UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

FOR THE QUARTERLY PERIOD ENDED June 29, 2019

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 July 26, 2019, there were 48,807,170 shares of the Registrant’s common stock outstanding.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.

QUARTERLY REPORT ON FORM 10-Q
FOR THE QUARTERLY PERIOD ENDED JUNE 29, 2019

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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. These statements also include statements regarding risks and uncertainties associated with the unauthorized access into our information systems reported on April 30, 2019, including the timing and effectiveness of adding enforced security features and monitoring procedures, and the potential revenue and financial impact related to the incident.

For example, we may use forward-looking statements when addressing topics such as: goodwill and asset impairments still under review; 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; 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 investment in, and 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 Citoxlab; 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.

You should not rely on forward-looking statements because they 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 29, 2018, under the sections entitled “Our Strategy,” “Risk Factors,” “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		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
Service revenue	$ 505,880	$ 438,456	$ 956,822	$ 783,910
Product revenue	151,688	146,845	305,315	295,361
Total revenue	657,568	585,301	1,262,137	1,079,271
Costs and expenses:				
Cost of services provided (excluding amortization of intangible assets)	345,369	302,304	662,169	546,112
Cost of products sold (excluding amortization of intangible assets)	74,095	67,016	150,087	135,709
Selling, general and administrative	135,941	120,531	258,515	223,903
Amortization of intangible assets	22,395	18,740	41,806	29,008
Operating income	79,768	76,710	149,560	144,539
Other income (expense):				
Interest income	274	182	453	464
Interest expense	(20,835)	(18,643)	(30,822)	(29,834)
Other income (expense), net	(213)	12,039	6,093	18,159
Income from continuing operations, before income taxes	58,994	70,288	125,284	133,328
Provision for income taxes	14,685	17,438	25,287	27,210
Income from continuing operations, net of income taxes	44,309	52,850	99,997	106,118
Income from discontinued operations, net of income taxes	—	1,529	—	1,506
Net income	44,309	54,379	99,997	107,624
Less: Net income attributable to noncontrolling interests	581	670	1,136	1,284
Net income attributable to common shareholders	$ 43,728	$ 53,709	$ 98,861	$ 106,340
Earnings per common share				
Basic:				
Continuing operations attributable to common shareholders	$ 0.90	$ 1.08	$ 2.03	$ 2.18
Discontinued operations	$ —	$ 0.03	$ —	$ 0.03
Net income attributable to common shareholders	$ 0.90	$ 1.11	$ 2.03	$ 2.22
Diluted:				
Continuing operations attributable to common shareholders	$ 0.88	$ 1.06	$ 1.99	$ 2.14
Discontinued operations	$ —	$ 0.03	$ —	$ 0.03
Net income attributable to common shareholders	$ 0.88	$ 1.10	$ 1.99	$ 2.17
Weighted-average number of common shares outstanding:				
Basic	48,772	48,198	48,615	47,992
Diluted	49,662	49,043	49,599	48,966

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		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
Net income	$ 44,309	$ 54,379	$ 99,997	$ 107,624
Other comprehensive income (loss):				
Foreign currency translation adjustment and other	(3,071)	(33,150)	6,814	(7,719)
Amortization of net loss and prior service benefit included in net periodic cost for pension and other post-retirement benefit plans	374	790	748	1,249
Comprehensive income, before income taxes	41,612	22,019	107,559	101,154
Less: Income tax expense (benefit) related to items of other comprehensive income	1,232	(2,320)	1,130	(598)
Comprehensive income, net of income taxes	40,380	24,339	106,429	101,752
Less: Comprehensive income (loss) related to noncontrolling interests, net of income taxes	88	(218)	1,101	960
Comprehensive income attributable to common shareholders, net of income taxes	$ 40,292	$ 24,557	$ 105,328	$ 100,792

See Notes to Unaudited Condensed Consolidated Financial Statements.

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

	June 29, 2019	December 29, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 200,589	$ 195,442
Trade receivables, net	545,148	472,248
Inventories	134,925	127,892
Prepaid assets	60,485	53,447
Other current assets	68,911	48,807
Total current assets	1,010,058	897,836
Property, plant and equipment, net	1,006,330	932,877
Operating lease right-of-use assets, net	131,880	—
Goodwill	1,526,682	1,247,133
Client relationships, net	644,192	537,945
Other intangible assets, net	90,509	72,943
Deferred tax assets	33,483	23,386
Other assets	182,350	143,759
Total assets	$ 4,625,484	$ 3,855,879
Liabilities, Redeemable Noncontrolling Interests and Equity		
Current liabilities:		
Current portion of long-term debt and finance leases	$ 33,955	$ 31,416
Accounts payable	99,381	66,250
Accrued compensation	129,844	137,212
Deferred revenue	167,530	145,139
Accrued liabilities	122,893	106,925
Other current liabilities	81,995	71,280
Total current liabilities	635,598	558,222
Long-term debt, net and finance leases	2,040,388	1,636,598
Operating lease right-of-use liabilities	108,311	—
Deferred tax liabilities	181,755	143,635
Other long-term liabilities	180,589	179,121
Total liabilities	3,146,641	2,517,576
Commitments and contingencies (Note 17)		
Redeemable noncontrolling interests	20,479	18,525
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; 48,937 shares issued and 48,799 shares outstanding as of June 29, 2019, and 48,210 shares issued and 48,209 shares outstanding as of December 29, 2018	489	482
Additional paid-in capital	1,497,794	1,447,512
Retained earnings	140,957	42,096
Treasury stock, at cost, 138 and 1 shares, as of June 29, 2019 and December 29, 2018, respectively	(17,938)	(55)
Accumulated other comprehensive loss	(166,236)	(172,703)
Total equity attributable to common shareholders	1,455,066	1,317,332
Noncontrolling interest	3,298	2,446
Total equity	1,458,364	1,319,778
Total liabilities, redeemable noncontrolling interests, and equity	$ 4,625,484	$ 3,855,879

See Notes to Unaudited Condensed Consolidated Financial Statements.

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

	Six Months Ended	
	June 29, 2019	**June 30, 2018**
Cash flows relating to operating activities		
Net income	$ 99,997	$ 107,624
Less: Income from discontinued operations, net of income taxes	—	1,506
Income from continuing operations, net of income taxes	99,997	106,118
Adjustments to reconcile net income from continuing operations to net cash provided by operating activities:		
Depreciation and amortization	94,504	76,606
Stock-based compensation	29,404	24,088
Deferred income taxes	(1,347)	(6,212)
Gain on venture capital investments	(6,321)	(17,385)
Other, net	3,312	6,961
Changes in assets and liabilities:		
Trade receivables, net	(36,538)	(19,375)
Inventories	(2,565)	(7,444)
Accounts payable	18,195	(12,608)
Accrued compensation	(25,421)	(2,417)
Deferred revenue	(241)	(4,331)
Customer contract deposits	(10,918)	37,543
Other assets and liabilities, net	(17,649)	2,379
Net cash provided by operating activities	144,412	183,923
Cash flows relating to investing activities		
Acquisition of businesses and assets, net of cash acquired	(492,381)	(821,350)
Capital expenditures	(41,512)	(48,939)
Purchases of investments and contributions to venture capital investments	(14,753)	(11,097)
Proceeds from sale of investments	15	30,406
Other, net	(607)	(56)
Net cash used in investing activities	(549,238)	(851,036)
Cash flows relating to financing activities		
Proceeds from long-term debt and revolving credit facility	1,485,731	2,392,568
Proceeds from exercises of stock options	23,853	24,196
Payments on long-term debt, revolving credit facility, and finance lease obligations	(1,076,761)	(1,680,207)
Payment of debt financing costs	—	(18,314)
Purchase of treasury stock	(17,883)	(13,668)
Other, net	(10,516)	—
Net cash provided by financing activities	404,424	704,575
Discontinued operations		
Net cash used in operating activities from discontinued operations	—	(3,731)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	5,670	(4,697)
Net change in cash, cash equivalents, and restricted cash	5,268	29,034
Cash, cash equivalents, and restricted cash, beginning of period	197,318	166,331
Cash, cash equivalents, and restricted cash, end of period	$ 202,586	$ 195,365

	Six Months Ended	
	June 29, 2019	June 30, 2018
Supplemental cash flow information:		
Cash and cash equivalents	$ 200,589	$ 192,300
Restricted cash included in Other current assets	498	593
Restricted cash included in Other assets	1,499	2,472
Cash, cash equivalents, and restricted cash, end of period	$ 202,586	$ 195,365

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 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**

	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 30, 2017	87,495	$ 875	$ 2,560,192	$ 288,658	$ (144,731)	40,093	$ (1,659,914)	$ 1,045,080	$ 2,327	$ 1,047,407
Net income	—	—	—	52,631	—	—	—	52,631	464	53,095
Other comprehensive income	—	—	—	—	23,604	—	—	23,604		23,604
Reclassification due to adoption of ASU 2018-02 Reclass	—	—	—	3,330	(3,330)	—	—	—	—	—
Adjustment due to adoption of ASU 2016-01	—	—	—	1,424	—	—	—	1,424	—	1,424
Issuance of stock under employee compensation plans	630	6	20,088	—	—	—	—	20,094	—	20,094
Acquisition of treasury shares	—	—	—	—	—	126	(13,549)	(13,549)	—	(13,549)
Stock-based compensation			10,541	—	—	—	—	10,541	—	10,541
March 31, 2018	**88,125**	**881**	**2,590,821**	**346,043**	**(124,457)**	**40,219**	**(1,673,463)**	**1,139,825**	**2,791**	**1,142,616**
Net income	—	—	—	53,709	—	—	—	53,709	448	54,157
Other comprehensive income	—	—	—	—	(29,151)	—	—	(29,151)	—	(29,151)
Issuance of stock under employee compensation plans	96	1	4,154	—	—	—	—	4,155	—	4,155
Acquisition of treasury shares	—	—	—	—	—	1	(119)	(119)	—	(119)
Stock-based compensation			13,547	—	—	—	—	13,547	—	13,547
June 30, 2018	**88,221**	**$ 882**	**$ 2,608,522**	**$ 399,752**	**$ (153,608)**	**40,220**	**$ (1,673,582)**	**$ 1,181,966**	**$ 3,239**	**$ 1,185,205**

Balances may differ compared to prior condensed consolidated balance sheets due to rounding.

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 2018. 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.

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.

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 2018 as well as Note 16, "Leases" in this Quarterly Report on Form 10-Q.

Newly Adopted Accounting Pronouncements

In June 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2018-07, "Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting." ASU 2018-07 aligns the accounting for share-based payment awards issued to employees and nonemployees as well as improves financial reporting for share-based payments to nonemployees. This standard became effective for the Company in the three months ended March 30, 2019 and did not have a material impact on the consolidated financial statements and related disclosures.

In August 2017, the FASB issued ASU 2017-12, "Derivatives and Hedging (Topic 815) Targeted Improvements to Accounting for Hedging Activities." ASU 2017-12 refines and expands hedge accounting for both financial and commodity risks. It also creates more transparency around how economic results are presented, both on the face of the financial statements and in the disclosures. In addition, this ASU makes certain targeted improvements to simplify the application of hedge accounting guidance. This standard became effective for the Company in the three months ended March 30, 2019 and did not have a material impact on the consolidated financial statements and related disclosures.

In February 2016, the FASB issued ASU 2016-02, "Leases." The standard, including subsequently issued amendments, collectively referred to as Accounting Standards Codification (ASC) 842, "Leases", established the principles that lessees and lessors will apply to report useful information to users of financial statements about the amount, timing and uncertainty of cash flows arising from a lease. The Company adopted this standard using the modified retrospective transition approach as applied to leases existing as of or entered into after the adoption date (December 30, 2018) in the three months ended March 30, 2019. See Note 16, "Leases" for a discussion of the Company's adoption of this standard and its impact on the consolidated financial statements and related disclosures.

Newly Issued Accounting Pronouncements

In August 2018, the 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). The ASU is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years and will be applied either retrospectively or prospectively. Early adoption is permitted. The Company is still evaluating the impact this standard will have on its 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. The ASU is effective for fiscal years ending after December 15, 2020 and will be applied on a retrospective basis to all periods presented. Early adoption is permitted. The Company is still evaluating the impact this standard will have on its 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. The ASU is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years and will be applied on a retrospective basis to all periods presented. Early adoption is permitted. The Company is still evaluating the impact this standard will have on its 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 is effective for annual or interim goodwill impairment tests in fiscal years beginning after December 15, 2019, and will be applied on a prospective basis. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The adoption of this standard is not expected to have a material impact on the Company's 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 accounts receivable, 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 ASU is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years, and requires the modified retrospective approach. Early adoption is permitted. The Company is still evaluating the impact this standard will have on its consolidated financial statements and related disclosures.

2. BUSINESS ACQUISITIONS

Citoxlab

On April 29, 2019, the Company acquired Citoxlab, a non-clinical contract research organization (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 preliminary purchase price for Citoxlab was $528.1 million in cash, subject to certain post-closing adjustments that may change the purchase price. The acquisition was funded through a combination of cash on hand and proceeds from the Company's $2.3B 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 DSA reportable segment.

The preliminary purchase allocation of $491.7 million, net of $36.4 million of cash acquired was as follows:

	April 29, 2019
	(in thousands)
Trade receivables (contractual amount of $35,547)	$ 35,547
Inventories	5,282
Other current assets (excluding cash)	14,687
Property, plant and equipment	93,326
Goodwill	275,076
Definite-lived intangible assets	161,100
Other long-term assets	20,465
Deferred revenue	(14,647)
Current liabilities	(46,118)
Deferred tax liabilities	(28,467)
Other long-term liabilities	(20,487)
Redeemable noncontrolling interest	(4,035)
Total purchase price allocation	$ 491,729

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	$ 133,500	13
Developed technology	19,900	3
Backlog	7,700	1
Total definite-lived intangible assets	$ 161,100	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 $12.1 million and $17.2 million for the three and six months ended June 29, 2019, respectively, which were primarily included in Selling, general and administrative expenses within the unaudited condensed consolidated statements of income.

Beginning on April 29, 2019, Citoxlab has been included in the operating results of the Company. Citoxlab revenue and net operating income for the three months ended June 29, 2019 was $30.9 million and $2.0 million, respectively.

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 six months ended June 29, 2019, these adjustments included additional amortization of intangible assets and depreciation of fixed assets of $4.0 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. For the six months ended June 30, 2018, these adjustments included additional amortization of intangible assets and depreciation of fixed assets of $5.1 million, additional interest expense on borrowings of $2.0 million, elimination of intercompany activity and other one-time costs, and the tax impacts of these adjustments.

	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
	(in thousands)			
Revenue	$ 673,645	$ 630,411	$ 1,325,483	$ 1,168,651
Net income attributable to common shareholders	53,625	54,990	114,653	107,859

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.

MPI Research

On April 3, 2018, the Company acquired MPI Research, a non-clinical CRO providing comprehensive testing services to biopharmaceutical and medical device companies worldwide. The acquisition enhances the Company's position as a leading global early-stage CRO by strengthening its ability to partner with clients across the drug discovery and development continuum. The purchase price for MPI Research was $829.7 million in cash. The acquisition was funded by borrowings on the $2.3B Credit Facility as well as the issuance of the Company's Senior Notes. See Note 9, "Long-Term Debt and Finance Lease Obligations." This business is reported as part of the Company's DSA reportable segment.

The purchase allocation of $800.8 million, net of $27.7 million of cash acquired and a final net working capital adjustment of $1.2 million, was as follows:

	April 3, 2018
	(in thousands)
Trade receivables (contractual amount of $35,073)	$ 35,073
Inventories	4,463
Other current assets (excluding cash)	5,893
Property, plant and equipment	128,403
Goodwill	441,656
Definite-lived intangible assets	309,200
Other long-term assets	1,081
Deferred revenue	(23,926)
Current liabilities	(32,885)
Deferred tax liabilities	(65,945)
Other long-term liabilities	(2,213)
Total purchase price allocation	$ 800,800

From the date of the acquisition through March 30, 2019, 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	$ 264,900	13
Developed technology	23,400	3
Backlog	20,900	1
Total definite-lived intangible assets	$ 309,200	12

The goodwill resulting from the transaction, $4.1 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 MPI Research and the assembled workforce of the acquired business.

