hurricanes, fire, floods and ice and snow storms, could result in damage to and closure of our or our customers' facilities or the infrastructure on which such facilities rely. As described herein, the COVID-19 pandemic has already, and will continue to, materially disrupt our operations, though the full extent of such impact remains uncertain. Such disruptions could include significant delays in the shipments of our products, reduce our capacity to provide services, eradicate unique manufacturing capabilities, result in our customers' inability to pay for our products or services and, ultimately, result in the loss of revenue and clients. Although we carry business interruption insurance policies and typically have provisions in our contracts that protect us in certain events, our coverage might not be adequate to compensate us for all losses that may occur. Any natural disaster or catastrophic event affecting us or our customers could have a significant negative impact on our operations and financial performance.

Failure to comply with U.S., state, local or international environmental, health and safety laws and regulations, including regulations issued by the Occupational Safety and Health Administration, Environmental Protection Agency, Nuclear Regulatory Agency and Department of Transportation, could result in fines and penalties and loss of licensure, and have a material adverse effect upon the Company's business.

We are subject to licensing and regulation under laws and regulations relating to the protection of the environment and human health and safety, including laws and regulations relating to the handling, transportation and disposal of medical specimens, infectious and hazardous waste and radioactive materials, as well as regulations relating to the safety and health of laboratory

employees and protecting employees from the spread of COVID-19. Failure to comply with these laws and regulations could subject us to denial of the right to conduct business, fines, criminal penalties and/or other enforcement actions that could have a material adverse effect on our business. In addition, compliance with future legislation could impose additional requirements on us that may be costly.

New technologies may be developed, validated and increasingly used in biomedical research, which could reduce demand for some of our products and services.

The scientific and research communities continue to explore methods to develop improved cellular and animal model systems that would increase the translation to human studies and vice-versa and possibly replace or supplement the use of traditional living animals as test platforms in biomedical research. Some companies have developed techniques in these areas that may have scientific merit to improve translation between species. In addition, technological improvements to existing or new processes, such as imaging and other translational biomarker technologies, could result in the refinement and utility for the number of animal research models necessary to improve the translation from non-clinical to clinical studies. There is an increasing push to focus on *in vitro* technologies such that employ human biospecimens, stem cell technologies and genome editing.

It is our strategy to explore these *in vitro* technologies to refine and potentially reduce the utilization of animal models as these new methods become validated. For example, our Discovery and Safety Assessment businesses have programs to evaluate the utility of induced pluripotent stems cells, advanced *in vitro* models, artificial intelligence and machine learning in discovery and preclinical development. Successful commercialization of alternatives to traditional research models may not be sufficient to fully offset reduced sales or profits from research models. In addition, alternative research methods could decrease the need for future research models, and we may not be able to develop new products effectively or in a timely manner to replace any lost sales. Lastly, other companies or entities may develop research models with characteristics different than the ones that we produce, and which may be viewed as more desirable by some of our clients.

Negative attention from special interest groups may impair our business.

The products and services that we provide our clients are essential to the drug discovery, development and manufacturing processes, and a significant amount are mandated by law. Notwithstanding, certain special interest groups categorically object to the use of animals for valid research purposes. Historically, our core research model activities with rats, mice and other rodents have not been the subject of significant animal rights media attention. However, research activities with animals have been the subject of adverse attention, including shareholder proposals and attempts to disrupt air carriers from transporting research models, impacting the industry. This has included periodic demonstrations near facilities operated by us and at our annual meetings, as well as shareholder proposals we received for some of our past Annual Meetings of Shareholders. Furthermore, the habitat of certain animals used for research purposes may be located in or near certain environmentally protected areas or conservation areas. Activities conducted by us or any of our agents within these areas may be legally challenged and result in similar negative attention and action from environmental protection activists, including advocacy for the expansion of environmental restrictions applicable to such areas. Any negative attention, threats, acts of vandalism or legal action directed against our animal research or procurement activities, or our third-party service providers, such as our airline carriers or suppliers, or that restrict our or their ability to access protected or conservation areas, could impair our ability to operate our business efficiently.

