UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

		FORM 10)-Q		
(Mark One) ☑	QUARTERLY REPORT PURSUANT TO	SECTION 13 OR 15	o(d) OF THE SECURIT	TIES EXCHANGE ACT OF 1	934
	FOR THE O	JARTERLY PERIO	D ENDED June 27, 202	20	
		OR	,		
	TRANSITION REPORT PURSUANT TO FOR THI	SECTION 13 OR 15 E TRANSITION PE	* *	FIES EXCHANGE ACT OF 1	934
		Commission File No.	001-15943		
		~~			
		charles	river		
	CHARLES RIVER L	ABORATORI	ES INTERNATI	ONAL, INC.	
	(Exact	Name of Registrant as Sp	ecified in Its Charter)		
	Delaware			06-1397316	
	(State or Other Jurisdiction of Incorporation or Organization)			(I.R.S. Employer Identification No.)	
	251 Ballardvale Street W (Address of Principal Executive Offic	0	sachusetts	01887 (Zip Code)	
		,		\ \	
	(Registrant's telep	hone number, includi	ng area code): (781) 222	-6000	
	Securities re	gistered pursuant to	Section 12(b) of the Act:		
	Title of each class	Ticker symbol(s)	Name	e of each exchange on which reg	istered
Со	mmon stock, \$0.01 par value	CRL		New York Stock Exchange	
during the prec	y check mark whether the Registrant (1) has filed reding 12 months (or for such shorter period that to days. Yes $\ \square$ No $\ \square$				
	y check mark whether the registrant has submitted (§ 232.405 of this chapter) during the preceding to \square				
emerging grow	y check mark whether the Registrant is a large accelerath company. See the definitions of "large accelerathe Exchange Act.			1 0 1	
	Large accelerated filer	\checkmark		Accelerated filer	
	Non-accelerated filer			Smaller reporting company	
				Emerging growth company	
	rging growth company, indicate by a check mark i al accounting standards provided pursuant to Sect			ed transition period for complying	with any new or

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.

QUARTERLY REPORT ON FORM 10-Q FOR THE QUARTERLY PERIOD ENDED JUNE 27, 2020

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Special Note on Factors Affecting Future Results

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

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

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

Factors that might cause or contribute to such differences include, but are not limited to, those discussed in our Annual Report on Form 10-K for the year ended December 28, 2019, under the sections entitled "Our Strategy," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and in this Quarterly Report on Form 10-Q, under the sections entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Risk Factors," in our press releases, and other financial filings with the Securities and Exchange Commission. We have no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events, or risks 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 Mo	onths	Ended	Six Mon	nths Ended	
	June 27, 2020		June 29, 2019	June 27, 2020		June 29, 2019
Service revenue	\$ 550,561	\$	505,880	\$ 1,097,153	\$	956,822
Product revenue	132,023		151,688	292,490		305,315
Total revenue	682,584		657,568	1,389,643		1,262,137
Costs and expenses:						
Cost of services provided (excluding amortization of intangible assets)	374,938		345,369	747,762		662,169
Cost of products sold (excluding amortization of intangible assets)	75,408		74,095	157,582		150,087
Selling, general and administrative	127,712		135,941	257,613		258,515
Amortization of intangible assets	27,758		22,395	55,637		41,806
Operating income	76,768		79,768	 171,049		149,560
Other income (expense):						
Interest income	276		274	592		453
Interest expense	(19,352)		(20,835)	(34,419)		(30,822)
Other income (expense), net	26,260		(213)	2,189		6,093
Income from operations, before income taxes	83,952		58,994	139,411		125,284
Provision for income taxes	16,284		14,685	20,906		25,287
Net income	67,668		44,309	118,505		99,997
Less: Net income attributable to noncontrolling interests	233		581	301		1,136
Net income attributable to common shareholders	\$ 67,435	\$	43,728	\$ 118,204	\$	98,861
Earnings per common share						
Net income attributable to common shareholders:						
Basic	\$ 1.36	\$	0.90	\$ 2.39	\$	2.03
Diluted	\$ 1.34	\$	0.88	\$ 2.36	\$	1.99
Weighted-average number of common shares outstanding:						
Basic	49,553		48,772	49,371		48,615
Diluted	50,246		49,662	50,118		49,599