No significant integration costs were incurred in connection with the acquisition for the three and six months ended June 29, 2019. The Company incurred transaction and integration costs in connection with the acquisition of $11.7 million and $14.5 million for the three and six months ended June 30, 2018, 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 MPI Research acquisition had occurred as of the beginning of the period immediately preceding the period of acquisition, which is January 1, 2017, after giving effect to certain adjustments. For the six months ended June 30, 2018, these adjustments included additional amortization of intangible assets and depreciation of fixed assets of $9.4 million, additional interest expense on borrowings of $2.8 million, elimination of intercompany activity and other one-time costs, and the tax impacts of these adjustments.

	June 30, 2018	
	Three Months Ended	Six Months Ended
	(in thousands)	
Revenue	$ 585,297	$ 1,141,388
Net income attributable to common shareholders	60,161	109,575

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.

KWS BioTest Limited

On January 11, 2018, the Company acquired KWS BioTest Limited (KWS BioTest), a CRO specializing in *in vitro* and *in vivo* discovery testing services for immuno-oncology, inflammatory and infectious diseases. The acquisition enhances the Company’s discovery expertise, with complementary offerings that provide the Company’s customers with additional tools in the active therapeutic research areas of oncology and immunology. The purchase price for KWS BioTest was $20.3 million in cash and was funded by the Company’s various borrowings. In addition to the initial purchase price, the transaction includes aggregate, undiscounted contingent payments of up to £3.0 million based on future performance. During the three months ended September 29, 2018, the terms of these contingent payments were amended, resulting in a fixed payment of £2.0 million, or $2.6 million, which was paid during the three months ended March 30, 2019. The KWS BioTest business is reported as part of the Company’s DSA reportable segment.

The purchase price allocation of $21.5 million, net of $1.0 million of cash acquired and a final net working capital adjustment of $0.4 million, was as follows:

	January 11, 2018
	(in thousands)
Trade receivables (contractual amount of $1,309)	$ 1,309
Other current assets (excluding cash)	99
Property, plant and equipment	1,136
Definite-lived intangible assets - client relationships	3,647
Goodwill	17,660
Current liabilities	(1,575)
Deferred revenue	(151)
Long-term liabilities	(596)
Total purchase price allocation	$ 21,529

From the date of the acquisition through December 29, 2018, 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 only definite-lived intangible asset relates to client relationships, which will be amortized over a weighted average life of 12 years.

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

No significant integration costs were incurred in connection with the acquisition for the three and six months ended June 29, 2019. No significant integration costs were incurred in connection with the acquisition for the three months ended June 30, 2018 and $0.5 million of integration costs were incurred for the six months ended June 30, 2018, which were included in Selling, general and administrative expenses within the unaudited condensed consolidated statements of income.

Pro forma financial information as well as actual revenue and operating income have not been included because KWS BioTest's financial results are not significant when compared to the Company's consolidated financial results.

3. REVENUE FROM CONTRACTS WITH CUSTOMERS

Revenue Recognition

Revenue is recognized when, or as, obligations under the terms of a contract are satisfied, which occurs when control of the promised products or services is transferred to customers. Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring products or services to a customer ("transaction price").

To the extent the transaction price includes variable consideration, the Company estimates the amount of variable consideration that should be included in the transaction price utilizing the amount to which the Company expects to be entitled. Variable consideration is included in the transaction price if, in the Company's judgment, it is probable that a significant future reversal of cumulative revenue under the contract will not occur. Estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of the Company's anticipated performance and all information (historical, current and forecasted) that is reasonably available. Sales, value add, and other taxes collected on behalf of third parties are excluded from revenue.

When determining the transaction price of a contract, an adjustment is made if payment from a customer occurs either significantly before or significantly after performance, resulting in a significant financing component. Generally, the Company does not extend payment terms beyond one year. Applying the practical expedient, the Company does not assess whether a significant financing component exists if the period between when the Company performs its obligations under the contract and when the customer pays is one year or less. None of the Company's contracts contained a significant financing component for the six months ended June 29, 2019 and June 30, 2018.

Contracts with customers may contain multiple performance obligations. For such arrangements, the transaction price is allocated to each performance obligation based on the estimated relative standalone selling prices of the promised products or services underlying each performance obligation. The Company determines standalone selling prices based on the price at which the performance obligation is sold separately. If the standalone selling price is not observable through past transactions, the Company estimates the standalone selling price taking into account available information such as market conditions and internally approved pricing guidelines related to the performance obligations.

Contracts are often modified to account for changes in contract specifications and requirements. Contract modifications exist when the modification either creates new, or changes existing, enforceable rights and obligations. Generally, when contract modifications create new performance obligations, the modification is considered to be a separate contract and revenue is recognized prospectively. When contract modifications change existing performance obligations, the existing transaction price and measure of progress for the performance obligation to which it relates is recognized as an adjustment to revenue (either as an increase in or a reduction of revenue) on a cumulative catch-up basis.

Product revenue is generally recognized when the customer obtains control of the Company's product, which occurs at a point in time, and may be upon shipment or upon delivery based on the contractual shipping terms of a contract. Service revenue is generally recognized over time as the services are delivered to the customer based on the extent of progress towards completion of the performance obligation. The selection of the method to measure progress towards completion requires judgment and is based on the nature of the products or services to be provided. Depending on which better depicts the transfer of value to the customer, the Company generally measures its progress using either cost-to-cost (input method) or right-to-invoice (output method). The Company uses the cost-to-cost measure of progress when it best depicts the transfer of value to the customer which occurs as the Company incurs costs on its contract, generally related to fixed fee service contracts. Under the cost-to-cost measure of progress, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. The costs calculation includes variables such as labor hours, allocation of overhead costs, research model costs, and subcontractor costs. Revenue is recorded proportionally as costs are incurred. The right-to-invoice measure of progress is generally related to rate per unit contracts, as the extent of progress towards completion is measured based on discrete service or time-based increments, such as samples tested or labor hours incurred. Revenue is recorded in the amount invoiced since that amount corresponds directly to the value of the Company's performance to date.

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		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
	(in thousands)			
Major Products/Service Lines:				
RMS	$ 136,054	$ 130,426	$ 273,226	$ 264,384
DSA	405,517	346,416	759,714	606,408
Manufacturing	115,997	108,459	229,197	208,479
Total revenue	$ 657,568	$ 585,301	$ 1,262,137	$ 1,079,271
Timing of Revenue Recognition:				
RMS				
Services and products transferred over time	$ 57,321	$ 48,804	$ 112,134	$ 97,530
Services and products transferred at a point in time	78,733	81,622	161,092	166,854
DSA				
Services and products transferred over time	405,351	346,226	759,429	605,970
Services and products transferred at a point in time	166	190	285	438
Manufacturing				
Services and products transferred over time	34,470	32,987	66,366	61,558
Services and products transferred at a point in time	81,527	75,472	162,831	146,921
Total revenue	$ 657,568	$ 585,301	$ 1,262,137	$ 1,079,271

RMS

The RMS business generates revenue through the commercial production and sale of research models 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 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 June 29, 2019. 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 following table includes estimated revenue expected to be recognized in the future related to performance obligations that are unsatisfied (or partially satisfied) as of June 29, 2019:

	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	$ 151,851	$ 109,835	$ 5,698	$ 487	$ 267,871
Manufacturing	10,057	16,279	50	26	26,412
Total	$ 161,908	$ 126,114	$ 5,748	$ 513	$ 294,283

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), contract liabilities (current and non-current deferred revenue), and customer 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:

	June 29, 2019	December 29, 2018
	(in thousands)	
Balances from contracts with customers:		
Client receivables	$ 422,031	$ 370,131
Contract assets (unbilled revenue)	126,306	105,216
Contract liabilities (current and long-term deferred revenue)	195,274	179,559
Contract liabilities (customer contract deposits)	32,923	38,245

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. As of June 29, 2019, the Company excluded approximately $27 million of unpaid advanced client billings from both client receivables and deferred revenue and approximately $33 million of advanced client payments have been presented as customer contract deposits within other current liabilities in the accompanying unaudited condensed consolidated balance sheets.

Other changes in the contract asset and the contract liability balances during the six months ended June 29, 2019 were as follows:

(i) Changes due to business combinations:

See Note 2. "Business Acquisitions" for client receivables, contract assets, and contract liabilities that were acquired as part of the Citoxlab acquisition on April 29, 2019.

(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 six months ended June 29, 2019, 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 29, 2018 was billed during the six months ended June 29, 2019.

(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 70% of contract liabilities as of December 29, 2018 were recognized as revenue during the six months ended June 29, 2019.

4. SEGMENT INFORMATION

The Company’s three reportable segments are Research Models and Services (RMS), Discovery and Safety Assessment (DSA), and Manufacturing Support (Manufacturing).

The following table presents revenue and other financial information by reportable segment:

	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
	(in thousands)			
RMS				
Revenue	$ 136,054	$ 130,426	$ 273,226	$ 264,384
Operating income	31,512	34,245	69,344	72,772
Depreciation and amortization	4,981	4,901	9,303	9,754
Capital expenditures	5,049	5,314	9,161	9,939
DSA				
Revenue	$ 405,517	$ 346,416	$ 759,714	$ 606,408
Operating income	63,514	56,623	110,219	97,482
Depreciation and amortization	37,549	31,042	71,333	51,829
Capital expenditures	15,141	10,894	23,989	23,696
Manufacturing				
Revenue	$ 115,997	$ 108,459	$ 229,197	$ 208,479
Operating income	33,141	34,115	64,640	62,638
Depreciation and amortization	5,782	5,868	11,587	11,604
Capital expenditures	4,272	3,188	7,878	10,022

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	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
	(in thousands)					
Three Months Ended:						
Total reportable segments	$ 128,167	$ 124,983	$ 48,312	$ 41,811	$ 24,462	$ 19,396
Unallocated corporate	(48,399)	(48,273)	834	1,585	319	1,817
Total consolidated	$ 79,768	$ 76,710	$ 49,146	$ 43,396	$ 24,781	$ 21,213
Six Months Ended:						
Total reportable segments	$ 244,203	$ 232,892	$ 92,223	$ 73,187	$ 41,028	$ 43,657
Unallocated corporate	(94,643)	(88,353)	2,281	3,419	484	5,282
Total consolidated	$ 149,560	$ 144,539	$ 94,504	$ 76,606	$ 41,512	$ 48,939

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

	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
	(in thousands)			
RMS	$ 136,054	$ 130,426	$ 273,226	$ 264,384
DSA	405,517	346,416	759,714	606,408
Manufacturing	115,997	108,459	229,197	208,479
Total revenue	$ 657,568	$ 585,301	$ 1,262,137	$ 1,079,271

A summary of unallocated corporate expense consists of the following:

	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
	(in thousands)			
Stock-based compensation	$ 10,718	$ 9,616	$ 18,992	$ 16,607
Compensation, benefits, and other employee-related expenses	13,753	15,315	35,791	35,911
External consulting and other service expenses	4,094	5,010	7,904	7,944
Information technology	4,555	3,190	7,277	5,654
Depreciation	834	1,585	2,281	3,419
Acquisition and integration	12,470	11,692	17,942	14,556
Other general unallocated corporate	1,975	1,865	4,456	4,262
Total unallocated corporate expense	$ 48,399	$ 48,273	$ 94,643	$ 88,353

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:						
June 29, 2019	$ 367,924	$ 182,770	$ 68,902	$ 36,213	$ 1,759	$ 657,568
June 30, 2018	334,016	161,656	51,559	36,235	1,835	585,301
Six Months Ended:						
June 29, 2019	$ 718,100	$ 349,135	$ 122,881	$ 69,392	$ 2,629	$ 1,262,137
June 30, 2018	582,996	322,482	100,137	70,755	2,901	1,079,271

Included in the Asia Pacific category above are operations located in China, Japan, Korea, Australia, Singapore, and India. 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:

	June 29, 2019	December 29, 2018
	(in thousands)	
Client receivables	$ 422,031	$ 370,131
Unbilled revenue	126,306	105,216
Total	548,337	475,347
Less: Allowance for doubtful accounts	(3,189)	(3,099)
Trade receivables, net	$ 545,148	$ 472,248

The composition of inventories is as follows:

	June 29, 2019	December 29, 2018
	(in thousands)	
Raw materials and supplies	$ 24,665	$ 22,378
Work in process	22,730	21,732
Finished products	87,530	83,782
Inventories	$ 134,925	$ 127,892

The composition of other current assets is as follows:

	June 29, 2019	December 29, 2018
	(in thousands)	
Prepaid income tax	$ 66,908	$ 47,157
Investments	887	885
Restricted cash	498	465
Other	618	300
Other current assets	$ 68,911	$ 48,807

The composition of other assets is as follows:

	June 29, 2019	December 29, 2018
	(in thousands)	
Venture capital investments	$ 99,748	$ 87,545
Other investments	12,492	1,046
Life insurance policies	35,821	32,340
Restricted cash	1,499	1,411
Other	32,790	21,417
Other assets	$ 182,350	$ 143,759

The composition of other current liabilities is as follows:

	June 29, 2019	December 29, 2018
	(in thousands)	
Current portion of operating lease right-of-use liabilities	$ 19,405	$ —
Accrued income taxes	22,254	24,120
Customer contract deposits	32,923	38,245
Other	7,413	8,915
Other current liabilities	$ 81,995	$ 71,280

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

	June 29, 2019	December 29, 2018
	(in thousands)	
U.S. Transition Tax	$ 52,066	$ 52,064
Long-term pension liability	29,025	24,671
Accrued executive supplemental life insurance retirement plan	36,976	36,086
Long-term deferred revenue	27,744	34,420
Other	34,778	31,880
Other long-term liabilities	$ 180,589	$ 179,121

6. VENTURE CAPITAL AND OTHER INVESTMENTS

The Company invests in several venture capital funds that invest in start-up companies, primarily in the life sciences industry. The Company's ownership interest in these funds ranges from less than 1% to 12.0%. The Company accounts for the investments in limited partnerships (LPs), which are variable interest entities, under the equity method of accounting. For publicly-held investments in the LPs, the Company adjusts for changes in fair market value based on reported share holdings at the end of each fiscal quarter. The Company is not the primary beneficiary because it has no power to direct the activities that most significantly affect the LPs' economic performance. The Company accounts for the investments in limited liability companies, which are not variable interest entities, under the equity method of accounting.

Venture capital investments were $99.7 million and $87.5 million as of June 29, 2019 and December 29, 2018, respectively. The Company's total commitment to the venture capital funds as of June 29, 2019 was $128.6 million, of which the Company funded $75.4 million through that date. The Company received dividends totaling $0.9 million and $1.5 million for the three months ended June 29, 2019 and June 30, 2018, respectively. The Company received dividends totaling $1.6 million and $8.5 million for the six months ended June 29, 2019 and June 30, 2018, respectively. The Company recognized losses of $4.3 million and gains of $10.9 million related to the venture capital investments for the three months ended June 29, 2019 and June 30, 2018, respectively. The Company recognized gains of $6.3 million and $17.4 million related to the venture capital investments for the six months ended June 29, 2019 and June 30, 2018, respectively. Gains and losses are recorded in Other income, net in the accompanying unaudited condensed consolidated statements of income.

The Company also invests directly in equity of privately-held companies. These investments are reported at fair value or under the equity method of accounting, as appropriate. Equity investments that do not have readily determinable fair values are generally recorded at cost, plus or minus certain adjustments. Other investments were $12.5 million and $1.0 million as of June 29, 2019 and December 29, 2018, respectively. The Company recognized an insignificant amount of gains and losses related to these investments for the three and six months ended June 29, 2019 and June 30, 2018. Gains and losses from other investments are recorded in Other income, net in the accompanying unaudited consolidated statements of income.