Our debt level could adversely affect our business and growth prospects.

As of September 26, 2020, we had $2.0 billion of debt and finance leases (debt). Our debt could have significant adverse effects on our business, including making it more difficult for us to obtain additional financing on favorable terms; requiring us to dedicate a substantial portion of our cash flows from operations to the repayment of debt and the interest on this debt; limiting our ability to capitalize on significant business opportunities; and making us more vulnerable to rising interest rates. For additional information regarding our debt, please see Note 9, “Long-Term Debt and Finance Lease Obligations”, included in the notes to our unaudited condensed consolidated financial statements included elsewhere in this Form 10-Q.

The interest rate on our credit facility (Credit Facility), which matures in fiscal year 2023, is linked to LIBOR. As of September 26, 2020, amounts outstanding on our Credit Facility were $160.9 million on our term loan and $0.8 billion on our revolving credit facility, for which there is an aggregate available borrowing capacity of $2.05 billion. In 2017, the Financial Conduct Authority (FCA) in the U.K. announced that it would phase out LIBOR as a benchmark by the end of 2021. It is unclear whether new methods of calculating LIBOR will be established such that it continues to exist after 2021, or whether different benchmark rates used to price indebtedness will develop. If LIBOR ceases to exist, the method and rate used to calculate our interest rates and/or payments on our debt in the future may result in interest rates and/or payments that are higher than, or that do not otherwise correlate over time with, the interest rates and/or payments that would have been applicable to our obligations if LIBOR was available in its current form, which could have a material adverse effect on our financial position, results of operations and liquidity. While we continue to take steps to mitigate the impact of the phase-out or replacement of LIBOR, such efforts may not prove successful. In addition, the overall financial market may be disrupted as a result of the

phase-out or replacement of LIBOR. Disruption in the financial market could also have a material adverse effect on our financial position, results of operations and liquidity.

Costs increasing more rapidly than market prices could reduce profitability.

The cost of collecting, processing and testing blood products has risen significantly in recent years and will likely continue to increase. These cost increases are related to new and improved testing procedures, increased regulatory requirements related to blood safety, and higher staff and supply costs related to collecting and processing blood products. Competition and fixed price contracts may limit our ability to maintain existing operating margins. Some competitors have greater resources than us to sustain periods of marginally profitable or unprofitable sales. Costs increasing more rapidly than market prices may reduce profitability and may have a material adverse impact on our business and results of operations.

The industries in which we operate are highly competitive.

The industries in which we operate are highly competitive. We compete for business with other CROs and blood product and therapeutic services companies, as well as internal discovery and development departments within our larger clients, who may have greater resources than ours. We also compete with universities and teaching hospitals for outsourced services. We compete on a variety of factors, including:

- reputation for on-time quality performance;
- reputation for regulatory compliance;
- expertise and experience in multiple specialized areas;
- scope and breadth of service and product offerings across the drug discovery and development spectrum;
- scope and breadth of service and product offerings across the manufacturing support spectrum;
- ability to provide flexible and customized solutions to support our clients' drug discovery, non-clinical development, and manufacturing support needs;
- broad geographic availability (with consistent quality);
- price/value, spend and flexibility;
- technological and scientific expertise and efficient drug development processes;
- quality of facilities;
- financial stability;
- size;
- ability to acquire, process, analyze and report data in an accurate manner; and
- accessibility of client data through secure portals.

If we do not compete successfully, our business will suffer. Increased competition might lead to price and other concessions that could adversely affect our operating results. The drug discovery and development services industry has continued to see a trend towards consolidation, particularly among the biotechnology companies, which are targets for each other and for large pharmaceutical companies. If this trend continues, it is likely to produce more competition among the larger companies and CROs generally, with respect to both clients and acquisition candidates. In addition, small, specialized entities considering entering the CRO industries will continue to find lower barriers to entry, and private equity firms may determine that there are opportunities to acquire and consolidate these companies, thus further increasing possible competition. More generally, our competitors or others might develop technologies, services or products that are more effective or commercially attractive than our current or future technologies, services or products, or that render our technologies, services or products less competitive or obsolete. If competitors introduce superior technologies, services or products and we cannot make enhancements to ours to remain competitive, our competitive position, and in turn our business, revenue and financial condition, would be materially and adversely affected. In the aggregate, these competitive pressures may affect the attractiveness of our technologies, services or products and could adversely affect our financial results.