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

	Three Months Ended				Six Months Ended			
	June 27	7, 2020	Jun	e 29, 2019	June 27, 2020		Ju	ne 29, 2019
Net income	\$	67,668	\$	44,309	\$	118,505	\$	99,997
Other comprehensive income (loss):								
Foreign currency translation adjustment and other		6,750		(3,071)		(38,105)		6,814
Amortization of net loss and prior service benefit included in net periodic cost for pension and other post-retirement benefit plans		1,365		374		2,739		748
Comprehensive income, before income taxes		75,783		41,612		83,139		107,559
Less: Income tax expense (benefit) related to items of other comprehensive income		1,862		1,232		(177)		1,130
Comprehensive income, net of income taxes		73,921		40,380		83,316		106,429
Less: Comprehensive income (loss) related to noncontrolling interests, net of income taxes		284		88		(192)		1,101
Comprehensive income attributable to common shareholders, net of income taxes	\$	73,637	\$	40,292	\$	83,508	\$	105,328

CHARLES RIVER LABORATORIES INTERNATIONAL, INC. CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)

(in thousands, except per share amounts)

(in thousands) encept per share uniounts)		June 27, 2020	De	cember 28, 2019
Assets				
Current assets:				
Cash and cash equivalents	\$	402,020	\$	238,014
Trade receivables, net		532,531		514,033
Inventories		168,366		160,660
Prepaid assets		66,746		52,588
Other current assets		65,062		56,030
Total current assets		1,234,725		1,021,325
Property, plant and equipment, net		1,028,005		1,044,128
Operating lease right-of-use assets, net		169,192		140,085
Goodwill		1,735,641		1,540,565
Client relationships, net		732,221		613,573
Other intangible assets, net		73,970		75,840
Deferred tax assets		42,759		44,659
Other assets		224,371		212,615
Total assets	\$	5,240,884	\$	4,692,790
Liabilities, Redeemable Noncontrolling Interests and Equity				
Current liabilities:				
Current portion of long-term debt and finance leases	\$	53,713	\$	38,545
Accounts payable		82,978		111,498
Accrued compensation		167,957		158,617
Deferred revenue		170,410		171,805
Accrued liabilities		144,239		139,118
Other current liabilities		108,639		90,598
Total current liabilities		727,936		710,181
Long-term debt, net and finance leases		2,207,157		1,849,666
Operating lease right-of-use liabilities		147,348		116,252
Deferred tax liabilities		201,792		167,283
Other long-term liabilities		176,042		182,933
Total liabilities		3,460,275		3,026,315
Commitments and contingencies (Notes 2, 9, 11, 12, 16 and 17)				
Redeemable noncontrolling interests		23,884		28,647
Equity:				
Preferred stock, \$0.01 par value; 20,000 shares authorized; no shares issued and outstanding		_		_
Common stock, \$0.01 par value; 120,000 shares authorized; 49,804 shares issued and 49,659 shares outstanding as o June 27, 2020, and 48,936 shares issued and 48,936 shares outstanding as of December 28, 2019	f	498		489
Additional paid-in capital		1,590,117		1,531,785
Retained earnings		398,533		280,329
Treasury stock, at cost, 145 and 0 shares, as of June 27, 2020 and December 28, 2019, respectively		(23,793)		_
Accumulated other comprehensive loss		(212,714)		(178,019)
Total equity attributable to common shareholders		1,752,641		1,634,584
Noncontrolling interest		4,084		3,244
Total equity		1,756,725		1,637,828
Total liabilities, redeemable noncontrolling interests and equity	\$	5,240,884	\$	4,692,790
Soo Notes to Unaudited Condensed Consolidated Financial Statemen	=		:===	