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 six months ended June 29, 2019 and June 30, 2018, 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;

- Mutual funds - Valued at the unadjusted quoted net asset value of shares held by the Company;
- 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 (Senior Notes) due in 2026, 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:

	June 29, 2019			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Cash equivalents	$ —	$ 32,476	$ —	$ 32,476
Other assets:				
Life insurance policies	—	28,160	—	28,160
Total assets measured at fair value	$ —	$ 60,636	$ —	$ 60,636
Other current liabilities measured at fair value:				
Contingent consideration	$ —	$ —	$ 719	$ 719

	December 29, 2018			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Cash equivalents	$ —	$ 45,982	$ —	$ 45,982
Other assets:				
Life insurance policies	—	24,541	—	24,541
Total assets measured at fair value	$ —	$ 70,523	$ —	$ 70,523
Other current liabilities:				
Contingent consideration	$ —	$ —	$ 3,033	$ 3,033
Foreign currency forward contract	—	1,319	—	1,319
Total liabilities measured at fair value	$ —	$ 1,319	$ 3,033	$ 4,352

Contingent Consideration

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

	Six Months Ended	
	June 29, 2019	June 30, 2018
	(in thousands)	
Beginning balance	$ 3,033	$ 298
Additions	2,869	2,746
Payments	(5,252)	—
Foreign currency translation	69	(164)
Ending balance	$ 719	$ 2,880

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.

As of both June 29, 2019 and December 29, 2018, the book value of the Company's Senior Notes, which is a fixed rate obligation carried at amortized cost, was $500.0 million. The fair value of the Company's Senior Notes as of June 29, 2019 and December 29, 2018 was $523.8 million and $495.0 million, respectively. 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.

8. GOODWILL AND INTANGIBLE ASSETS

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

		Adjustments to Goodwill		
	December 29, 2018	Acquisitions	Foreign Exchange	June 29, 2019
	(in thousands)			
RMS	$ 56,968	$ —	$ 2	$ 56,970
DSA	1,051,470	275,076	4,618	1,331,164
Manufacturing	138,695		(147)	138,548
Goodwill	$ 1,247,133	$ 275,076	$ 4,473	$ 1,526,682

The increase in goodwill during the six months ended June 29, 2019 related primarily to the acquisition of Citoxlab in the DSA reportable segment and the impact of foreign exchange.

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

	June 29, 2019			December 29, 2018		
	Gross	Accumulated Amortization	Net	Gross	Accumulated Amortization	Net
	(in thousands)					
Backlog	$ 28,761	$ (21,314)	$ 7,447	$ 20,900	$ (18,691)	$ 2,209
Technology	121,717	(48,712)	73,005	101,506	(41,870)	59,636
Trademarks and trade names	8,273	(4,715)	3,558	8,331	(4,640)	3,691
Other	17,629	(11,130)	6,499	17,448	(10,041)	7,407
Other intangible assets	176,380	(85,871)	90,509	148,185	(75,242)	72,943
Client relationships	931,954	(287,762)	644,192	791,725	(253,780)	537,945
Intangible assets	$ 1,108,334	$ (373,633)	$ 734,701	$ 939,910	$ (329,022)	$ 610,888

The increase in intangible assets, net during the six months ended June 29, 2019 related primarily to the acquisition of Citoxlab.

9. LONG-TERM DEBT AND FINANCE LEASE OBLIGATIONS

Long-Term Debt and Finance Lease Obligations

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

	June 29, 2019	December 29, 2018
	(in thousands)	
Term loans	$ 712,500	$ 731,250
Revolving facility	839,206	397,452
Senior Notes	500,000	500,000
Other debt	5,717	26,286
Finance leases (Note 16)	31,511	29,240
Total debt and finance leases	2,088,934	1,684,228
Less:		
Current portion of long-term debt	30,708	28,228
Current portion of finance leases (Note 16)	3,247	3,188
Current portion of long-term debt and finance leases	33,955	31,416
Long-term debt and finance leases	2,054,979	1,652,812
Debt discount and debt issuance costs	(14,591)	(16,214)
Long-term debt, net and finance leases	$ 2,040,388	$ 1,636,598

As of June 29, 2019 and December 29, 2018, the weighted average interest rate on the Company’s debt was 3.14% and 4.24%, respectively.

Term Loans and Revolving Facility

On March 26, 2018, the Company amended and restated its $1.65 billion credit facility creating a $2.3 billion credit facility ($2.3B Credit Facility) which extends the maturity date for the credit facility. The $2.3B Credit Facility provides for a $750.0 million term loan and a $1.55 billion multi-currency revolving facility. The amendment was accounted for as a debt modification. In connection with the transaction, the Company capitalized approximately $6.2 million within Long-term debt, net and finance leases in the accompanying unaudited condensed consolidated balance sheets and expensed approximately $1.0 million of debt issuance costs recorded within Interest expense in the accompanying unaudited condensed consolidated statements of income.

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, 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 $2.3B 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 $2.3B 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 4.50 to 1.0 with step downs to 3.50 to 1.0 by the last day of the first quarter of 2020. As of June 29, 2019, the Company was compliant with all covenants.

The obligations of the Company under the $2.3B Credit Facility are collateralized by substantially all of the assets of the Company.

During the six months ended June 29, 2019, the Company had multiple U.S. dollar denominated loans borrowed by a non-U.S. Euro functional currency entity under the Company’s $2.3B Credit Facility, which ranged from $300 million to $350 million. This resulted in foreign currency losses recognized in Other income, net. The Company entered into foreign exchange forward contracts to limit its foreign currency exposures related to these borrowings. As of June 29, 2019, 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.

The acquisition of Citoxlab on April 29, 2019 for $528.1 million in cash was funded through a combination of cash on hand and proceeds from the $2.3B Credit Facility under the multi-currency revolving facility.

Senior Notes Offering

On April 3, 2018, the Company entered into an indenture (Indenture) with MUFG Union Bank, N.A., (Trustee) in connection with the offering of $500.0 million in aggregate principal amount of the Company's 5.5% Senior Notes (Senior Notes), due in 2026, in an unregistered offering. Under the terms of the Indenture, interest on the Senior Notes is payable semi-annually on April 1 and October 1, beginning on October 1, 2018. The Senior Notes are guaranteed fully and unconditionally, jointly and severally on a senior unsecured basis by the Company and certain of its U.S. subsidiaries. In connection with the transaction, the Company incurred approximately $7.4 million of debt issuance costs within Long-term debt, net and finance leases in the accompanying unaudited condensed consolidated balance sheets.

The Company may redeem all or part of the Senior Notes at any time prior to April 1, 2021, at its option, at a redemption price equal to 100% of the principal amount of such Senior Notes plus the Applicable Premium (as defined in the Indenture). The Company may also redeem up to 40% of the Senior Notes with the proceeds of certain equity offerings completed before April 1, 2021, at a redemption price equal to 105.5% of the principal amount of such Senior Notes. On or after April 1, 2021, the Company may on any one or more occasions redeem all or a part of the Senior Notes, at the redemption prices specified in the Indenture based on the applicable date of redemption. Upon the occurrence of a Change of Control Triggering Event (as defined in the Indenture), the Company will be required to offer to repurchase the Senior Notes at a purchase price equal to 101% of the aggregate principal amount of such Senior Notes. Any redemption of the Senior Notes would also require settlement of accrued and unpaid interest, if any, up to but excluding the redemption date.

The Indenture contains certain covenants including, but not limited to, limitations and restrictions on the ability of the Company and its U.S. subsidiaries to (i) create certain liens, (ii) enter into any Sale and Leaseback Transaction (as defined in the Indenture) with respect to any property, and (iii) merge, consolidate, sell or otherwise dispose of all or substantially all of their assets. These covenants are subject to a number of conditions, qualifications, exceptions and limitations. Any event of default, as defined, could result in the acceleration of the repayment of the obligations.

Net proceeds from the Senior Notes of $493.8 million were used to partially repay the outstanding revolving credit facility on April 3, 2018.

Commitment Letter

On February 12, 2018, the Company secured an $830 million commitment under a 364-day senior unsecured bridge loan facility (the Bridge Facility) for the purpose of financing the acquisition of MPI Research. The Bridge Facility was terminated as of April 3, 2018 upon the successful acquisition of MPI Research. Debt issuance costs of $1.8 million, which were capitalized upon the execution of the Bridge Facility, were expensed upon termination of the agreement on April 3, 2018. In addition, the Company incurred and expensed $2.0 million of fees pertaining to a temporary backstop facility related to the negotiation of the Credit Facility during the three months ended March 31, 2018. These costs were included in Interest expense in the accompanying unaudited condensed consolidated statements of income.

Letters of Credit

As of June 29, 2019 and December 29, 2018, the Company had $6.7 million and $6.5 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		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
	(in thousands)			
Numerator:				
Income from continuing operations, net of income taxes	$ 44,309	$ 52,850	$ 99,997	$ 106,118
Income from discontinued operations, net of income taxes	—	1,529	—	1,506
Less: Net income attributable to noncontrolling interests	581	670	1,136	1,284
Net income attributable to common shareholders	$ 43,728	$ 53,709	$ 98,861	$ 106,340
Denominator:				
Weighted-average shares outstanding - Basic	48,772	48,198	48,615	47,992
Effect of dilutive securities:				
Stock options, restricted stock units, performance share units and restricted stock	890	845	984	974
Weighted-average shares outstanding - Diluted	49,662	49,043	49,599	48,966

Options to purchase 0.4 million and 0.5 million shares for the three months ended June 29, 2019 and June 30, 2018, respectively, as well as a non-significant number of restricted shares, 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 0.4 million and 0.5 million shares for the six months ended June 29, 2019 and June 30, 2018, respectively, as well as a non-significant number of restricted shares, 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 six months ended June 29, 2019 and June 30, 2018 excluded the impact of 1.0 million and 1.1 million shares, respectively, of non-vested restricted stock and RSUs.

Treasury Shares

During the six months ended June 29, 2019 and June 30, 2018, the Company did not repurchase any shares under its authorized stock repurchase program. As of June 29, 2019, 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 six months ended June 29, 2019 and June 30, 2018, the Company acquired 0.1 million shares for $17.9 million and 0.1 million shares for $13.7 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 29, 2018	$ (102,199)	$ (70,504)	$ (172,703)
Other comprehensive income before reclassifications	6,849	—	6,849
Amounts reclassified from accumulated other comprehensive loss	—	748	748
Net current period other comprehensive income	6,849	748	7,597
Income tax expense	961	169	1,130
June 29, 2019	$ (96,311)	$ (69,925)	$ (166,236)

Nonredeemable Noncontrolling Interest

The Company has an investment in an entity whose financial results are consolidated in the Company's 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. The activity within the nonredeemable noncontrolling interest was immaterial during the three and six months ended June 29, 2019 and June 30, 2018.

Redeemable Noncontrolling Interests

On June 13, 2019, the Company purchased an additional 5% equity interest in Vital River for $7.9 million, resulting in total ownership of 92%. The Company recorded a $0.8 million gain in equity equal to the excess fair value of the 5% equity interest over the purchase price. Concurrent with the transaction, the pre-existing agreement was further amended to provide the Company with the right to purchase, and the noncontrolling interest holders with the right to sell, the remaining 8% equity interest (redeemable noncontrolling 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 Company recorded a charge of $2.2 million in Selling, general and administrative expenses within the unaudited condensed consolidated statements of income, equal to the excess fair value of the hybrid instrument (equity interest with embedded derivative) over the fair value of the 8% equity interest. 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 ($13.9 million as of June 29, 2019) 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 agreement does not limit the amount that the Company could be required to pay to purchase the remaining 8% equity interest.

As part of the Citoxlab acquisition on April 29, 2019, the Company acquired a less than wholly owned subsidiary that is fully consolidated under the voting interest model. The Company acquired a 90% equity interest, which includes a 10% redeemable noncontrolling interest. The noncontrolling interest holders have the ability to require the Company to purchase the remaining 10% interest at certain dates in the future between 2021 through 2023. The noncontrolling interest is classified in the mezzanine section of the unaudited condensed consolidated balance sheets and is approximately $4 million as of June 29, 2019.

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

	Six Months Ended	
	June 29, 2019	June 30, 2018
	(in thousands)	
Beginning balance	$ 18,525	$ 16,609
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	4,095	—
Net income attributable to noncontrolling interests	284	377
Foreign currency translation	(35)	(324)
Ending balance	$ 20,479	$ 16,662

11. INCOME TAXES

The Company's effective tax rates remained relatively consistent for the three months ended June 29, 2019 and June 30, 2018 at 24.9% and 24.8%, respectively. The Company's effective tax rates also remained relatively consistent for the six months ended June 29, 2019 and June 30, 2018 at 20.2% and 20.4%, respectively. The slight changes in the effective tax rates from the prior year periods were primarily attributable to the increased non-deductible transaction costs in the three months ended June 29, 2019, offset by increased research and development credits and the acquisition of Citoxlab.

For the three months ended June 29, 2019, the Company's unrecognized tax benefits increased by $5.3 million to $24.8 million, primarily due to pre-acquisition tax positions taken by Citoxlab, as well as an additional quarter of Canadian Scientific Research and Experimental Development Credit reserves. For the three months ended June 29, 2019, the unrecognized income tax benefits that would impact the effective tax rate increased by $4.6 million to $22.7 million, for the same reasons discussed above. The accrued interest on unrecognized tax benefits was $3.2 million at June 29, 2019. The Company estimates that it is reasonably possible that the unrecognized tax benefits will decrease by up to $8.5 million over the next twelve-month period, primarily due to the outcome of pending tax audits.

The Company conducts business in several tax jurisdictions. As a result, it is subject to tax audits in jurisdictions including the U.S., U.K., China, France, Germany, Canada, Japan and India. With few exceptions, the Company is no longer subject to U.S. and international income tax examinations for years before 2015.

The Company and certain of its subsidiaries have ongoing tax controversies with various tax authorities in the U.S., Canada, Japan, India and France. The Company does not anticipate resolution of these audits will have a material impact on its 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		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
	(in thousands)			
Service cost	$ 757	$ 969	$ 1,387	$ 1,815
Interest cost	2,875	2,656	5,750	5,489
Expected return on plan assets	(3,235)	(4,012)	(6,470)	(7,889)
Amortization of prior service cost (credit)	91	(90)	182	(271)
Amortization of net loss	488	886	977	1,531
Net periodic cost	$ 976	$ 409	$ 1,826	$ 675

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 income, 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 six months ended June 29, 2019 and June 30, 2018 was not significant.

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		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
	(in thousands)			
Cost of revenue	$ 2,489	$ 1,738	$ 4,438	$ 3,151
Selling, general and administrative	14,016	11,809	24,966	20,937
Stock-based compensation, before income taxes	16,505	13,547	29,404	24,088
Provision for income taxes	(2,855)	(2,454)	(4,902)	(4,570)
Stock-based compensation, net of income taxes	$ 13,650	$ 11,093	$ 24,502	$ 19,518

During the six months ended June 29, 2019, the Company granted stock options representing 0.5 million common shares with a per-share weighted-average grant date fair value of $33.98, RSUs representing 0.2 million common shares with a per-share weighted-average grant date fair value of $142.90, and PSUs representing 0.2 million common shares with a per-share weighted-average grant date fair value of $162.74. The maximum number of common shares to be issued upon vesting of PSUs granted during the six months ended June 29, 2019 is 0.3 million.

14. FOREIGN CURRENCY CONTRACTS

The Company entered into foreign exchange forward contracts during the six months ended June 29, 2019 and three months ended December 29, 2018 to limit its foreign currency exposure related to a U.S. dollar denominated loan borrowed by a non-U.S. Euro functional currency entity under the $2.3B Credit Facility. These contracts are not designated as hedging instruments. Any gains or losses on these forward contracts are recognized immediately in Interest expense.

The open contract at December 29, 2018, which had a duration of approximately 3 months, was recorded at fair value in the Company's accompanying unaudited condensed consolidated balance sheets. The notional amount and fair value of the open contract is summarized as follows:

	Notional Amount	Fair Value	Balance Sheet Location
	(in thousands)		
December 29, 2018	$ 343,300	$ (1,319)	Other current liabilities

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 June 29, 2019.

The following table summarizes the effect of the foreign exchange forward contract on the Company's unaudited condensed consolidated statements of income:

	June 29, 2019		June 30, 2018	
Location of hedge 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	$ (20,835)	$ (1,606)	$ (18,643)	$ —
Six Months Ended:				
Interest expense	$ (30,822)	$ 7,311	$ (29,834)	$ —

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., Europe, 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 Company's existing lease obligations for certain facilities continue through various dates, the latest being 2028.