Changes in U.S. and International Tax Law.

In 2017, significant U.S. tax law changes from the Tax Cuts and Jobs Act of 2017 (U.S. Tax Reform) went into effect and reduced the U.S. federal statutory tax rate, broadened the corporate tax base through the elimination or reduction of deductions, exclusions and credits, limited the ability of U.S. corporations to deduct interest expense and allowed for the repatriation of foreign earnings to the U.S. with a 100% federal dividends received deduction prospectively. In addition, U.S. Tax Reform required a one-time transitional tax on foreign cash equivalents and previously unremitted earnings. Several of the new

provisions enacted as part of U.S. Tax Reform still require clarification and guidance from the Internal Revenue Service (IRS) and Treasury Department. These or other changes in U.S. tax laws could impact our profits, effective tax rate and cash flows.

On March 27, 2020, the Coronavirus Aid, Relief and Economic Security Act ("CARES Act"), which is aimed at providing emergency assistance and health care for individuals, families, and businesses affected by the COVID-19 pandemic and generally supporting the U.S. economy went into effect. The CARES Act, among other things, includes provisions relating to refundable payroll tax credits, deferment of employer side social security payments, net operating loss carryback periods, alternative minimum tax credit refunds, modifications to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property. We are analyzing the different aspects of the CARES Act to determine the extent to which any specific provisions may impact us.

Additionally, the OECD, the European Commission (EC) and individual taxing jurisdictions have recently focused on issues related to the taxation of multinational corporations. The OECD released its comprehensive plan to create an agreed set of rules to address concerns regarding base erosion and profit shifting (BEPS). This initiative resulted in proposed and enacted changes to tax laws in various countries including France, Germany, Luxembourg, Netherlands and the U.K. In addition, the OECD and EC and individual countries are examining how taxing rights should be allocated among countries considering the digital economy. Future changes to tax laws or interpretation of tax laws resulting from enacted laws could increase our effective tax rate, which would affect our profitability.

We receive substantial tax credits in Canada, from both the Canadian federal and Quebec governments, France and the U.K. Any reduction in the availability or amount of these tax credits or increase to tax rates due to tax law changes or outcomes of tax controversies could have a material adverse effect on our profits, cash flows and effective tax rate.

Contract research services create a risk of liability.

As a CRO, we face a range of potential liabilities, which may include:

- risks associated with errors or omissions in reporting of study detail in non-clinical studies that may lead to inaccurate reports, which may undermine the usefulness of a study or data from the study, or which may potentially advance studies absent the necessary support or inhibit studies from proceeding to the next level of testing;
- risks associated with our possible failure to properly care for our clients' property, such as research models and samples, study compounds, records, work in progress, other archived materials or goods and materials in transit, while in our possession;
- risks that models in our breeding facilities or in facilities that we manage may be infected with diseases that may be harmful and even lethal to them or humans, despite preventive measures for the quarantine and handling of imported animals;
- risks that we may have errors and omissions and/or product liabilities related to our products designed to conduct lot release testing of medical devices, injectable drugs, food, beverages and home and beauty products (primarily through our Microbial Solutions business), or in the testing of biologics and other services performed by our Biologics business, which could result in us or our clients failing to identify unsafe or contaminated materials; and
- risk of transmitting dangerous infectious diseases, as a result of the failure of our screening and testing processes, or new pathogens that may be undetected by such processes.