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

		Six Months Ended			
	Ju	me 27, 2020		June 29, 2019	
Cash flows relating to operating activities					
Net income	\$	118,505	\$	99,997	
Adjustments to reconcile net income to net cash provided by operating activities:					
Depreciation and amortization		114,468		94,504	
Stock-based compensation		24,103		29,404	
Deferred income taxes		148		(1,347)	
Gain on venture capital and strategic equity investments, net		(11,876)		(6,321)	
Other, net		10,487		3,312	
Changes in assets and liabilities:					
Trade receivables, net		(19,371)		(36,538)	
Inventories		(1,901)		(2,565)	
Accounts payable		(25,619)		18,195	
Accrued compensation		8,728		(25,421)	
Deferred revenue		(3,273)		(241)	
Customer contract deposits		8,276		(10,918)	
Other assets and liabilities, net		8,221		(17,649)	
Net cash provided by operating activities		230,896		144,412	
Cash flows relating to investing activities					
Acquisition of businesses and assets, net of cash acquired		(382,250)		(492,381)	
Capital expenditures		(52,521)		(41,512)	
Purchases of investments and contributions to venture capital investments		(12,064)		(14,753)	
Proceeds from sale of investments		5,681		15	
Other, net		(1,157)		(607)	
Net cash used in investing activities		(442,311)		(549,238)	
Cash flows relating to financing activities					
Proceeds from long-term debt and revolving credit facility		1,411,953		1,485,731	
Proceeds from exercises of stock options		36,608		23,853	
Payments on long-term debt, revolving credit facility, and finance lease obligations		(1,045,235)		(1,076,761)	
Purchase of treasury stock		(23,793)		(17,883)	
Other, net		(4,417)		(10,516)	
Net cash provided by financing activities		375,116		404,424	
Effect of exchange rate changes on cash, cash equivalents, and restricted cash		295		5,670	
Net change in cash, cash equivalents, and restricted cash		163,996		5,268	
Cash, cash equivalents, and restricted cash, beginning of period		240,046		197,318	
Cash, cash equivalents, and restricted cash, end of period	\$	404,042	\$	202,586	
Supplemental cash flow information:					
Cash and cash equivalents	\$	402,020	\$	200,589	
Restricted cash included in Other current assets		465		498	
Restricted cash included in Other assets		1,557		1,499	
Cash, cash equivalents, and restricted cash, end of period	\$	404,042	\$	202,586	

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

<u>-</u>	Commo	n Stock	Additional					Attr	Total Equity Attributable to		N			
	Shares	Amoun	Paid-In Capital	Retained Earnings		omprehensive ncome (Loss)	Shares	Amount		Common areholders	No	ncontrolling Interest	Т	otal Equity
December 28, 2019	48,936	\$ 489	\$ 1,531,785	\$ 280,329	\$	(178,019)	_	s —	\$	1,634,584	\$	3,244	\$	1,637,828
Net income	_	_	_	50,769		_	_	_		50,769		399		51,168
Other comprehensive loss	_	_	_	_		(40,898)	_	_		(40,898)		_		(40,898)
Buy-out and contingent consideration recognition in connection with redeemable noncontrolling interest	_	_	(2,379)	_		_	_	_		(2,379)		_		(2,379)
Issuance of stock under employee compensation plans	694	7	22,616	_		_	_	_		22,623		_		22,623
Acquisition of treasury shares	_	_	_	_		_	144	(23,675)		(23,675)		_		(23,675)
Stock-based compensation	_	_	10,960	_		_	_	_		10,960		_		10,960
March 28, 2020	49,630	496	1,562,982	331,098		(218,917)	144	(23,675)		1,651,984		3,643		1,655,627
Net income	_	_	_	67,435		_	_	_		67,435		441		67,876
Other comprehensive income	_	_	_	_		6,203	_	_		6,203		_		6,203
Issuance of stock under employee compensation plans	174	2	13,992	_		_	_	_		13,994		_		13,994
Acquisition of treasury shares	_	_	_	_		_	1	(118)		(118)		_		(118)
Stock-based compensation			13,143							13,143				13,143
June 27, 2020	49,804	\$ 498	\$ 1,590,117	\$ 398,533	\$	(212,714)	145	\$ (23,793)	\$	1,752,641	\$	4,084	\$	1,756,725