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

	Three Months Ended					
	June 29, 2019			June 30, 2018		
	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)	$ 371	$ 356	$ 727	$ 174	$ —	$ 174
Selling, general and administrative	940	18	958	1,682	—	1,682
Total	$ 1,311	$ 374	$ 1,685	$ 1,856	$ —	$ 1,856

	Six Months Ended					
	June 29, 2019			June 30, 2018		
	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)	$ 638	$ 1,505	$ 2,143	$ 737	$ 22	$ 759
Selling, general and administrative	1,073	18	1,091	1,735	—	1,735
Total	$ 1,711	$ 1,523	$ 3,234	$ 2,472	$ 22	$ 2,494

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

	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
	(in thousands)			
RMS	$ 641	$ —	$ 942	$ —
DSA	672	1,197	685	965
Manufacturing	372	—	1,607	870
Unallocated corporate	—	659	—	659
Total	$ 1,685	$ 1,856	$ 3,234	$ 2,494

2017 RMS Restructuring Initiative

In the fourth quarter of fiscal year 2017, the Company committed to a plan to further reduce costs and improve operating efficiencies in its RMS reportable segment. The plan included ceasing production within the Company's facility in Maryland and repurposing it for alternative initiatives, and reducing its workforce at certain RMS facilities during 2018.

The following table presents a summary of severance and transition costs, and asset impairments (referred to as restructuring costs) during the three and six months ended June 30, 2018 related to this initiative within the unaudited condensed consolidated statements of income. The Company did not incur any restructuring costs in the three and six months ended June 29, 2019.

	June 30, 2018					
	Three Months Ended			Six Months Ended		
	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)	$ 202	$ 69	$ 271	$ 555	$ 584	$ 1,139
Selling, general and administrative	18	—	18	188	—	188
Total	$ 220	$ 69	$ 289	$ 743	$ 584	$ 1,327

Cumulative restructuring costs incurred during 2017 and 2018 were $20.1 million, which primarily related to non-cash asset impairments and accelerated depreciation charges of $17.7 million and cash payments for severance and transition costs of $1.2 million and were recorded in the RMS reportable segment. All severance and transition costs have been paid as of June 29, 2019 and no further restructuring costs related to the 2017 RMS Restructuring Initiative are expected to be incurred.

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		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
	(in thousands)			
Beginning balance	$ 2,113	$ 7,053	$ 2,921	$ 6,856
Expense (excluding non-cash charges)	1,609	2,076	2,855	3,215
Payments / utilization	(970)	(1,990)	(3,004)	(3,138)
Foreign currency adjustments	6	(329)	(14)	(123)
Ending balance	$ 2,758	$ 6,810	$ 2,758	$ 6,810

As of June 29, 2019 and June 30, 2018, $2.7 million and $2.6 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 $0.1 million and $4.2 million, respectively, were included in other long-term liabilities within the Company's unaudited condensed consolidated balance sheets.

16. LEASES

Adoption of ASC Topic 842, "Leases" (ASC 842)

ASC 842 became effective for the Company on December 30, 2018 and was adopted using the modified retrospective method for all leases that had commenced as of the effective date, along with certain available practical expedients. The Company elected to recognize any effects of applying the new standard as a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption, which there were none. In addition, the Company elected to adopt the package of practical expedients permitted under the transition guidance within the new standard. The practical expedient package applied to leases that commenced prior to the effective date of the new standard and permits a reporting entity not to: i) reassess whether any expired or existing contracts are or contain leases, ii) reassess the historical lease classification for any expired or existing leases, and iii) reassess initial direct costs for any existing leases.

The reporting results for the six months ended June 29, 2019 reflect the application of ASC 842 guidance while the historical results for fiscal year 2018 were prepared under the guidance of ASC 840. The adoption of the new standard did not have a significant impact upon the Company's condensed consolidated statements of income and cash flows. The adoption of the new standard resulted in the following impact to the condensed consolidated balance sheet: i) no significant change in the carrying values of assets and liabilities related to the Company's finance leases, previously referred to as capital leases (See Note 9, "Long-Term Debt and Finance Lease Obligations"), ii) the derecognition of assets and related liabilities pertaining to certain build-to-suit arrangements previously accounted for under ASC 840 and recording them under the guidance of ASC 842, and iii) the recording of right-of-use assets and corresponding lease liabilities pertaining to the Company's operating leases on the condensed consolidated balance sheet, adjusted for existing balances of prepaid rent and deferred rent liabilities as of the transition date. The cumulative effect of applying ASC 842 to all leases that had commenced as of December 30, 2018 was as follows:

Balance sheet captions impacted by ASC 842	December 30, 2018 (Prior to adoption of ASC 842)	Effect of the adoption of ASC 842		December 30, 2018 (As adjusted)
		(in thousands)		
Prepaid assets	$ 53,447	$ (4,413)	(1)	$ 49,034
Property, plant and equipment, net	932,877	(23,448)	(2)	909,429
Operating lease right-of-use assets, net	—	134,172	(3)	134,172
Other assets	143,759	(4,989)	(4)	138,770
Other current liabilities	71,280	15,935	(5)	87,215
Operating lease right-of-use liabilities	—	111,570	(6)	111,570
Long-term debt, net and finance leases	1,636,598	(26,183)	(7)	1,610,415

ASC 842 adoption adjustments:

(1) Short term prepaid rent reclassified from Prepaid assets to the Operating lease right-of-use asset.

(2) Derecognition of approximately $26 million of leased properties, recorded in Property, plant and equipment, specifically Construction-in-process, that were recognized under the previously existing build-to-suit accounting
rules; partially offset by Prepaid assets related to finance leases reclassified from Prepaid assets.

(3) Recognition of Operating lease right-to-use asset and adjusted for prepaid rent and deferred rent liability reclassification adjustments identified in adjustments (1) (4) (5).

(4) Long-term prepaid rent reclassified from Other assets to the Operating lease right-of-use asset.

(5) Recognition of short-term portion of the Operating lease right-of-use liabilities offset by reclassification of deferred rent liability to Operating lease right-of-use asset.

(6) Recognition of long-term portion of the Operating lease right-of-use liabilities.

(7) Derecognition of approximately $26 million of Other debt associated with leased properties that were recognized under the previously existing build-to-suit accounting rules.

Operating and Finance Leases

At inception of a contract, the Company determines if a contact meets the definition of a lease. A lease is a contract, or part of a contract, that conveys the right to control the use of identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration. The Company determines if the contract conveys the right to control the use of an identified asset for a period of time. The Company assesses throughout the period of use whether the Company has both of the following: (1) the right to obtain substantially all of the economic benefits from use of the identified asset, and (2) the right to direct the use of the identified asset. This determination is reassessed if the terms of the contract are changed. Leases are classified as operating or finance leases based on the terms of the lease agreement and certain characteristics of the identified asset. Right-of-use assets and lease liabilities are recognized at lease commencement date based on the present value of the minimum future lease payments.

The Company leases laboratory, production, and office space (real estate), as well as land, vehicles and certain equipment under non-cancellable operating and finance leases. The carrying value of the Company's right-of-use lease assets is substantially concentrated in its real estate leases, while the volume of lease agreements is primarily concentrated in vehicles and equipment leases. The Company's policy is to not record leases with an original term of twelve months or less on the condensed consolidated balance sheets. The Company recognizes lease expense for these short-term leases on a straight-line basis over the lease term.

Certain lease agreements include rental payments that are adjusted periodically for inflation or other variables. In addition to rent, the leases may require the Company to pay additional amounts for taxes, insurance, maintenance and other expenses, which are generally referred to as non-lease components. Such adjustments to rental payments and variable non-lease components are treated as variable lease payments and recognized in the period in which the obligation for these payments was incurred. Variable lease components and variable non-lease components are not measured as part of the right of use asset and liability. Only when lease components and their associated non-lease components are fixed are they accounted for as a single lease component and are recognized as part of a right of use asset and liability. Total contract consideration is allocated to the combined fixed lease and non-lease component. This policy election applies consistently to all asset classes under lease agreements.

Most leases contain clauses for renewal at the Company's option with renewal terms that generally extend the lease term from 1 to 5 years. Certain lease agreements contain options to purchase the leased property and options to terminate the lease. Payments to be made in option periods are recognized as part of the right-of-use lease assets and lease liabilities when it is reasonably certain that the option to extend the lease will be exercised or the option to terminate the lease will not be exercised, or is not at the Company's option. The Company determines whether the reasonably certain threshold is met by considering contract-, asset-, market-, and entity-based factors.

A portfolio approach is applied to certain lease contracts with similar characteristics. The Company's lease agreements do not contain any significant residual value guarantees or material restrictive covenants imposed by the leases.

The Company subleases a limited number of lease arrangements. Sublease activity is not material to the condensed consolidated financial statements.

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

	June 29, 2019
	(in thousands)
Operating leases	
Operating lease right-of-use assets, net	$ 131,880
Other current liabilities	$ 19,405
Operating lease right-of-use liabilities	108,311
Total operating lease liabilities	$ 127,716
Finance leases	
Property, plant and equipment, net	$ 32,780
Current portion of long-term debt and finance leases	$ 3,247
Long-term debt, net and finance leases	28,264
Total finance lease liabilities	$ 31,511

The components of operating and finance lease costs for the three and six months ended June 29, 2019 were as follows:

	June 29, 2019	
	Three Months Ended	Six Months Ended
	(in thousands)	
Operating lease costs	$ 7,887	$ 15,594
Finance lease costs:		
Amortization of right-of-use assets	931	1,852
Interest on lease liabilities	345	641
Short-term lease costs	204	396
Variable lease costs	930	1,265
Sublease income	(45)	(91)
Total lease costs	$ 10,252	$ 19,657

Other information related to leases was as follows:

Supplemental cash flow information

	Six Months Ended June 29, 2019 (in thousands)
Cash flows included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$ 13,214
Operating cash flows from finance leases	715
Finance cash flows from finance leases	1,842
Non-cash leases activity:	
Right-of-use lease assets obtained in exchange for new operating lease liabilities	$ 5,028
Right-of-use lease assets obtained in exchange for new finance lease liabilities	4,508

Lease term and discount rate

	As of June 29, 2019
Weighted-average remaining lease term (in years)	
Operating lease	7.49
Finance lease	12.94
Weighted-average discount rate	
Operating lease	4.48
Finance lease	4.60

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 June 29, 2019, minimum future lease payments under non-cancellable leases for each of the following five years and a total thereafter were as follows:

	Operating Leases	Finance Leases
	(in thousands)	
2019 (excluding the six months ended June 29, 2019)	$ 11,180	$ 2,119
2020	24,038	4,800
2021	22,418	3,786
2022	18,740	3,754
2023	14,740	2,857
Thereafter	59,675	25,038
Total minimum future lease payments	150,791	42,354
Less: Imputed interest	23,075	10,843
Total lease liabilities	$ 127,716	$ 31,511

Total minimum future lease payments (predominantly operating leases) of approximately $33.0 million for leases that have not commenced as of June 29, 2019, as the Company does not yet control the underlying assets, are not included in the condensed consolidated financial statements. These leases are expected to commence between fiscal years 2019 and 2021 with lease terms of 3 to 11 years.

As of December 29, 2018, minimum future lease payments under non-cancellable leases for each of the following five years and a total thereafter were as follows:

	Operating Leases [1]	Finance Leases [1]
	(in thousands)	
2019	$ 25,411	$ 3,972
2020	22,400	3,759
2021	21,544	2,869
2022	18,535	2,967
2023	15,398	2,209
Thereafter	66,870	24,304
Total minimum future lease payments	$ 170,158	$ 40,080

(1) Lease commitments are presented under the guidance of ASC 840 and includes approximately $14 million of minimum future lease payments for leases that had not commenced as of December 29, 2018. These commitments relate to existing leases for which the Company does not yet control certain expansion space.

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 2018. 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” in our Annual Report on Form 10-K for fiscal year 2018. 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 and Research Model Services 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). 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; Avian Vaccine Services (Avian), which supplies specific-pathogen-free chicken eggs and chickens.

Recent Acquisitions

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

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 preliminary purchase price for Citoxlab was $528.1 million in cash, subject to certain post-closing adjustments that may change the purchase price. The acquisition was funded through a combination of cash on hand and proceeds from our $2.3 billion credit facility ($2.3B Credit Facility) under the multi-currency revolving facility. Citoxlab is reported as part of our DSA reportable segment.

On April 3, 2018, we acquired MPI Research, a non-clinical CRO providing comprehensive testing services to biopharmaceutical and medical device companies worldwide. The acquisition enhances our position as a leading global early-stage CRO by strengthening our ability to partner with clients across the drug discovery and development continuum. The purchase price for MPI Research was $829.7 million in cash. The acquisition was funded by borrowings on our $2.3B Credit Facility as well as the issuance of the Company's Senior Notes. MPI Research is reported as part of our DSA reportable segment.

On January 11, 2018, we acquired KWS BioTest Limited (KWS BioTest), a CRO specializing in *in vitro* and *in vivo* discovery testing services for immuno-oncology, inflammatory and infectious diseases. The acquisition enhances our discovery expertise, with complementary offerings that provide our customers with additional tools in the active therapeutic research areas of oncology and immunology. The purchase price for KWS BioTest was $20.3 million in cash. In addition to the initial purchase price, the transaction includes aggregate, undiscounted contingent payments of up to £3.0 million based on future performance. During the three months ended September 29, 2018, the terms of these contingent payments were amended, resulting in a fixed payment of £2.0 million, or $2.6 million, which was paid during the three months ended March 30, 2019. The KWS BioTest business is reported as part of our DSA reportable segment.

Overview of Results of Operations and Liquidity

Revenue for the three months ended June 29, 2019 was $657.6 million compared to $585.3 million in the corresponding period in 2018. This increase of $72.3 million, or 12.3%, was primarily due to the recent acquisition of Citoxlab as well as growth in our DSA and Manufacturing segments; partially offset by the negative effect of changes in foreign currency exchange rates which decreased revenue by $11.0 million, or 1.9%, when compared to the corresponding period in 2018. Revenue for the six months ended June 29, 2019 was $1.3 billion compared to $1.1 billion in the corresponding period in 2018. The increase of $182.8 million, or 16.9%, was primarily due to the reasons described above as well as the recent acquisition of MPI Research; partially offset by the negative effect of changes in foreign currency exchange rates, which decreased revenue by $24.9 million, or 2.4%, when compared to the corresponding period in 2018.

In the three months ended June 29, 2019, our operating income and operating income margin were $79.8 million and 12.1%, respectively, compared with $76.7 million and 13.1%, respectively, in the corresponding period of 2018. In the six months ended June 29, 2019, our operating income and operating margin were $149.6 million and 11.8%, respectively, compared with $144.5 million and 13.4%, respectively, in the corresponding period of 2018. The increases in operating income were primarily due to contributions from our recent acquisitions of Citoxlab and MPI Research. The decreases in operating income margin were primarily due to increased amortization expense and costs related to our recent acquisitions; as well as continued investments to support future growth of the businesses, which includes increased investments in personnel (staffing levels and hourly wage increases) and facility expansions.

Net income attributable to common shareholders decreased to $43.7 million in the three months ended June 29, 2019, from $53.7 million in the corresponding period of 2018. Net income attributable to common shareholders decreased to $98.9 million in the six months ended June 29, 2019, from $106.3 million in the corresponding period of 2018. The decreases in Net income attributable to common shareholders was primarily due to lower net gains on our venture capital investments, partially offset by the increases in operating income discussed above.

During the first six months of 2019, our cash flows from operations was $144.4 million compared with $183.9 million for the same period in 2018. The decrease was primarily driven by unfavorable changes in operating assets and liabilities, specifically related to the timing of net contract balances from contracts with customers (collectively trade receivables, net; deferred revenue; and customer contract deposits) and higher compensation payments compared to the prior year period.

On March 26, 2018, we amended and restated our $1.65 billion credit facility creating a $2.3B Credit Facility. The $2.3B Credit Facility provides for a $750.0 million term loan and a $1.55 billion multi-currency revolving 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.

On April 3, 2018, we issued $500.0 million of 5.5% Senior Notes (Senior Notes) due 2026 in an unregistered offering. Interest on the Senior Notes is payable semi-annually on April 1 and October 1, beginning on October 1, 2018.

In March 2019, we detected unauthorized access into portions of our information systems and commenced an investigation into the incident, coordinated with U.S. federal law enforcement and leading cybersecurity experts, and promptly implemented a comprehensive containment and remediation plan. While the investigation is ongoing, we have determined that some client data was copied by a highly sophisticated, well-resourced intruder. We have not yet determined the potential revenue or financial impact related to this incident.