While we attempt to mitigate these risks through a variety of methods, it is impossible to completely eradicate such risks. In our RMS business, we mitigate these risks to the best of our abilities through our regimen of animal testing, quarantine procedures and veterinary staff vigilance, through which we seek to control the exposure of animal related disease or infections. In our DSA and Manufacturing businesses, we attempt to reduce these risks by contractual risk transfer provisions entitling us to be indemnified by our clients and subject to a limitation of liability, by insurance maintained by our clients and/or by us and by various regulatory requirements we must follow in connection with our business.

Contractual risk transfer indemnifications generally do not protect us against liability arising from certain of our own actions, such as negligence or misconduct. We could be materially and adversely affected if we are required to pay damages or bear the costs of defending any claim that is outside any contractual indemnification provision, or if a party does not fulfill its indemnification obligations or the damage is beyond the scope or level of insurance coverage. We also often contractually indemnify our clients (subject to a limitation of liability), similar to the way they indemnify us, and we may be materially adversely affected if we have to fulfill our indemnity obligations. Furthermore, either we or a party required to indemnify us may not be able to maintain such insurance coverage (either at all or on terms acceptable to us).

The failure to successfully obtain, maintain and enforce intellectual property rights and defend against challenges to our intellectual property rights could adversely affect us.

Many of our services, products and processes rely on intellectual property. In some cases, that intellectual property is owned by another party and licensed to us, sometimes exclusively. To protect our intellectual property rights, we primarily rely upon trade secret law, confidentiality agreements and policies, invention assignments and other contractual arrangements, along with patent, copyright and trademark laws. Existing laws of certain countries outside of the United States in which we operate offer only limited protection, and these are subject to change at any time. In addition, the agreements upon which we rely to protect our intellectual property might be breached, or might not be fully enforceable. Our intellectual property rights might not prevent our competitors from independently developing intellectual property that is similar to or duplicative of ours. Also, enforcing our intellectual property rights might also require substantial time, money and oversight, and we might not be successful in enforcing our rights. If we are unable to obtain or maintain the proprietary rights to our intellectual property, if we are unable to prevent attempted infringement against our intellectual property, or if we are unable to defend against claims that we are infringing on another party's intellectual property, we could be adversely affected. These adverse effects could include us having to abandon, alter or delay the deployment of products, services or processes that rely on such intellectual property; having to procure and pay for licenses from the holders of intellectual property rights that we seek to use; and having to pay damages, fines, court costs and attorney's fees in connection with intellectual property litigation.

Further, the drug discovery and development industry has a history of patent and other intellectual property litigation and these lawsuits will likely continue. Legal proceedings relating to intellectual property are expensive, take significant time, and divert management's attention from other business concerns, whether we win or lose. If we do not prevail in an infringement lawsuit brought against us, we may have to pay substantial damages, including treble damages, and we could be required to stop the infringing activity or obtain a license to use technology on unfavorable terms.

We may not be able to successfully develop and market new services and products.

We may seek to develop and market new services and products that complement or expand our existing business or service offerings. We believe our ability to in-license new technologies from third parties will be critical to our ability to offer new products and services to our clients. Our ability to gain access to technologies that we need for new products and services depends, in part, on our ability to convince inventors and their agents or assignees that we can successfully commercialize their inventions. We cannot guarantee that we will be able to identify new technologies of interest to our clients. Even if we are able to identify new technologies of interest, we may not be able to negotiate license agreements on acceptable terms, or at all. If we are unable to develop new services and products and/or create demand for those newly developed services and products, our future business, results of operations, financial condition and cash flows could be adversely affected.

The decision by British voters to exit the European Union may adversely affect our business.

The first stage of the U.K.'s withdrawal from the European Union ("Brexit") took place on January 31, 2020, when the U.K. left the European Union and entered a transition phase. During the transition phase, the U.K. needs to negotiate the terms of its future trading and other relationships with the European Union. The scope and timing of these negotiations have created significant uncertainty and continue to do so. The U.K. Prime Minister has said that a trade agreement needs to be reached by December 31, 2020. There is currently no mechanism to automatically extend the transition period, but there is a possibility that the transition period may be extended by agreement between the U.K. and the European Union.