<u>-</u>	Common Stock		Common Stock		Additional		Accumula Other	Trea	sury Stock	Total Equity Attributable to		
_	Shares	Amount	Paid-In Capital	Retained Earnings	Compreher Income (L		Amount	Common Shareholders	Noncontrolling Interest	Total Equity		
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,	300) 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		

1. BASIS OF PRESENTATION

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

Use of Estimates

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

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

Consolidation

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

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

Segment Reporting

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

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

Summary of Significant Accounting Policies

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

Newly Adopted Accounting Pronouncements

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

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

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

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

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

Newly Issued Accounting Pronouncements

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

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

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

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

2. BUSINESS COMBINATIONS

HemaCare Corporation

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

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

	Ja	January 3, 2020			
	(i	n thousands)			
Trade receivables	\$	6,451			
Inventories		8,468			
Other current assets (excluding cash)		3,527			
Property, plant and equipment		10,033			
Goodwill		209,104			
Definite-lived intangible assets		183,540			
Other long-term assets		5,920			
Current liabilities		(5,188)			
Deferred tax liabilities		(37,470)			
Other long-term liabilities		(7,664)			
Total purchase price allocation	\$	376,721			

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

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

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

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

The Company incurred transaction and integration costs in connection with the acquisition of \$0.1 million and \$5.8 million for the three and six months ended June 27, 2020, respectively, which were primarily included in Selling, general and administrative expenses within the unaudited condensed consolidated statements of income.

Beginning on January 3, 2020, HemaCare has been included in the operating results of the Company. HemaCare revenue for the three and six months ended June 27, 2020 was \$6.4 million and \$18.7 million, respectively. HemaCare operating loss for the three and six months ended June 27, 2020 was \$5.9 million and \$8.1 million, respectively.

The following selected unaudited pro forma consolidated results of operations are presented as if the HemaCare acquisition had occurred as of the beginning of the period immediately preceding the period of acquisition, which is December 30, 2018, after giving effect to certain adjustments. For the six months ended June 27, 2020, these adjustments included additional amortization of intangible assets and depreciation of fixed assets of \$0.4 million, elimination of intercompany activity and other one-time costs, and the tax impacts of these adjustments. For the six months ended June 29, 2019, these adjustments included additional amortization of intangible assets and depreciation of fixed assets of \$6.4 million, additional interest expense on borrowings of \$6.1 million, elimination of intercompany activity and other one-time costs, and the tax impacts of these adjustments.

		Three Mo	onths E	ıded		Six Mor	ıded		
	Jī	June 27, 2020 June 29, 2019				June 27, 2020	June 29, 2019		
				(in the	usand	s)			
				(una	udited))			
Revenue	\$	682,584	\$	668,095	\$	1,389,661	\$	1,281,551	
Net income attributable to common shareholders		67.383		42,467		123.088		94.654	

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.

Citoxlab

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

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

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

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

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

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

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

The Company incurred transaction and integration costs in connection with the acquisition of \$1.2 million and \$12.1 million for the three months ended June 27, 2020 and June 29, 2019, respectively, which were primarily included in Selling, general and administrative expenses within the unaudited condensed consolidated statements of income. The Company incurred transaction and integration costs in connection with the acquisition of \$2.5 million and \$17.2 million for six months ended June 27, 2020 and June 29, 2019, respectively, which were primarily included in Selling, general and administrative expenses within the unaudited condensed consolidated statements of income.

The following selected unaudited pro forma consolidated results of operations are presented as if the Citoxlab acquisition had occurred as of the beginning of the period immediately preceding the period of acquisition, which is December 31, 2017, after giving effect to certain adjustments. For the 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.

	 June 29, 2019								
	Three Months Ended		Six Months Ended						
Revenue	\$ 673,645	\$	1,325,483						
Net income attributable to common shareholders	53,625		114,653						

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

Other Acquisition

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

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

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

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

No significant integration costs were incurred with the acquisition for the three and six months ended June 27, 2020. The Company incurred transaction and integration costs in connection with the acquisition of \$1.1 million for the three and six months ended June 29, 2019.