We continue to move aggressively to further secure our information systems, which includes adding enhanced security features and monitoring procedures to further protect our client data. While we have taken substantial steps to minimize unauthorized access into our information systems, until our ongoing remediation process is complete, we will be unable to determine that this incident has been entirely remediated. We have not observed any further indications of continued unauthorized activity in our information systems.

Results of Operations

Three Months Ended June 29, 2019 Compared to the Three Months Ended June 30, 2018

Revenue and Operating Income

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

	Three Months Ended			
	June 29, 2019	June 30, 2018	$ change	% change
	(in millions, except percentages)			
Service revenue	$ 505.9	$ 438.5	$ 67.4	15.4%
Product revenue	151.7	146.8	4.9	3.3%
Total revenue	$ 657.6	$ 585.3	$ 72.3	12.3%

	Three Months Ended				
	June 29, 2019	June 30, 2018	$ change	% change	Impact of FX
	(in millions, except percentages)				
RMS	$ 136.1	$ 130.4	$ 5.7	4.3%	(2.5)%
DSA	405.5	346.4	59.1	17.1%	(1.2)%
Manufacturing	116.0	108.5	7.5	7.0%	(3.1)%
Total revenue	$ 657.6	$ 585.3	$ 72.3	12.3%	(1.9)%

The following table presents operating income by reportable segment:

	Three Months Ended			
	June 29, 2019	June 30, 2018	$ change	% change
	(in millions, except percentages)			
RMS	$ 31.5	$ 34.2	$ (2.7)	(8.0)%
DSA	63.5	56.6	6.9	12.2 %
Manufacturing	33.1	34.1	(1.0)	(2.9)%
Unallocated corporate	(48.3)	(48.2)	(0.1)	0.3 %
Total operating income	$ 79.8	$ 76.7	$ 3.1	4.0 %
Operating income % of revenue	12.1%	13.1%		(1.0)%

The following presents the results from operating income by each of our reportable segments:

RMS

	Three Months Ended				
	June 29, 2019	June 30, 2018	$ change	% change	Impact of FX
	(in millions, except percentages)				
Revenue	$ 136.1	$ 130.4	$ 5.7	4.3 %	(2.5)%
Cost of revenue (excluding amortization of intangible assets)	84.1	79.4	4.7	5.9 %	
Selling, general and administrative	20.2	16.3	3.9	22.8 %	
Amortization of intangible assets	0.3	0.5	(0.2)	(14.5)%	
Operating income	$ 31.5	$ 34.2	$ (2.7)	(8.0)%	
Operating income % of revenue	23.2%	26.3%		(3.1)%	

RMS revenue increased $5.7 million due primarily to higher research model services revenue and higher research model product revenue in China. Research model services benefited from a large government contract in the IS business and strong client demand in the GEMS business resulting from increased research and development activity conducted across biotechnology and academic institutional clients. Partially offsetting these increases were the effect of changes in foreign currency exchange rates and lower research model product revenue outside of China, particularly from large biopharmaceutical clients.

RMS operating income decreased $2.7 million compared to the corresponding period in 2018. RMS operating income as a percentage of revenue for the three months ended June 29, 2019 was 23.2%, a decrease of 3.1% from 26.3% for the corresponding period in 2018. Operating income and operating income as a percentage of revenue decreased primarily due to higher cost of revenue and selling, general, and administrative expenses to support the growth of the businesses, which included the following: a $2.2 million charge recorded in the three months ended June 29, 2019 in connection with the modification of the option to purchase the remaining 8% equity interest in Vital River, increased investments in personnel (staffing levels and hourly wage increases), and facility expansions (primarily in China). In addition, operating income as a percentage of revenue decreased due to lower operating income margins on the aforementioned large government contract and lower sales volume for research models outside of China.

DSA

	Three Months Ended				
	June 29, 2019	June 30, 2018	$ change	% change	Impact of FX
	(in millions, except percentages)				
Revenue	$ 405.5	$ 346.4	$ 59.1	17.1 %	(1.2)%
Cost of revenue (excluding amortization of intangible assets)	277.5	239.2	38.3	16.0 %	
Selling, general and administrative	44.7	34.6	10.1	29.5 %	
Amortization of intangible assets	19.8	16.0	3.8	23.2 %	
Operating income	$ 63.5	$ 56.6	$ 6.9	12.2 %	
Operating income % of revenue	15.7%	16.3%		(0.6)%	

DSA revenue increased $59.1 million due primarily to the recent acquisition of Citoxlab which contributed $30.9 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 favorable pricing of services. These increases were partially offset by the effect of changes in foreign currency exchange rates.

DSA operating income increased $6.9 million during the three months ended June 29, 2019 compared to the corresponding period in 2018. DSA operating income as a percentage of revenue for the three months ended June 29, 2019 was 15.7%, a decrease of 0.6% from 16.3% for the corresponding period in 2018. The increase to operating income was primarily attributable to contributions from our recent acquisition of Citoxlab. This increase was partially offset by increased costs in both cost of revenue and selling, general, and administrative expenses to support the growth of the businesses, which included the following: increased investments in personnel (staffing levels and hourly wage increases); increased investments related to facility expansions; and higher amortization of intangible assets and acquisition and integration costs associated with our recent acquisitions. These increased costs collectively decreased operating income as a percentage of revenue in the three months ended June 29, 2019 compared to the same period in 2018.

Manufacturing

	Three Months Ended				
	June 29, 2019	June 30, 2018	$ change	% change	Impact of FX
	(in millions, except percentages)				
Revenue	$ 116.0	$ 108.5	$ 7.5	7.0 %	(3.1)%
Cost of revenue (excluding amortization of intangible assets)	57.9	50.7	7.2	14.1 %	
Selling, general and administrative	22.7	21.3	1.4	6.4 %	
Amortization of intangible assets	2.3	2.4	(0.1)	(0.3)%	
Operating income	$ 33.1	$ 34.1	$ (1.0)	(2.9)%	
Operating income % of revenue	28.6%	31.5%		(2.9)%	

Manufacturing revenue increased $7.5 million due primarily to higher demand for endotoxin products, bioburden products and services, and species identification services in the Microbial Solutions business and higher service revenue in the Biologics business; partially offset by the effect of changes in foreign currency exchange rates.

Manufacturing operating income decreased $1.0 million during the three months ended June 29, 2019 compared to the corresponding period in 2018. Manufacturing operating income as a percentage of revenue for the three months ended June 29, 2019 was 28.6%, a decrease of 2.9% from 31.5% for the corresponding period in 2018. The decrease was due primarily to the increased costs in both cost of revenue and selling, general, and administrative expenses to support the growth of the businesses, which included the following: increased investments in process improvements to further enhance Microbial Solutions' operating efficiency; increased investments in personnel (staffing levels and hourly wage increases), and increased investments related to facility expansions (primarily in Biologics). These increased costs collectively decreased operating income as a percentage of revenue in the three months ended June 29, 2019 compared to the same period in 2018.

Unallocated Corporate

	Three Months Ended			
	June 29, 2019	June 30, 2018	$ change	% change
	(in millions, except percentages)			
Unallocated corporate	$ 48.3	$ 48.2	$ 0.1	0.3 %
Unallocated corporate % of revenue	7.4%	8.2%		(0.8)%

Unallocated corporate costs consist of selling, general and administrative expenses that are not directly related or allocated to the reportable segments. The amount in the three months ended June 29, 2019 compared to the same period in 2018 remained consistent. Costs as a percentage of revenue for the three months ended June 29, 2019 was 7.4%, a decrease of 0.8% from 8.2% for the corresponding period in 2018, which resulted from cost saving initiatives.

Interest Income

Interest income, which represents earnings on cash, cash equivalents, and time deposits remained consistent at $0.3 million and $0.2 million for the three months ended June 29, 2019 and the corresponding period in 2018, respectively.

Interest Expense

Interest expense for the three months ended June 29, 2019 was $20.8 million, an increase of $2.2 million, or 11.8%, compared to $18.6 million for the corresponding period in 2018. The increase was due primarily to higher debt to fund our recent acquisitions and a foreign currency loss recognized in connection with an interest rate forward contract; partially offset by higher debt issuance costs incurred in the corresponding period in 2018.

Other Income (Expense), Net
Other expense, net, was $0.2 million for the three months ended June 29, 2019, a decrease of $12.2 million, or 101.8%, compared to Other income, net of $12.0 million for the corresponding period in 2018. The decrease was due to a net loss on our venture capital investments compared to a net gain in the corresponding period in 2018; partially offset by a foreign currency gain recognized in the three months ended June 29, 2019 in connection with a U.S. dollar denominated loan borrowed by a non-U.S. entity with a different functional currency.

Income Taxes
Income tax expense for the three months ended June 29, 2019 was $14.7 million, a decrease of $2.7 million compared to $17.4 million for the corresponding period in 2018. Our effective tax rate was 24.9% for the three months ended June 29, 2019, compared to 24.8% for the corresponding period in 2018. The slight increase in our effective tax rate in the 2019 period compared to the 2018 period was primarily attributable to increased non-deductible transaction costs in the second quarter of 2019, partially offset by increased research and development credits and the acquisition of Citoxlab.

Six Months Ended June 29, 2019 Compared to the Six Months Ended June 30, 2018

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

	Six Months Ended			
	June 29, 2019	June 30, 2018	$ change	% change
	(in millions, except percentages)			
Service revenue	$ 956.8	$ 783.9	$ 172.9	22.1%
Product revenue	305.3	295.4	9.9	3.4%
Total revenue	$ 1,262.1	$ 1,079.3	$ 182.8	16.9%

	Six Months Ended				
	June 29, 2019	June 30, 2018	$ change	% change	Impact of FX
	(in millions, except percentages)				
RMS	$ 273.2	$ 264.4	$ 8.8	3.3%	(2.8)%
DSA	759.7	606.4	153.3	25.3%	(1.6)%
Manufacturing	229.2	208.5	20.7	9.9%	(3.8)%
Total revenue	$ 1,262.1	$ 1,079.3	$ 182.8	16.9%	(2.4)%

The following table presents operating income by reportable segment:

	Six Months Ended			
	June 29, 2019	June 30, 2018	$ change	% change
	(in millions, except percentages)			
RMS	$ 69.3	$ 72.8	$ (3.5)	(4.7)%
DSA	110.2	97.5	12.7	13.1 %
Manufacturing	64.6	62.6	2.0	3.2 %
Unallocated corporate	(94.5)	(88.4)	(6.1)	7.1 %
Total operating income	$ 149.6	$ 144.5	$ 5.1	3.5 %
Operating income % of revenue	11.8%	13.4%		(1.6)%

The following presents the results from operating income by each of our reportable segments:

RMS

	Six Months Ended				
	June 29, 2019	June 30, 2018	$ change	% change	Impact of FX
	(in millions, except percentages)				
Revenue	$ 273.2	$ 264.4	$ 8.8	3.3 %	(2.8)%
Cost of revenue (excluding amortization of intangible assets)	167.0	159.7	7.3	4.6 %	
Selling, general and administrative	36.2	31.1	5.1	16.4 %	
Amortization of intangible assets	0.7	0.8	(0.1)	(14.2)%	
Operating income	$ 69.3	$ 72.8	$ (3.5)	(4.7)%	
Operating income % of revenue	25.4%	27.5%		(2.1)%	

RMS revenue increased $8.8 million due primarily to higher research model services revenue and higher research model product revenue in China. Research model services benefited from a large government contract in the IS business and strong client demand in the GEMS business resulting from increased research and development activity conducted across biotechnology and academic institutional clients. Partially offsetting these increases were the effect of changes in foreign currency exchange rates and lower research model product revenue outside of China, particularly from large biopharmaceutical clients.

RMS operating income decreased $3.5 million compared to the corresponding period in 2018. RMS operating income as a percentage of revenue for the six months ended June 29, 2019 was 25.4%, a decrease of 2.1% from 27.5% for the corresponding period in 2018. Operating income and operating income as a percentage of revenue decreased primarily due to higher cost of revenue and selling, general, and administrative expenses to support the growth of the businesses, which included the following: a $2.2 million charge recorded in the six months ended June 29, 2019 in connection with the modification of the option to purchase the remaining 8% equity interest in Vital River, increased investments in personnel (staffing levels and hourly wage increases), and facility expansions (primarily in China). In addition, operating income as a percentage of revenue decreased due to lower operating income margins on the aforementioned large government contract, and lower sales volume for research models outside of China.

DSA

	Six Months Ended				
	June 29, 2019	June 30, 2018	$ change	% change	Impact of FX
	(in millions, except percentages)				
Revenue	$ 759.7	$ 606.4	$ 153.3	25.3 %	(1.6)%
Cost of revenue (excluding amortization of intangible assets)	529.7	422.6	107.1	25.3 %	
Selling, general and administrative	83.3	62.7	20.6	32.9 %	
Amortization of intangible assets	36.5	23.6	12.9	54.7 %	
Operating income	$ 110.2	$ 97.5	$ 12.7	13.1 %	
Operating income % of revenue	14.5%	16.1%		(1.6)%	

DSA revenue increased $153.3 million due primarily to the recent acquisitions of MPI Research and Citoxlab, which contributed $73.0 million and $30.9 million, respectively, to service revenue growth. Additionally, service revenue increased in both the Safety Assessment and Discovery Services businesses due to demand from biotechnology clients and favorable pricing of services. These increases were partially offset by the effect of changes in foreign currency exchange rates.

DSA operating income increased $12.7 million during the six months ended June 29, 2019 compared to the corresponding period in 2018. DSA operating income as a percentage of revenue for the six months ended June 29, 2019 was 14.5%, a decrease of 1.6% from 16.1% for the corresponding period in 2018. The increase to operating income was primarily attributable to contributions from our recent acquisitions of MPI Research and Citoxlab. This increase was partially offset by increased costs in both cost of revenue and selling, general, and administrative expenses to support the growth of the businesses, which included the following: increased investments in personnel (staffing levels and hourly wage increases); increased investments related to facility expansions; and higher amortization of intangible assets and acquisition and integration costs associated with our recent acquisitions. These increased costs collectively decreased operating income as a percentage of revenue in the six months ended June 29, 2019 compared to the same period in 2018.

Manufacturing

	Six Months Ended				
	June 29, 2019	June 30, 2018	$ change	% change	Impact of FX
	(in millions, except percentages)				
Revenue	$ 229.2	$ 208.5	$ 20.7	9.9 %	(3.8)%
Cost of revenue (excluding amortization of intangible assets)	115.6	99.5	16.1	16.2 %	
Selling, general and administrative	44.3	41.7	2.6	6.2 %	
Amortization of intangible assets	4.7	4.7	—	— %	
Operating income	$ 64.6	$ 62.6	$ 2.0	3.2 %	
Operating income % of revenue	28.2%	30.0%		(1.8)%	

Manufacturing revenue increased $20.7 million due primarily to higher demand for endotoxin products, bioburden products and services, and species identification services in the Microbial Solutions business and higher service revenue in the Biologics business; partially offset by the effect of changes in foreign currency exchange rates.

Manufacturing operating income increased $2.0 million during the six months ended June 29, 2019 compared to the corresponding period in 2018. Manufacturing operating income as a percentage of revenue for the six months ended June 29, 2019 was 28.2%, a decrease of 1.8% from 30.0% for the corresponding period in 2018. The increase to operating income was due primarily to the increase in revenue. This increase was partially offset by increased costs in both cost of revenue and selling, general, and administrative expenses to support the growth of the businesses, which included the following: increased investments in process improvements to further enhance Microbial Solutions' operating efficiency; increased investments in personnel (staffing levels and hourly wage increases), and increased investments related to facility expansions (primarily in Biologics). These increased costs collectively decreased operating income as a percentage of revenue in the six months ended June 29, 2019 compared to the same period in 2018.

Unallocated Corporate

	Six Months Ended			
	June 29, 2019	June 30, 2018	$ change	% change
	(in millions, except percentages)			
Unallocated corporate	$ 94.5	$ 88.4	$ 6.1	7.1 %
Unallocated corporate % of revenue	7.5%	8.2%		(0.7)%

Unallocated corporate costs consist of selling, general and administrative expenses that are not directly related or allocated to the reportable segments. The increase in unallocated corporate costs of $6.1 million is consistent with the allocated selling, general, and administrative expense increases discussed above and are primarily related an increase in costs associated with the evaluation and integration of our recent acquisitions; an increase in compensation, benefits, and other employee-related expenses to support the growth of the Company; and costs related to the remediation of the unauthorized access into our information systems. Costs as a percentage of revenue for the six months ended June 29, 2019 was 7.5%, a decrease of 0.7% from 8.2% for the corresponding period in 2018, which resulted from cost saving initiatives.