Given the continuing uncertainty concerning the terms of the U.K.'s future relationship with the European Union, including the possibility that there may still be no negotiated agreement despite the results of the December 2019 general election, we have formed a committee (comprised of senior managers across our business functions) to address key risks among four main themes: (1) trade and customs, (2) employees and immigration, (3) strategy and business planning and (4) legislative changes. That committee will continue until the situation is clarified.

In the absence of a trade deal in the short to medium term, the U.K.'s trade with the European Union and the rest of the world would be subject to tariffs and duties set by the World Trade Organization. Additionally, the movement of goods between the U.K. and the remaining member states of the European Union will be subject to additional inspections and documentation checks, leading to possible delays at ports of entry and departure. These changes to the trading relationship between the U.K and European Union would likely result in increased cost of goods imported into and exported from the U.K. and may decrease the profitability of our U.K. and other operations. Additional currency volatility could drive a weaker British pound, which increases the cost of goods imported into our U.K. operations and may decrease the profitability of our U.K. operations. A weaker British pound versus the U.S. dollar also causes local currency results of our U.K. operations to be translated into fewer U.S. dollars during a reporting period. Although we are undertaking efforts to mitigate those risks within our control, a failure to adequately mitigate such risks or other factors outside our control could adversely affect our business, business opportunities, results of operations, financial condition and cash flows.

We depend on key personnel and may not be able to retain these employees or recruit additional qualified personnel, which would harm our business.

Our success depends to a significant extent on the continued services of our senior management and other members of management. James C. Foster, our Chief Executive Officer and President since 1992 and Chairman since 2000, has held various positions with us for four decades. While we entered into an employment agreement with Mr. Foster in 2018, most members of our senior management do not have employment agreements. If Mr. Foster or other members of senior management do not continue in their present positions, our business may be adversely impacted.

Because of the specialized scientific nature of our business, we are highly dependent upon attracting and retaining qualified scientific, technical and managerial personnel. While we have a strong record of employee retention, and we strive to reduce the impact of the potential loss of existing employees by having an established organizational talent review process that identifies successors and potential talent needs, there is still significant competition for qualified personnel in the veterinary, pharmaceutical and biotechnology fields. Therefore, we may not be able to attract and retain the qualified personnel necessary for the development of our business. The loss of the services of existing personnel, as well as the failure to recruit additional key scientific, technical and managerial personnel in a timely manner, could harm our business.

Our quarterly operating results may vary, which could negatively affect the market price of our common stock.

Our results of operations in any quarter may vary from quarter to quarter and are influenced by the risks discussed above, as well as:

- changes in the general global economy;
- changes in the mix of our products and services;
- cyclical buying patterns of our clients;
- the financial performance of our venture capital investments; and
- the occasional extra week ("53rd week") that we recognize in a fiscal year (and fourth fiscal quarter thereof) due to our fiscal year ending on the last Saturday in December.

We believe that operating results for any particular quarter are not necessarily a meaningful indication of future results. Nonetheless, fluctuations in our quarterly operating results could negatively affect the market price of our common stock.

Since we do not expect to pay any cash dividends for the foreseeable future, our shareholders will benefit from an investment in our common stock only if it appreciates in value.

We have not declared or paid any cash dividends on our common stock, and do not anticipate that we will pay any dividends to holders of our common stock for the foreseeable future. Any payment of cash dividends will be at the discretion of our Board of Directors and will depend on our financial condition, capital requirements, legal requirements, earnings and other factors. Consequently, our shareholders should not rely on dividends to receive a return on their investment.

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

The following table provides information relating to the purchases of shares of our common stock during the three months ended September 26, 2020.

	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs
				(in thousands)
June 28, 2020 to July 25, 2020	255	$ 174.84	—	$ 129,105
July 26, 2020 to August 22, 2020	183	198.99	—	129,105
August 23, 2020 to September 26, 2020	150	210.41	—	129,105
Total	588		—	

Our Board of Directors have authorized up to an aggregate amount of $1.3 billion for our stock repurchase program. During the three months ended September 26, 2020, we did not repurchase any shares of common stock under our stock repurchase program or in open market trading. As of September 26, 2020, we had $129.1 million remaining on the authorized stock repurchase program.