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

3. REVENUE FROM CONTRACTS WITH CUSTOMERS

Disaggregation of Revenue

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

		Three Mo	nths En	ded	Six Months Ended						
	Jı	une 27, 2020	Jı	ıne 29, 2019	j	June 27, 2020		June 29, 2019			
		(in thousands)									
Major Products/Service Lines:											
RMS	\$	116,549	\$	136,054	\$	262,545	\$	273,226			
DSA		442,564		405,517		881,247		759,714			
Manufacturing		123,471		115,997		245,851		229,197			
Total revenue	\$	682,584	\$	657,568	\$	1,389,643	\$	1,262,137			

		Three Mo	nths E	nded	Six Months Ended				
	June 27, 2020			June 29, 2019	June 27, 2020			June 29, 2019	
				(in the	ousand	ls)		_	
Timing of Revenue Recognition:									
RMS									
Services and products transferred over time	\$	57,357	\$	57,321	\$	117,398	\$	112,134	
Services and products transferred at a point in time		59,192		78,733		145,147		161,092	
DSA									
Services and products transferred over time		442,447		405,351		881,011		759,429	
Services and products transferred at a point in time		117		166		236		285	
Manufacturing									
Services and products transferred over time		41,317		34,470		78,631		66,366	
Services and products transferred at a point in time		82,154		81,527		167,220		162,831	
Total revenue	\$	682,584	\$	657,568	\$	1,389,643	\$	1,262,137	

RMS

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

DSA

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

Manufacturing

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

Transaction Price Allocated to Future Performance Obligations

The Company discloses the aggregate amount of transaction price that is allocated to performance obligations that have not yet been satisfied as of June 27, 2020. Excluded from the disclosure is the value of unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which revenue is recognized at the amount to which the Company has the right to invoice for services performed. The Company has assessed future performance obligations with respect to the COVID-19 pandemic uncertainties and believes there is an insignificant impact on the ability to meet future performance obligations and the amount of revenue to be recognized.

The following table includes estimated revenue expected to be recognized in the future related to performance obligations that are unsatisfied (or partially satisfied) as of June 27, 2020:

				Revenue Expe	ected t	to be Recognized in	Futur	e Periods		
	Les	Less than 1 Year		1 to 3 Years		4 to 5 Years	Beyond 5 Years			Total
	<u></u>					(in thousands)				
DSA	\$	255,160	\$	121,350	\$	5,195	\$	654	\$	382,359
Manufacturing		11,585		6,627		32		19		18,263
Total	\$	266,745	\$	127,977	\$	5,227	\$	673	\$	400,622

Contract Balances from Contracts with Customers

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

	J	June 27, 2020	De	cember 28, 2019					
		(in thousands)							
Balances from contracts with customers:									
Client receivables	\$	403,351	\$	395,740					
Contract assets (unbilled revenue)		133,393		121,957					
Contract liabilities (current and long-term deferred revenue)		186,198		192,788					
Contract liabilities (customer contract deposits)		41,165		33,080					

When the Company does not have the unconditional right to advanced billings, both advanced client payments and unpaid advanced client billings are excluded from deferred revenue, with the advanced billings also being excluded from client receivables. The Company excluded approximately \$13 million and \$27 million of unpaid advanced client billings from both client receivables and deferred revenue in the accompanying unaudited condensed consolidated balance sheets as of June 27, 2020 and December 28, 2019, respectively. Advanced client payments of approximately \$41 million and \$33 million have been presented as customer contract deposits within other current liabilities in the accompanying unaudited condensed consolidated balance sheets as of June 27, 2020 and December 28, 2019, respectively.

Other changes in the contract asset and the contract liability balances during the six months ended June 27, 2020 were as follows:

- (i) Changes due to business combinations:
 - See Note 2. "Business Combinations" for client receivables, contract assets, and contract liabilities that were acquired as part of the HemaCare acquisition on January 3, 2020.
- (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 27, 2020, an immaterial cumulative catch-up adjustment to revenue was recorded.