Interest Income

Interest income, which represents earnings on cash, cash equivalents, and time deposits remained consistent at $0.5 million for each of the six months ended June 29, 2019 and the corresponding period in 2018.

Interest Expense

Interest expense for the six months ended June 29, 2019 was $30.8 million, an increase of $1.0 million, or 3.3%, compared to $29.8 million for the corresponding period in 2018. The increase was due primarily to higher debt to fund our recent acquisitions; partially offset by a foreign currency gain recognized in connection with an interest rate forward contract and the absence of debt issuance costs that were incurred in the corresponding period in 2018.

Other Income (Expense), Net

Other income, net, was $6.1 million for the six months ended June 29, 2019, a decrease of $12.1 million, or 66.4%, compared to $18.2 million for the corresponding period in 2018. The decrease was due to lower net gains on our venture capital investments compared to the corresponding period in 2018 and a foreign currency loss recognized in the six months ended June 29, 2019 in connection with a U.S. dollar denominated loan borrowed by a non-U.S. entity with a different functional currency; partially offset by higher net gains on our life insurance policy investments compared to the corresponding period in 2018.

Income Taxes

Income tax expense for the six months ended June 29, 2019 was $25.3 million, a decrease of $1.9 million compared to $27.2 million for the corresponding period in 2018. Our effective tax rate was 20.2% for the six months ended June 29, 2019 compared to 20.4% for the corresponding period in 2018. The slight decreased tax rate is primarily attributable to increased research and development credits and the acquisition of Citoxlab, partially offset by increased non-deductible transaction costs in the second quarter of 2019.

Liquidity and Capital Resources

We currently require cash to fund our working capital needs, capital expansion, and acquisitions, and to pay our debt 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.

The following table presents our cash, cash equivalents and investments:

	June 29, 2019	December 29, 2018
	(in millions)	
Cash and cash equivalents:		
Held in U.S. entities	$ 39.2	$ 67.3
Held in non-U.S. entities	161.4	128.1
Total cash and cash equivalents	200.6	195.4
Investments:		
Held in non-U.S. entities	0.9	0.9
Total cash, cash equivalents and investments	$ 201.5	$ 196.3

Borrowings

On March 26, 2018, we amended and restated our $1.65 billion credit facility, creating our $2.3B Credit Facility which extended the maturity date for the credit facility. The $2.3B Credit Facility provides for a $750.0 million term loan and a $1.55 billion multi-currency revolving 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.

On April 3, 2018, we entered into an indenture (Indenture) with MUFG Union Bank, N.A., in connection with the offering of $500.0 million in aggregate principal amount of the Senior Notes due in 2026 in an unregistered offering. Under the terms of the Indenture, interest on the Senior Notes is payable semi-annually on April 1 and October 1, beginning on October 1, 2018.

Amounts outstanding under our credit facilities and Senior Notes were as follows:

	June 29, 2019	December 29, 2018
	(in millions)	
Term loans	$ 712.5	$ 731.3
Revolving facility	839.2	397.5
Senior Notes	500.0	500.0
Total	$ 2,051.7	$ 1,628.8

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. The interest rates applicable to the term loan and revolving facility under the $2.3B 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.

We entered into foreign exchange forward contracts during the six months ended June 29, 2019 and three months ended December 29, 2018 to limit our foreign currency exposure related to a U.S. dollar denominated loan borrowed by a non-U.S. Euro functional currency entity under the $2.3B Credit Facility.

The acquisition of Citoxlab on April 29, 2019 for $528.1 million in cash was funded through a combination of cash on hand and proceeds from our $2.3B Credit Facility under the multi-currency revolving facility.

Repurchases of Common Stock

During the six months ended June 29, 2019, we did not repurchase any shares under our authorized stock repurchase program. As of June 29, 2019, 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 2019. 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 six months ended June 29, 2019, we acquired $0.1 million shares for $17.9 million through such netting.

Cash Flows

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

	Six Months Ended	
	June 29, 2019	June 30, 2018
	(in millions)	
Income from continuing operations	$ 100.0	$ 106.1
Adjustments to reconcile net income from continuing operations to net cash provided by operating activities	119.5	84.1
Changes in assets and liabilities	(75.1)	(6.3)
Net cash provided by operating activities	$ 144.4	$ 183.9

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 income from continuing operations for (1) non-cash operating items such as depreciation and amortization, stock-based compensation, deferred income taxes, gains on venture capital investments, and impairment charges, 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 six months ended June 29, 2019, compared to the six months ended June 30, 2018, the decrease in cash provided by operating activities was primarily driven by unfavorable changes in operating assets and liabilities, specifically related to the timing of net contract balances from contracts with customers (collectively trade receivables, net; deferred revenue; and customer contract deposits), and higher compensation payments compared to the prior year period.

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

	Six Months Ended	
	June 29, 2019	June 30, 2018
	(in millions)	
Acquisitions of businesses and assets, net of cash acquired	$ (492.4)	$ (821.4)
Capital expenditures	(41.5)	(48.9)
Investments, net	(14.7)	19.4
Other, net	(0.6)	(0.1)
Net cash used in investing activities	$ (549.2)	$ (851.0)

For the six months ended June 29, 2019, the primary use of cash used in investing activities related to the acquisition of Citoxlab, capital expenditures to support the growth of the business, and investments in certain venture capital and other equity investments. For the six months ended June 30, 2018, the primary use of cash used in investing activities related primarily to our acquisitions of MPI Research and KWS BioTest, and our capital expenditures to support the growth of the business; partially offset by proceeds from net investments, which primarily related to short-term investments held by our U.K. operations.

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

	Six Months Ended	
	June 29, 2019	June 30, 2018
	(in millions)	
Proceeds from long-term debt and revolving credit facility	$ 1,485.7	$ 2,392.6
Proceeds from exercises of stock options	23.9	24.2
Payments on long-term debt, revolving credit facility and finance lease obligations	(1,076.8)	(1,680.2)
Payments on debt financing costs	—	(18.3)
Purchase of treasury stock	(17.9)	(13.7)
Other, net	(10.5)	—
Net cash provided by financing activities	$ 404.4	$ 704.6

For the six months ended June 29, 2019, net cash provided by financing activities reflected the net proceeds of $408.9 million on our $2.3B Credit Facility and finance lease obligations. Included in the net proceeds are approximately $950 million of gross proceeds and payments on the revolving credit facility, which resulted from a non-U.S. Euro functional currency entity repaying an existing Euro loan and replacing the Euro loan with a U.S. dollar denominated loan. 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 and net to zero. Net cash provided by financing activities also reflected proceeds from exercises of employee stock options of $23.9 million. Net cash provided by financing activities was partially offset by treasury stock purchases of $17.9 million made due to the netting of common stock upon vesting of stock-based awards in order to satisfy individual statutory tax withholding requirements and the purchase of an additional 5% equity interest in Vital River for $7.9 million which is included in Other, net.

For the six months ended June 30, 2018, net cash provided by financing activities reflected the incremental proceeds from the refinancing of our previous $1.65 Billion Credit Facility to the $2.3 Billion Credit Facility and the proceeds from our $500.0 million Senior Notes; and proceeds from exercises of employee stock options of $24.2 million; partially offset by payments on debt financing costs of $18.3 million and treasury stock purchases of $13.7 million made due to the netting of common stock upon vesting of stock-based awards in order to satisfy individual statutory tax withholding requirements.

Contractual Commitments and Obligations

The disclosure of our contractual commitments and obligations was reported in our Annual Report on Form 10-K for fiscal 2018. There have been no material changes from the contractual commitments and obligations previously disclosed in our Annual Report on Form 10-K for fiscal 2018 other than the changes described in Note 2, “Business Acquisitions,” 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 June 29, 2019, 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 June 29, 2019 was $128.6 million, of which we funded $75.4 million through June 29, 2019. Refer to Note 6, “Venture Capital and Other 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 June 29, 2019 were $6.7 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 our application of the following 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: (1) revenue recognition, (2) income taxes, (3) goodwill and intangible assets, (4) valuation and impairment of long-lived assets, (5) pension and other retirement benefit plans, and (6) stock-based compensation. Our significant accounting policies are described in our Annual Report on Form 10-K for fiscal year 2018 as well as Note 16, “Leases” in this Quarterly Report on Form 10-Q.

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 six months ended June 29, 2019 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 June 29, 2019, 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 $15.5 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, British Pound, Canadian Dollar, Chinese Yuan Renminbi, and Japanese Yen. During the six months ended June 29, 2019, the most significant drivers of foreign currency translation adjustment the Company recorded as part of Other comprehensive income (loss) were the Euro, British Pound, Canadian Dollar, Chinese Yuan Renminbi, and Japanese Yen.

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 six months ended June 29, 2019, our revenue would have increased by $41.8 million and our operating income would have decreased by $0.1 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 six months ended June 29, 2019, 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 $2.3B Credit Facility. We did not have any significant foreign currency contracts open as of June 29, 2019.

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 June 29, 2019, 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 June 29, 2019. 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 June 29, 2019 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

In addition to the other information set forth in this report, you should carefully consider the factors discussed in Part I, “Item 1A. Risk Factors” in our Annual Report on Form 10-K for fiscal year 2018, which could materially affect our business, financial condition, and/or future results. The risks described in our Annual Report on Form 10-K are not the only risks we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition, and/or operating results. There have been no material changes to the risk factors set forth in our Annual Report on Form 10-K for fiscal year 2018, except as disclosed below.

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 for the purpose of stealing data or disrupting the systems. While we have taken measures to protect them from intrusion, in March 2019, we detected evidence that an unauthorized third party has accessed certain of our information systems and acquired data. The Company’s investigation is ongoing, but we believe that the incident is attributable to a sophisticated intruder. We are working with a leading data security firm to assist in our investigation, and are also coordinating with law enforcement authorities. The investigation indicates that the affected information included client information.

Our contracts with our clients typically contain provisions that require us to keep confidential the information generated from the studies we conduct. The unauthorized access detected, as well as any future breaches, could expose us 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 others. In addition, we may face investigations by government regulators and agencies as a result of this incident or as a result of future incidents.

While the Company is in the process of implementing additional security safeguards, it is expected to take a number of months for all of these additional security safeguards to be fully implemented. While we have taken steps to limit the unauthorized third party’s access to our computer systems, we will be unable to determine that this matter has been entirely contained until the additional steps to secure our information systems have been fully implemented. In addition, there can be no assurance that the additional security safeguards will be successful. In the event that additional data is accessed prior to the full implementation of these additional security safeguards or in the event that such additional security safeguards are unsuccessful, we could suffer significant harm.

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 June 29, 2019.

	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)
March 31, 2019 to April 27, 2019	59	$ 145.50		$ 129,105
April 28, 2019 to May 25, 2019	700	136.89		129,105
May 26, 2019 to June 29, 2019	147	125.45		129,105
Total	906		—	

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 June 29, 2019, we did not repurchase any shares of common stock under our stock repurchase program or in open market trading. As of June 29, 2019, 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
4.1*+	Charles River Laboratories International, Inc. Form of Performance Share Unit granted under the 2018 Incentive Plan
10.1*+	Charles River Laboratories International, Inc. Form of Non-Qualified Stock Option granted under the 2018 Incentive Plan
10.2*+	Charles River Laboratories International, Inc. Form of Restricted Stock Unit granted under the 2018 Incentive Plan
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.

July 31, 2019	/s/ JAMES C. FOSTER
	James C. Foster *Chairman, President and Chief Executive Officer*
July 31, 2019	/s/ DAVID R. SMITH
	David R. Smith *Corporate Executive Vice President and Chief Financial Officer*

Exhibit 4.1

FORM OF
CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
2018 INCENTIVE PLAN
PERFORMANCE SHARE UNIT AWARD AGREEMENT (the "Award Agreement")

This Performance Share Unit Award (the "Award") is granted as of February xx, 20xx by Charles River Laboratories International, Inc. (the "Company") to **«FN_» «LN_»** (the "Participant") on the terms and conditions as set forth in this Award Agreement and in the 2018 Incentive Plan (as amended from time to time, the "Plan"). All capitalized terms used herein shall have the meaning specified in the Plan, unless another meaning is specified herein.

In accordance with this grant, and as a condition thereto, the Company agrees as follows:

SECTION 1. *Performance Share Unit Award; Performance Period; Date of Grant.*

Target Award:	**«M_Perf_Shares»** Performance Share Units (the "Target Award")
Performance Period:	December xx, 20xx through and ending on December xx, 20xx (the "Performance Period")
Date of Grant:	February xx, 20xx

SECTION 2. *Nature of Award.* The Target Award represents the opportunity to receive a future payment equal to a number of shares of Company common stock, par value $0.01 per share (the "Performance Shares"), to be delivered in the form of unrestricted common stock, as are earned in accordance with Section 3 and Section 4 of this Award Agreement.

SECTION 3. *Determination of Number of Shares Earned.* The number of Performance Shares earned as of the end of the Performance Period, if any, shall be determined as follows (subject to the Participant's continued employment through December xx, 20xx, except as provided under Section 5):

# of Shares = # Target Award x EPS Payout Percentage x TSR Payout Percentage

For purposes of this Award Agreement:

"# Target Award" means the number of Performance Share Units comprising the Target Award in Section 1, above.

"EPS Payout Percentage" means the percentage multiplier as determined in the table below:

Performance Level	**20xx Non-GAAP EPS as % of 20xx Non-GAAP EPS Target**	**EPS Payout Percentage**
Below Threshold	Less than 90%	0%
Threshold	90%	50%
Target	100%	100%
Maximum	110%	150%
Above Maximum	Greater than 110%	150%

As shown in the table above, if 20xx Non-GAAP EPS falls at or between 90% and 110% of the 20xx Non-GAAP EPS Target, EPS Payout Percentage will be calculated based upon a linear interpolation using the table above.

"20xx Non-GAAP EPS" means the Company's reported **20xx** Non-GAAP earnings per share excluding the financial performance of its venture capital investments as reported in its earnings releases.

"20xx Non-GAAP EPS Target" means **$x.xx**, representing the Company's Non-GAAP earnings per share target for 20xx, as approved by the Company's Board of Directors, less the portion of that target which is attributable to the projected financial performance of the Company's venture capital investments in 20xx as reported in its earnings releases.

"TSR" means Total Shareholder Return, which is the share price appreciation of any particular company's publicly traded common stock plus dividends accrued, as measured during the Performance Period. The starting and ending points for calculating a company's 3-year TSR are the average closing stock price of the common stock for the twenty (20) trading days prior to the start or end date of the Performance Period, as applicable. For purposes of clarity, any dividends will be accrued as cash, summing all dividends over the Performance Period.

"TSR Payout Percentage" means the percentage multiplier as determined in the table below:

Relative 3-year TSR Percentile	**TSR Payout Percentage**
>90th Percentile	135%
75th Percentile	125%
50th Percentile	100%
25th Percentile	75%
<10th Percentile	65%

As shown in the table above, between each of the five percentile levels, the TSR Payout Percentage will be calculated based upon a linear interpolation. For example, there is linear interpolation between the 10th Percentile and the 25th Percentile, and a separate linear interpolation between the 25th Percentile and the 50th Percentile.

"Relative 3-year TSR Percentile" means the comparative percentile of the Company's 3-year TSR as compared to the TSRs for the companies in the Peer Group.

"Peer Group" means the selected companies within the S&P 1500 Healthcare Index as determined by the Compensation Committee of the Board of Directors prior to the award; provided, however, that the Peer Group shall include only those companies that remain on the list, based on continuing to meet the qualifications originally established for companies to be selected for the list, at the end of the Performance Period. By way of clarity, but not intended to address all circumstances:

- If a member of the Peer Group is acquired by another company, the acquired Peer Group company will be removed from the Peer Group for the entire Performance Period.

- If a member of the Peer Group sells, spins-off, or disposes of a portion of its business, then such Peer Group company will remain in the Peer Group for the Performance Period unless such disposition(s) results in the disposition of more than 50% of such company's total assets during the Performance Period.