Additionally, our stock-based compensation plans permit the netting of common stock upon vesting of restricted stock, restricted stock units, and performance share units in order to satisfy individual statutory tax withholding requirements.

Item 6. Exhibits

(a) Exhibits	Description of Exhibits
10.1*	Agreement between David Smith and Charles River Laboratories, Inc. effective October 26, 2020
31.1+	Rule 13a-14(a)/15d-14(a) Certification of Chief Executive Officer
31.2+	Rule 13a-14(a)/15d-14(a) Certification of Chief Financial Officer
32.1+	Certification of the Principal Executive Officer and the Principal Financial Officer required by Rule 13a-14(a) of 15d-14(a) of the Exchange Act
101.INS	eXtensible Business Reporting Language (XBRL) Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Calculation Linkbase Document
101.DEF	XBRL Taxonomy Definition Linkbase Document
101.LAB	XBRL Taxonomy Label Linkbase Document
101.PRE	XBRL Taxonomy Presentation Linkbase Document

* Management contract or compensatory plan, contract or arrangement.
+ Furnished herein.

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, thereunto duly authorized.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.

October 29, 2020 /s/ JAMES C. FOSTER

James C. Foster
Chairman, President and Chief Executive Officer

October 29, 2020 /s/ DAVID R. SMITH

David R. Smith
Corporate Executive Vice President and Chief Financial Officer

Exhibit 10.1

PERSONAL AND CONFIDENTIAL

October 26, 2020

David Smith
c/o Charles River Laboratories, Inc.
251 Ballardvale Street
Wilmington, MA 01887

David:

The purpose of this letter is to summarize the transfer of your employment from Wilmington, MA, U.S. (your "origin location") to Cambridge, England, in the Charles River Discovery Research Services UK LTD entity (your "destination location"), effective as of December 1, 2020.

As you will be employed by a UK legal entity, the specific terms of your employment will be outlined in a standard UK employment contract commensurate with an employee of your role and status within the Company. A draft of this contract is being prepared and will be shared with you in the coming weeks.

Your position will remain as Corporate Executive Vice President & Chief Financial Officer and you will continue to report to me. Your current remuneration and benefits will remain unchanged, except as described below:

- Annual Salary - At the commencement of your transfer, your base salary will remain the same ($577,076 USD) with adjustment to local currency (£452,428 GBP), as of the effective date. This is based on a trailing 12 month average exchange rate. Your regular compensation (including base salary and variable compensation) will no longer be administered and adjusted in accordance with the practices and guidelines in your origin location, but instead will be subject to the practices and guidelines in effect in your destination location. You will continue to be eligible for merit increases, subject to annual approval by the Compensation Committee of the Charles River Board of Directors. Please note, any salary increase is subject to annual approval and/or modification by the Compensation Committee.

- Bonus: Your targeted bonus (EICP) will continue as 70% of your gross annual base salary. Your actual payout will vary depending on performance against your respective bonus metrics and the rules of the EICP in force from time to time, which are subject to approval by the Compensation Committee. Please note, bonus plan design and eligibility are subject to annual approval and/or modification by the Compensation Committee.

- Equity: Your regular compensation package will continue to include eligibility for annual equity (stock) awards. Beginning in 2021, any equity grant value would be planned in GBP and approved by the Compensation Committee, and then converted to $USD, using the exchange rate on the date of the grant. The number of units you receive will continue to be based on your approved grant value and the stock price on the date of the grant.