- (iii) A change in the time frame for a right to consideration to become unconditional (that is, for a contract asset to be recorded as a client receivable): Approximately 75% of unbilled revenue as of December 28, 2019 was billed during the six months ended June 27, 2020.
- (iv) A change in the time frame for a performance obligation to be satisfied (that is, for the recognition of revenue arising from a contract liability):

Approximately 75% of contract liabilities as of December 28, 2019 were recognized as revenue during the six months ended June 27, 2020.

4. SEGMENT INFORMATION

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

	 Three Mo	onths l	Ended		Six Months Ended					
	 June 27, 2020		June 29, 2019		June 27, 2020	June 29, 2019				
			(in the	ousan	ds)					
RMS										
Revenue	\$ 116,549	\$	136,054	\$	262,545	\$	273,226			
Operating income	3,844		31,512		31,217		69,344			
Depreciation and amortization	9,126		4,981		17,878		9,303			
Capital expenditures	6,621		5,049		12,033		9,161			
DSA										
Revenue	\$ 442,564	\$	405,517	\$	881,247	\$	759,714			
Operating income	72,241		63,514		144,524		110,219			
Depreciation and amortization	41,101		37,549		82,431		71,333			
Capital expenditures	16,175		15,141		30,904		23,989			
Manufacturing										
Revenue	\$ 123,471	\$	115,997	\$	245,851	\$	229,197			
Operating income	42,930		33,141		84,042		64,640			
Depreciation and amortization	6,236		5,782		12,602		11,587			
Capital expenditures	3,037		4,272		8,198		7,878			

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

	Operating Income]	Depreciation a	ortization	Capital Expenditures					
	Jı	ıne 27, 2020	Jı	June 29, 2019		June 27, 2020		June 29, 2019		June 27, 2020		ne 29, 2019
						(in the	usand	s)				
Three Months Ended:												
Total reportable segments	\$	119,015	\$	128,167	\$	56,463	\$	48,312	\$	25,833	\$	24,462
Unallocated corporate		(42,247)		(48,399)		745		834		967		319
Total consolidated	\$	76,768	\$	79,768	\$	57,208	\$	49,146	\$	26,800	\$	24,781
Six Months Ended:												
Total reportable segments	\$	259,783	\$	244,203	\$	112,911	\$	92,223	\$	51,135	\$	41,028
Unallocated corporate		(88,734)		(94,643)		1,557		2,281		1,386		484
Total consolidated	\$	171,049	\$	149,560	\$	114,468	\$	94,504	\$	52,521	\$	41,512

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

	Three Mo	onths l	Ended	Six Months Ended					
	 June 27, 2020 June 29, 2019				June 27, 2020		June 29, 2019		
)							
RMS	\$ 116,549	\$	136,054	\$	262,545	\$	273,226		
DSA	442,564		405,517		881,247		759,714		
Manufacturing	123,471		115,997		245,851		229,197		
Total revenue	\$ 682,584	\$	657,568	\$	1,389,643	\$	1,262,137		

A summary of unallocated corporate expense consists of the following:

	Three Mo	onths	Ended	Six Months Ended				
	June 27, 2020		June 29, 2019		June 27, 2020		June 29, 2019	
			(in the	ousan	ds)			
Stock-based compensation	\$ 8,203	\$	10,718	\$	14,907	\$	18,992	
Compensation, benefits, and other employee-related								
expenses	20,749		13,753		42,729		35,791	
External consulting and other service expenses	4,917		4,094		7,386		7,904	
Information technology	4,235		4,555		7,951		7,277	
Depreciation	745		834		1,557		2,281	
Acquisition and integration	869		12,470		7,852		17,942	
Other general unallocated corporate	2,529		1,975		6,352		4,456	
Total unallocated corporate expense	\$ 42,247	\$	48,399	\$	88,734	\$	94,643	