- If a member of the Peer Group acquires another company, the acquiring Peer Group company will remain in the Peer Group for the Performance Period.

- If a member of the Peer Group is delisted on all major stock exchanges, such delisted company will be removed from the Peer Group for the entire Performance Period.

- If the Company and/or any member of the Peer Group split its stock or declare a distribution of shares, such company's TSR performance will be adjusted for the stock split or share distribution so as not to give an advantage or disadvantage to such company by comparison to the other companies.

- Members of the Peer Group that file for bankruptcy, liquidation or reorganization during the Performance Period will remain in the Peer Group positioned below the lowest performing non-bankrupt member of the Peer Group in reverse chronological order by bankruptcy date (except to the extent such member of the Peer Group is removed pursuant to another of the circumstances above).

In addition, the Compensation Committee shall have the authority to make other appropriate adjustments in response to a change in circumstances that results in a member of the Peer Group no longer satisfying the criteria for which such member was originally selected.

The total "# of Shares" earned shall be determined by the Compensation Committee of the Board of Directors of the Company (the "Administrator") in its sole discretion based on the formula set out above in this Section 3. The Payout Percentage may be as low as 0%, or as high as 200%. The Administrator shall make the determination of the EPS Payout Percentage at a meeting of the Administrator to occur in the first calendar quarter of fiscal 20xx, and shall make the determination of the # of Shares at a meeting of the Administrator to occur in the first calendar quarter of fiscal year 20xx; provided, however, that the Administrator has the discretion to make such determination and/or grant of # of Shares at such time or times as it deems acceptable in the sole discretion of the Administrator.

TSR Outperformance Override Feature. Notwithstanding the foregoing, in the event that (a) 20xx Non-GAAP EPS as a % of 20xx Non-GAAP EPS Target is less than 90% but greater than 85% and (b) the Relative 3-year TSR Percentile is 75^{th} percentile or greater, then the # of Shares earned as of the end of the Performance Period, if any, shall be determined as follows:

# of Shares = # Target Award x TSR Outperformance Payout Percentage

For purposes of this Award Agreement:

"TSR Outperformance Payout Percentage" means the percentage multiplier as determined in the table below:

20xx Non-GAAP EPS as % of 20xx Non-GAAP EPS Target	TSR Outperformance Payout Percentage
85%	10%
87.5%	20%
89.99%	30%

As shown in the table above, between 85% of 20xx Non-GAAP EPS Target and 89.99% Non-GAAP EPS Target, TSR Outperformance Payout Percentage will be calculated based upon a linear interpolation.

SECTION 4. *Payment of Performance Shares.* The Performance Shares payable to a Participant as determined by the Payout Percentage calculated pursuant to Section 3 shall be as follows:

- 100% of the Performance Shares will be paid in the form of common stock of the Company (without any restrictions thereupon).

The Company shall not be required to issue any fractional Performance Shares pursuant to this Award Agreement, and the Compensation Committee shall round fractions down.

SECTION 5. *Termination of Employment.*

(a) If the Participant's employment with the Company is terminated by the Company or by the Participant (other than by the death of the Participant or by virtue of the Participant's Full Career Retirement), the provisions of Section 4.d.(5-6) of the Plan shall govern.

(b) If the Participant's employment with the Company is terminated by reason of death prior to the end of the Performance Period, the provisions of Sections 4.d.(5) and 4.d.(7) of the Plan shall govern.

(c) If the Participant's employment with the Company is terminated by virtue of a Full Career Retirement, the Performance Shares shall continue to vest as they would have absent an employment termination, subject to the Participant's continued compliance with the restrictions set forth in Section 6, and the number of Performance Shares earned as of the end of the Performance Period shall be determined in accordance with Section 3 and will be paid to the Participant at the time they would have been paid absent an employment termination.

For purposes of this Award Agreement:

"Full Career Retirement" means the Participant's termination of employment from the Company and its subsidiaries and/or affiliates, other than for cause, on or after such time that the Participant has become Retirement Eligible.

"Retirement Eligible" means that the Participant (i) has attained age 55, (ii) has a minimum of 10 years of service with the Company and its subsidiaries and/or affiliates (such service only to have deemed to have commenced at such time as such subsidiary and/or affiliate became a subsidiary and/or affiliate of the Company), (iii) the numerical sum of the Participant's age and years of service (as calculated pursuant to clause (ii) above) is equal to at least 70, (iv) the Participant has given notice, in form satisfactory to the Company, to the Chief Administrative Officer of the Company (or, if the Participant is the Chief Administrative Officer, to the Chief Executive Officer) of his or her intent to retire specifying the exact intended date of retirement (provided that prior to such notice the Company had not already given notice to the Participant that he or she would be terminated), and remained employed by the Company until the earlier of (a) the one year anniversary of the date of such notice or (b) the date on which the Employee experienced a termination of employment due to death or disability or was terminated by the Company without cause and (v) at the time the Participant gave such notice to the Company he or she also provided the Company a signed acknowledgement, in a form satisfactory to the Company, reaffirming the covenants set forth in Section 6.

(d) For purposes of the Plan and the Award Agreement, a transfer of employment from the Company to any subsidiary of the Company or vice versa, or from one subsidiary to another, shall not be considered a termination of employment.

SECTION 6. *Retirement Restrictions.* For the period beginning on the date of the Participant's Full Career Retirement and ending on the date on which the Award would have become fully vested absent a termination of employment (the "Restricted Period"), the Participant shall not, directly or indirectly, without the prior written consent of the Company, render services as an employee, consultant, director, partner or otherwise to any person, entity, division, subsidiary or subgroup whose primary business activity is in competition with the Company's business, or (2) assist with the creation of (a) any entity whose primary business activity is in competition with the Company's business, or (b) any division, subsidiary or subgroup of an entity whose primary business activity is in competition with the Company's business. Nothing herein shall prohibit the Participant from pursuing employment with any corporation or entity engaged substantially in the discovery or development of pharmaceuticals or medical devices as long as such company also manufactures, markets and sells such products. THE PARTICIPANT ACKNOWLEDGES AND UNDERSTANDS THAT THIS SECTION MAY AFFECT THE PARTICIPANT'S RIGHT TO ACCEPT EMPLOYMENT WITH OTHER COMPANIES SUBSEQUENT TO EMPLOYMENT BY THE COMPANY AND THAT THE RESTRICTIONS CONTAINED HEREIN ARE SEPARATE AND APART AND IN ADDITION TO ANY SIMILAR RESTRICTIONS, NON-COMPETE OR OTHERWISE, THAT THE PARTICIPANT MAY BE SUBJECT TO PURSUANT ANY OTHER AGREEMENT WITH THE COMPANY OR ANY OF ITS AFFILIATES.

SECTION 7. *Tax Withholding.* Pursuant to paragraph 4.a.(6) of the Plan, the Administrator shall have the power and the right to deduct or withhold, or require the Participant to remit to the Company, an amount sufficient to satisfy any federal, state, local or other taxes required by applicable law to be withheld with respect to payment of the Award.

SECTION 8. *No Employment Commitment; Rights as a Shareholder.* Nothing herein contained or contained in the Plan shall be deemed to be or constitute an agreement or commitment by the Company to continue to employ the Participant for the period within which this Award may be earned or exercised. The Participant acknowledges and agrees that his or her employment with the Company shall remain on an "at will" basis and that the Company may terminate the employment of the Participant with or without cause at any time. The Participant shall have no rights as a shareholder with respect to the Performance Share Units subject to the Award until the shares with respect to the Award have been issued.

SECTION 9. *Limitation of Rights; Dividend Equivalents.* Prior to the receipt of shares of Common Stock as outlined above, Participant shall not have (i) any rights of ownership of the shares of Common Stock subject to the Performance Share Units before the issuance of such shares, (ii) any right to vote such shares, or (iii) the right to receive any cash dividends paid on shares underlying Performance Share Units if and when cash dividends are paid to shareholders of the Company.

SECTION 10. *Transferability.* This Performance Award is not transferable by the Participant otherwise than by will or the laws of descent and distribution.

SECTION 11. *Ratification of Actions.* By accepting the Award or other benefit under the Plan, the Participant and each person claiming under or through him or her shall be conclusively deemed to have indicated the Participant's acceptance and ratification of, and consent to, any action taken under the Plan or the Award by the Company, the board or the Administrator. All decisions or interpretations of the Company, the Board and the Administrator upon any questions arising under the Plan and/or this Award Agreement shall be binding, conclusive and final on all parties. In the event of any conflict between any provision of the Plan and this Award Agreement, the terms and provisions of the Plan shall control.

SECTION 12. *Notices.* Any notice hereunder to the Company shall be addressed to its office, 251 Ballardvale Street, Wilmington, MA 01887, Attention: Corporate Executive Vice President, Human Resources, General Counsel & Chief Administrative Officer, and any notice hereunder to the Participant shall be addressed to him or her at the address specified on the Award Agreement, subject to the right of either party to designate at any time hereafter in writing some other address.

SECTION 13. *Entire Agreement; Governing Law.* The Plan and this Award Agreement constitute the entire agreement with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and you with respect to the subject matter hereof. This Award Agreement may not be modified in a manner that is materially adverse to your interest except by means of a writing signed by the Company and you. This Award Agreement is governed by the internal substantive laws but not the choice of law rules of Delaware.

YOU ARE HEREBY INFORMED THAT THIS AWARD IS SUBJECT TO ALL TERMS AND CONDITIONS OF THE PLAN, A COPY OF WHICH IS ATTACHED HERETO. YOU ARE HEREBY INFORMED THAT ALL DECISIONS OR INTERPRETATIONS OF THE ADMINISTRATOR UPON ANY QUESTIONS ARISING UNDER THE PLAN OR THIS AWARD AGREEMENT ARE FINAL, BINDING AND CONCLUSIVE.

SECTION 14. *Financial Statements.* The Company's most recent Annual Report to Shareholders containing the Company's audited financial statements for the last three (3) years and its Annual Report on Form 10-K is available on the Company's website at http://www.criver.com.

SECTION 15. *Recoupment.* Shares awarded under this Award Agreement are subject to recoupment in accordance with the Company's Corporate Governance Guidelines, as may be revised from time to time, and/or any other so-called recoupment, clawback or similar policy that may be approved by the Board of Directors of the Company or any committee thereof.

SECTION 16. *Adjustments; Effect of Certain Transactions.* The number of Shares covered by the Performance Share Units shall be adjusted as set forth in Section 5 of the Plan to reflect dividends or other distributions, recapitalizations, stock splits, reverse stock splits, reorganizations, mergers, consolidations, split-ups, spin-offs, combinations, repurchases or exchanges. In the event of a Covered Transaction "double trigger event" (as defined in the Plan) where the covered transaction occurs (A) on or prior to December xx, 20xx, the **# of Shares** shall be deemed to be equal to the **# Target Award** and (B) after December xx, 20xx and prior to December xx, 20xx, the # of Shares shall be deemed to be equal to the product of the **# Target Award x EPS Payout Percentage.**

SECTION 17. *Section 409A of the Code.* This Award is intended to be excepted from coverage under and/or comply with Section 409A of the Internal Revenue Code, as amended (the "Code") and shall be administered, interpreted and construed accordingly. The Company may, in its sole discretion and without Participant's consent, modify or amend the terms of this Award Agreement, impose conditions on the timing and effectiveness of the issuance of the Performance Share Units, and/or take any other action it deems necessary to cause this Award Agreement to be exempted from Section 409A (or to comply therewith to the extent the Company determines it is not excepted). Notwithstanding, Participant recognizes and acknowledges that Section 409A may affect the timing and recognition of payments due hereunder, and may impose upon the Participant certain taxes or other charges for which the Participant is and shall remain solely responsible. In order to minimize the application of Section 409A of the Code, the Company will deliver the Performance Shares, if any, to the Participant, between January 1, 20xx and March 15, 20xx, or, if earlier, in the year following the Participant's death. If the Company considers the Participant to be one of its "specified employees" and the Participant is a U.S. taxpayer, in each case, at the time of his or her "separation from service" (as such terms are defined in the Code) from the Company, no conversion specified hereunder shall occur prior to the expiration of the six-month period measured from the date of the Participant's separation from service from the Company to the extent required to comply with Section 409A of the Code.

SECTION 18. *Provisions of the Plan.* This Award is subject to the terms and provisions of the 2018 Incentive Plan, a copy of which is attached hereto and additional copies of which are available upon request by Participant. Information about the Plan, subsequent to its approval by the shareholders of the Company at the 2018 Annual Meeting of shareholders, will also be included in the Prospectus for the Plan, which will be available on the Company's Intranet site.

IN WITNESS WHEREOF, and by the signatures of the Participant and a duly authorized officer of the Company below, the Participant and the Company agree that this Award Agreement is granted under and governed by the terms and conditions of the Charles River Laboratories International, Inc. 2018 Incentive Plan, as amended from time to time, and the terms and conditions contained herein, as well as such administrative regulations and the Compensation Committee may adopt from time to time.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.	**«FN_» «LN_»**
By: __________ David P. Johst Corporate Executive Vice President, General Counsel & Chief Administrative Officer	By: ____________________________________
DATE: __________	DATE: _________________________________

Exhibit 10.1

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.

Non-Qualified Stock Option
Granted Under 2018 Incentive Plan

The Company's most recent Annual Report to Shareholders containing the Company's audited financial statements for the last three years and its Annual Report on Form 10-K is available on the Company's website at http://www.criver.com. You are urged to review those documents before making a decision whether or not to exercise your stock options.

Non-Qualified Stock Option granted by Charles River Laboratories International, Inc., a Delaware corporation ("Charles River"), to **«FN_» «LN_»**, an employee of Charles River or its subsidiaries (the "Employee"), pursuant to the Company's 2018 Incentive Plan (as amended from time to time, the "Plan"). All initially capitalized terms used herein shall have the meaning specified in the Plan, unless another meaning is specified herein.

1. Grant of Option.

This certificate evidences the grant by Charles River on **February xx, 20xx** to the Employee of an option to purchase, in whole or in part, on the terms herein provided, a total of **«AOG_»** shares of common stock of Charles River (the "Shares") at **$X.XX** per share, which is not less than the fair market value of the Shares on the date of grant of this option. The Final Exercise Date of this option (as that term is used in the Plan) is **February xx, 20xx**. The option evidenced by this certificate is not intended to be an "incentive stock option" as defined in section 422 of the Internal Revenue Code of 1986, as amended from time to time (the "Code").

This option is exercisable in the following cumulative installments prior to the Final Exercise Date:

Insert Vesting Table

Except as otherwise provided herein, upon termination of the Employee's employment with the Company, any portion of this option that is not then exercisable shall promptly expire and the remainder of this option shall remain exercisable only for such period, if any, as is specified in the Plan.

2. Full Career Retirement.

If the Employee's employment with the Company is terminated by virtue of a Full Career Retirement, the option shall continue to be outstanding, and become exercisable as it would have absent an employment termination, subject to the Employee's continued compliance with the restrictions set forth in Section 4.

For purposes of this option [certificate]:

"Full Career Retirement" means the Employee's termination of employment from the Company and its subsidiaries and/or affiliates, other than for cause, on or after such time that the Employee has become Retirement Eligible.

"Retirement Eligible" means that the Employee (i) has attained age 55, (ii) has a minimum of 10 years of service with the Company and its subsidiaries and/or affiliates (such service only to have deemed to have commenced at such time as such subsidiary and/or affiliate became a subsidiary and/or affiliate of the Company), (iii) the numerical sum of the Employee's age and years of service (as calculated pursuant to clause (ii) above) is equal to at least 70, (iv) the Employee has given notice, in form satisfactory to the Company, to the Chief Administrative Officer of the Company (or, if the Employee is the Chief Administrative Officer, the Chief Executive Officer) of his or her intent to retire specifying the exact intended date of retirement (provided that prior to such notice the Company had not already given notice to the Employee that he or she would be terminated), and remained employed by the Company until the earlier of (a) the one year anniversary of the date of such notice or (b) the date on which the Employee experienced a termination of employment due to death or disability or was terminated by the Company without cause and (v) at the time the Employee gave such notice to the Company he or she also provided the Company with a signed acknowledgement, in a form satisfactory to the Company, reaffirming the covenants set forth in Section 4.