- Benefits: With your transfer to Cambridge, England you will become eligible for their UK Health, Wellness and Leave Benefits under the Charles River Discovery Research Services UK LTD entity, and will no longer be eligible for the US Benefits after December 31, 2020. However, we will provide you with the following additional benefit items:
    - Deferred Compensation Match – one time lump sum for 2020: You will receive a one-time cash lump sum in the amount of $95,246 (gross) USD to compensate you for your 2020 U.S. Deferred Compensation Plan company match. The lump sum will be paid to you in US Dollars from US Payroll in January 2021.
    - Lincoln Life Insurance: We will continue your Lincoln Life Insurance coverage of $1.6M USD, which is in addition to the standard Life Insurance you will be eligible to receive under the life insurance benefit in Cambridge, England.

- MGH Executive Registry: We will continue your eligibility for the Massachusetts General Hospital (MGH) Executive Registry, which assists in coordinating immediate round the clock routine and emergency access to physicians and specialists at Massachusetts General Hospital.

- Tax Service Assistance: The Company will provide you with origin and destination location tax preparation assistance for taxes to be filed through and including the 2025 tax year/filing (i.e., you are entitled to receive tax preparation services in 2026, as needed, for your 2025 tax filing). You are required to use Charles River Laboratories' designated tax services provider to receive Company support for tax equalization services. Unless otherwise noted, any origin/destination location tax liabilities are your personal responsibility.

It is also your responsibility to provide accurate and timely information, as requested by the Company's designated professional tax advisors and any relevant taxing authority, in order to enable tax compliance for you and the Company during the year of transfer. Interest or penalties arising from a failure to cooperate in this process will be payable by you individually and subject to deduction from other payments and benefits you are entitled to per this letter. After the year of your transfer, you will no longer receive support from the Company with respect to tax preparation, and all origin and destination location taxes/interest/penalties will continue to be your sole responsibility (as appropriate).

- Visa Services: The Company's outside immigration counsel will provide support for you to obtain the appropriate documents that permit you to work in the destination location prior to your date of transfer. It is your obligation to comply with all requirements and provide timely responses to requests for information and/or documentation. Costs related to visa and immigration support for your transfer to the destination location will be borne by the Company.

Please note, some of the payments and benefits mentioned in this letter are taxable, and this will be your responsibility.

Please acknowledge receipt of this letter by return email.

Sincerely,

Jim Foster
Chairman President & CEO

Acknowledge receipt of Global Transfer Letter:

/s/David R. Smith 26-10-2020
David Smith Date

Exhibit 31.1

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002
AND RULE 13a-14(a)/15d-14(a) OF THE EXCHANGE ACT OF 1934

I, James C. Foster, Chairman, President and Chief Executive Officer of Charles River Laboratories International, Inc. (the registrant) certify that:

1. I have reviewed this quarterly report on Form 10-Q for the quarter ended September 26, 2020 of the registrant;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and

   d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ James C. Foster

James C. Foster
Chairman, President and Chief Executive Officer
Charles River Laboratories International, Inc.

October 29, 2020

Exhibit 31.2

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002
AND RULE 13a-14(a)/15d-14(a) OF THE EXCHANGE ACT OF 1934

I, David R. Smith, Corporate Executive Vice President and Chief Financial Officer of Charles River Laboratories International, Inc. (the registrant) certify that:

1. I have reviewed this quarterly report on Form 10-Q for the quarter ended September 26, 2020 of the registrant;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and

    d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ David R. Smith

David R. Smith
Corporate Executive Vice President and Chief Financial Officer
Charles River Laboratories International, Inc.

October 29, 2020

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report on Form 10-Q for the quarter ended September 26, 2020 of Charles River Laboratories International, Inc. (the "Company") as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, James C. Foster, Chairman, President and Chief Executive Officer of the Company, and David R. Smith, Corporate Executive Vice President and Chief Financial Officer of the Company, each hereby certifies, to the best of his knowledge and pursuant to 18 U.S.C. Section 1350, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act"); and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ James C. Foster

James C. Foster
Chairman, President and Chief Executive Officer
Charles River Laboratories International, Inc.

October 29, 2020

/s/ David R. Smith

David R. Smith
Corporate Executive Vice President and Chief Financial Officer
Charles River Laboratories International, Inc.

October 29, 2020

This certification shall not be deemed "filed" for any purpose, nor shall it be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Exchange Act.