3. Exercise of Option.

(a) Each election to exercise this option shall be made by contacting UBS Financial Services at 800-820-9296 (in the U.S.) or 201-272-7566 (outside the U.S.) or via the internet at www.ubs.com/onesource/CRL. The purchase price may be paid by delivery of cash, certified check, bank draft, money order, unrestricted common stock of Charles River that the Employee has held for at least six months, or an unconditional and irrevocable undertaking by a broker acceptable to Charles River to deliver promptly to Charles River sufficient funds to pay the exercise price. In the event that this option is exercised by the Employee's Legal Representative, Charles River shall be under no obligation to deliver Shares hereunder unless and until it is satisfied as to the authority of the person or persons exercising this option.

(b) Exercise Period Upon Termination of Employment. Except as set forth in Section 3(d) below, if the Employee ceases to be an employee of the Company, the Employee may at any time within a period of three (3) months after the date of such employment termination or cessation (but prior to the expiration of the option) exercise the option to the extent that the option was exercisable on the date of such employment termination or cessation.

(c) Exercise Period in the Event of Death. If the Employee dies while in the employ of the Company, the option, to the extent that the Employee was entitled to exercise it on the date of death, may be exercised within a period of one year after the Employee's death (but prior to the expiration of the option) by the person or persons to whom the Employee's rights under the option shall pass by will or by the laws of descent and distribution.

(d) Exercise Period in the Event of Full Career Retirement. If the Employee's employment with the Company is terminated by virtue of a Full Career Retirement, the option will remain and/or become exercisable as it would absent an employment termination.

4. Retirement Restrictions.

For the period beginning on the date of the Employee's Full Career Retirement and ending on the date on which the option would have become fully vested absent a termination of employment (the "Restricted Period"), the Employee shall not, directly or indirectly, without the prior written consent of the Company, (1) render services as an employee, consultant, director, partner or otherwise to any person, entity, division, subsidiary or subgroup whose primary business activity is in competition with the Company's business, or (2) assist with the creation of (a) any entity whose primary business activity is in competition with the Company's business, or (b) any division, subsidiary or subgroup of an entity whose primary business activity is in competition with the Company's business. Nothing herein shall prohibit the Employee from pursuing employment with any corporation or entity engaged substantially in the discovery or development of pharmaceuticals or medical devices as long as such company also manufactures, markets and sells such products. THE EMPLOYEE ACKNOWLEDGES AND UNDERSTANDS THAT THIS SECTION MAY AFFECT THE EMPLOYEE'S RIGHT TO ACCEPT EMPLOYMENT WITH OTHER COMPANIES SUBSEQUENT TO EMPLOYMENT BY THE COMPANY AND THAT THE RESTRICTIONS CONTAINED HEREIN ARE SEPARATE AND APART AND IN ADDITION TO ANY SIMILAR RESTRICTIONS, NON-COMPETE OR OTHERWISE, THAT THE EMPLOYEE MAY BE SUBJECT TO PURSUANT ANY OTHER AGREEMENT WITH THE COMPANY OR ANY OF ITS AFFILIATES.

5. Notice of Disposition.

The person exercising this option shall notify Charles River when making any disposition of the Shares acquired upon exercise of this option, whether by sale, gift or otherwise.

6. Restrictions on Transfer of Shares.

If at the time this option is exercised Charles River is a party to any agreement restricting the transfer of any outstanding shares of its Common Stock, this option may be exercised only if the Shares so acquired are made subject to the transfer restrictions set forth in that agreement (or if more than one such agreement is then in effect, the agreement specified by the Board of Directors).

7. Withholding; Agreement to Provide Security.

If at the time this option is exercised the Company determines that under applicable law and regulations the Company could be liable for the withholding of any federal or state tax upon exercise or with respect to a disposition of any Shares acquired upon exercise of this option, this option may not be exercised unless the person exercising this option remits to the Company any amounts required to be withheld upon exercise and gives such security as the Company deems adequate to meet the potential liability of the Company for the withholding of tax upon a disposition of the Shares (and agrees to augment such security from time to time in any amount reasonably determined by the Company to be necessary to preserve the adequacy of such security).

8. Nontransferability of Option.

This option is not transferable by the Employee otherwise than by will or the laws of descent and distribution, and is exercisable during the Employee's lifetime only by the Employee.

9. No Employment Commitment; Rights as a Stockholder.

Nothing herein contained or contained in the Plan shall be deemed to be or constitute an agreement or commitment by the Company to continue to employ the Employee for the period within which this option may be exercised. The Employee acknowledges and agrees that his or her employment with the Company shall remain on an "at will" basis and that the Company may terminate the employment of the Employee with or without cause at any time. The Employee shall have no rights as a stockholder with respect to the shares subject to the option until the proper exercise of the option and the issuance of a stock certificate for the option Shares with respect to which the option shall have been exercised.

10. Recoupment.

Shares awarded under this Award Agreement are subject to recoupment in accordance with the Company's Corporate Governance Guidelines, as may be revised from time to time, and/or any other so-called recoupment, clawback or similar policy that may be approved by the Board of Directors of the Company or any committee thereof.

11. Provisions of the Plan.

This option award is subject to the terms and provisions of the 2018 Incentive Plan, a copy of which has been made available to Employee and additional copies of which are available upon request by Employee. Information about the Plan is also included in the Prospectus for the 2018 Incentive Plan, a print copy of which we are delivering to you if this is your first award under the 2018 Incentive Plan, or which will be delivered to you prior to the initial vesting date hereunder and which is otherwise accessible on the Company's Intranet site.

IN WITNESS WHEREOF, the Company has caused this option to be executed under its corporate seal by its duly authorized officer. This option shall take effect as a sealed instrument.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.

By: ____________________________________
David P. Johst
Corporate Executive Vice President,
General Counsel & Chief Administrative Officer

Dated: Current Date

Exhibit 10.2

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
GRANTED UNDER 2018 INCENTIVE PLAN

RESTRICTED STOCK UNIT AWARD

Unless defined in this Restricted Stock Unit Award (this "**Award Document**"), capitalized terms will have the same meanings ascribed to them in the Charles River Laboratories International, Inc. 2018 Incentive Plan (the "**Plan**").

Pursuant to Section 4(c) and Section 4(d) of the Plan, you have been granted restricted units of Common Stock on the following terms and subject to the provisions of the Plan, which is incorporated by reference. In the event of a conflict between the provisions of the Plan and this Award Document, the provisions of the Plan will prevail. Each unit entitles you to receive one share of the Company's Common Stock at such time as your units vest in accordance with the schedule set forth below. The grant of the units to you does not transfer title to the underlying shares to you until such units have vested. Therefore, you do not have any voting or dividend rights relating to the underlying shares until such time as units vest.

Name: «FN» «LN»

Total Number of Units Granted: «ARSG» Units

Fair Market Value per Share: $X.XX

Date of Grant: February xx, 20xx

Vesting Schedule:

Insert Vesting Table

.

This Restricted Stock Units Award is made to you expressly on the condition that the shares underlying such award are granted under and governed by the terms and conditions of the Plan and the terms and conditions set forth in the attached Exhibit A.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.

____

David P. Johst
Corporate Executive Vice President,
General Counsel & Chief Administrative Officer

EXHIBIT A

TERMS AND CONDITIONS OF
RESTRICTED STOCK UNIT AWARD

Payment for Shares

No payment is required for the Restricted Stock Units (**"RSU"s**) that you receive under this Award, nor for the underlying Shares upon vesting of the RSUs.

Vesting

The RSUs that you receive under this Award will vest in accordance with the "Vesting Schedule" set forth in the Award Document.

Restricted Units

You may not sell, transfer, pledge or otherwise dispose of, make any short sale of, grant any option for the purchase of or enter into any hedging or similar transaction with the same economic effect as a sale, any RSUs, except as provided in the next paragraph.

Except as otherwise provided in the Plan, RSUs will not be transferable by you other than by will or by the laws of descent and distribution. With the consent of the Committee, you may transfer RSUs to: (i) your spouse, children or grandchildren ("Immediate Family Members"), (ii) a trust or trusts for the primary benefit of you and/or any or all of such Immediate Family Members or (iii) a partnership or other entity in which you and/or any or all of such Immediate Family Members or trusts are the only partners or equity participants; *provided* that a transferee of RSUs must agree in writing on a form prescribed by the Company to be bound by all provisions of this Award Document and subsequent transfers of RSUs will be prohibited except those in accordance with the Plan. Following transfer, RSUs will continue to be subject to the same terms and conditions as were applicable immediately before transfer, and the events of termination of the section below entitled "Termination" will continue to be applied with respect to you.

Termination

If you cease to be an employee of the Company or an Affiliate for any reason other than a termination by virtue of a Full Career Retirement, then (1) you will forfeit all of the unvested RSUs that you receive under this Award without any consideration and (2) such shares of unvested RSUs covered by this Award will revert to the Plan.

If your employment with the Company is terminated by virtue of a Full Career Retirement, the units shall continue to vest and be settled as they would have absent an employment termination, subject to your continued compliance with the restrictions set forth in below in "Retirement Restrictions."

For purposes of this Award Document:

"Full Career Retirement" means your termination of employment from the Company and its subsidiaries and/or affiliates, other than for cause, on or after such time that you have become Retirement Eligible.

"Retirement Eligible" means that you (i) have attained age 55, (ii) have a minimum of 10 years of service with the Company and its subsidiaries and/or affiliates (such service only to have deemed to have commenced at such time as such subsidiary and/or affiliate became a subsidiary and/or affiliate of the Company, (iii) the numerical sum of your age and years of service (as calculated pursuant to clause (ii) above) is equal to at least 70, (iv) you have given notice, in form satisfactory to the Company, to the Chief Administrative Officer of the Company (or, if you are the Chief Administrative Officer, to the Chief Executive Officer) of your intent to retire specifying the exact intended date of retirement to the Company (provided that prior to such notice the Company had not already given you notice that you would be terminated), and remained employed by the Company until the earlier of (a) the one year anniversary of the date of such notice or (b) the date on which you experience a termination of employment due to death or disability or you are terminated by the Company without cause and (v) at the time you give such notice to the Company you also provide the Company with a signed acknowledgement, in a form satisfactory to the Company, reaffirming the covenants set forth below in "Retirement Restrictions."

Retirement Restrictions

For the period beginning on the date of your Full Career Retirement and ending on the date on which the restricted unit would have become fully vested absent a termination of employment (the "Restricted Period"), you shall not, directly or indirectly, without the prior written consent of the Company, (1) render services as an employee, consultant, director, partner or otherwise to any person, entity, division, subsidiary or subgroup whose primary business activity is in competition with the Company's business, or (2) assist with the creation of (a) any entity whose primary business activity is in competition with the Company's business, or (b) any division, subsidiary or subgroup of an entity whose primary business activity is in competition with the Company's business. Nothing herein shall prohibit you from pursuing employment with any corporation or entity engaged substantially in the discovery or development of pharmaceuticals or medical devices as long as such company also manufactures, markets and sells such products. YOU ACKNOWLEDGE AND UNDERSTAND THAT THIS SECTION MAY AFFECT YOUR RIGHT TO ACCEPT EMPLOYMENT WITH OTHER COMPANIES SUBSEQUENT TO EMPLOYMENT BY THE COMPANY AND THAT THE RESTRICTIONS CONTAINED HEREIN ARE SEPARATE AND APART AND IN ADDITION TO ANY SIMILAR RESTRICTIONS, NON-COMPETE OR OTHERWISE, THAT YOU MAY BE SUBJECT TO PURSUANT ANY OTHER AGREEMENT WITH THE COMPANY OR ANY OF ITS AFFILIATES.

Shares

Upon the vesting of your RSUs, the underlying shares which have vested will be transferred from the transfer agent to your stock account at CRL's stock plan administrator.

Withholding Taxes

No shares will be released to you unless you have made acceptable arrangements to pay any withholding taxes that may be due as a result of the receipt of Shares upon vesting of the RSUs that you receive under this Award. These arrangements may include withholding of Shares that otherwise would be released to you when the RSUs vest or surrendering of RSUs or shares that you already own. The Fair Market Value of RSUs or Shares that are withheld or that you surrender, determined as of the date when the taxes otherwise would have been withheld in cash, will be applied as a credit against the taxes.

Lock-Up Period

If requested by the Company, you hereby agree that you will not sell, transfer, pledge, otherwise dispose, make any short sale of, grant any option for the purchase of or enter into any hedging or similar transaction with the same economic effect as a sale, any Shares (or other securities of the Company) held by you (other than those included in the registration) for a period specified by the representative of the underwriters of the Common Stock (or other securities of the Company) not to exceed 180 days following the effective date of a registration statement of the Company filed under the Securities Act.

You agree to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriter which are consistent with the foregoing or which are necessary to give further effect thereto. In addition, if requested by the Company or the representative of the underwriters of Common

Stock (or other securities) of the Company, you will provide, within 10 days of the request, the information required by the Company or the representative in connection with the completion of any public offering of the Company's securities pursuant to a registration statement filed under the Securities Act. The obligations described in this section entitled "Lock-Up Period" will not apply to a registration relating solely to employee benefit plans on Form S-3 or Form S-8 or similar forms that may be promulgated in the future, or a registration relating solely to a Rule 145 transaction on Form S-4 or similar forms that may be promulgated in the future. The Company may impose stop-transfer instructions with respect to the Shares (or other securities) subject to the foregoing restriction until the end of the 180-day period.

Recoupment

Shares awarded under this Award Agreement are subject to recoupment in accordance with the Company's Corporate Governance Guidelines, as may be revised from time to time, and/or any other so-called recoupment, claw back or similar policy that may be approved by the Board of Directors of the Company or any committee thereof.

Section 409A of the Code

This Award is intended to exempt and/or comply with Section 409A of the Internal Revenue Code, as amended (the "Code") and shall be administered, interpreted and construed accordingly. The Company may, in its sole discretion and without your consent, modify or amend the terms of this Award Agreement, impose conditions on the timing and effectiveness of the issuance of the Restricted Stock Units, and/or take any other action it deems necessary to cause this Award Agreement to be exempted from Section 409A (or to comply therewith to the extent the Company determines it is not excepted). Notwithstanding, you recognize and acknowledge that Section 409A may affect the timing and recognition of payments due hereunder, and may impose upon you certain taxes or other charges for which you are and shall remain solely responsible. If the Company considers you to be one of its "specified employees" and you are a U.S. taxpayer, in each case, at the time of your "separation from service" (as such terms are defined in the Code) from the Company, no conversion specified hereunder shall occur prior to the expiration of the six-month period measured from the date of your separation from service from the Company to the extent required to comply with Section 409A of the Code.

No Guarantee of Continued Service

YOU ACKNOWLEDGE AND AGREE THAT EXCEPT AS OTHERWISE PROVIDED HEREIN THE VESTING OF SHARES PURSUANT TO THE "VESTING SCHEDULE" HEREOF IS EARNED ONLY BY CONTINUING AS AN EMPLOYEE OF THE COMPANY OR ITS AFFILIATES. YOU FURTHER ACKNOWLEDGE AND AGREE THAT THIS AWARD DOCUMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER AND THE "VESTING SCHEDULE" DO NOT CONSTITUTE AN EXPRESS OR IMPLIED PROMISE OF CONTINUED EMPLOYMENT FOR THE VESTING PERIOD, FOR ANY PERIOD OR AT ALL AND WILL NOT INTERFERE IN ANY WAY WITH YOUR RIGHT OR THE COMPANY'S RIGHT OR ITS AFFILIATE'S RIGHT TO TERMINATE YOUR EMPLOYMENT AT ANY TIME, WITH OR WITHOUT CAUSE.

Entire Agreement; Governing Law

The Plan and this Award Document constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and you with respect to the subject matter hereof. This Award Document may not be modified in a manner that is materially adverse to your interest except by means of a writing signed by the Company and you. This Award Document is governed by the internal substantive laws of but not the choice of law rules of the State of Delaware.

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 June 29, 2019 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.

July 31, 2019

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 June 29, 2019 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.
July 31, 2019	

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 June 29, 2019 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
July 31, 2019	James C. Foster *Chairman, President and Chief Executive Officer* Charles River Laboratories International, Inc.
	/s/ David R. Smith
July 31, 2019	David R. Smith *Corporate Executive Vice President and Chief Financial Officer* Charles River Laboratories International, Inc.

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.