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	1	Asia Pacific	Other	Consolidated
			(in the	ousand	s)		_
Three Months Ended:							
June 27, 2020	\$ 382,918	\$ 190,935	\$ 71,543	\$	35,965	\$ 1,223	\$ 682,584
June 29, 2019	367,924	182,770	68,902		36,213	1,759	657,568
Six Months Ended:							
June 27, 2020	\$ 789,630	\$ 381,197	\$ 148,176	\$	67,794	\$ 2,846	\$ 1,389,643
June 29, 2019	718,100	349,135	122,881		69,392	2,629	1,262,137

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 27, 2020		December 28, 2019		
	(in thousands)					
Client receivables	\$	395,740				
Unbilled revenue		133,393		121,957		
Total		536,744		517,697		
Less: Allowance for doubtful accounts		(4,213)		(3,664)		
Trade receivables, net	\$	532,531	\$	514,033		

The composition of inventories is as follows:

J	une 27, 2020	De	ecember 28, 2019			
(in thousands)						
\$	25,426	\$	24,613			
	36,616		35,852			
	106,324		100,195			
\$	168,366	\$	160,660			
	\$	\$ 25,426 36,616 106,324	(in thousands) \$ 25,426 \$ 36,616 106,324			

The composition of other current assets is as follows:

	j	June 27, 2020	De	cember 28, 2019				
	(in thousands)							
Prepaid income tax	\$	63,361	\$	54,358				
Short-term investments		929		941				
Restricted cash		465		431				
Other		307		300				
Other current assets	\$	65,062	\$	56,030				

The composition of other assets is as follows:

	June 27, 2020			December 28, 2019			
		(in thousands)					
Venture capital investments	\$	124,730	\$	108,983			
Strategic equity investments		17,087		13,996			
Life insurance policies		36,001		38,207			
Other long-term income tax assets		20,625		20,570			
Restricted cash		1,557		1,601			
Other		24,371		29,258			
Other assets	\$	224,371	\$	212,615			

The composition of other current liabilities is as follows:

	June 27, 2020		December 28, 2019			
	(in thousands)					
Current portion of operating lease right-of-use liabilities	\$ 24,450	\$	20,357			
Accrued income taxes	32,302		26,066			
Customer contract deposits	41,165		33,080			
Other	10,722		11,095			
Other current liabilities	\$ 108,639	\$	90,598			

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

		June 27, 2020		December 28, 2019		
	(in thousands)					
U.S. Transition Tax	\$	50,057	\$	52,066		
Long-term pension liability, accrued executive supplemental life insurance retirement plan and deferred compensation						
plan		76,572		80,833		
Long-term deferred revenue		15,788		20,983		
Other		33,625		29,051		
Other long-term liabilities	\$	176,042	\$	182,933		

6. VENTURE CAPITAL AND STRATEGIC EQUITY INVESTMENTS

Venture capital investments were \$124.7 million and \$109.0 million as of June 27, 2020 and December 28, 2019, respectively. The Company's total commitment to the venture capital funds as of June 27, 2020 was \$130.4 million, of which the Company funded \$87.5 million through that date. The Company received dividends totaling \$2.4 million and \$0.9 million for the three months ended June 27, 2020 and June 29, 2019, respectively. The Company received dividends totaling \$3.3 million and \$1.6 million for the six months ended June 27, 2020 and June 29, 2019, respectively.

The Company recognized gains of \$23.9 million and losses of \$4.3 million related to the venture capital investments for the three months ended June 27, 2020 and June 29, 2019, respectively. The Company recognized gains of \$11.9 million and gains of \$6.3 million related to the venture capital investments for the six months ended June 27, 2020 and June 29, 2019, respectively.

The Company also invests, with minority positions, directly in equity of predominantly privately-held companies. Strategic equity investments were \$17.1 million and \$14.0 million as of June 27, 2020 and December 28, 2019, respectively. The Company recognized an insignificant amount of gains and losses related to these investments for the three and six months ended June 27, 2020 and June 29, 2019.

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 27, 2020 and June 29, 2019, there were no transfers between levels.

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

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

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

	June 27, 2020							
	Level 1			Level 2	Level 3			Total
				(in the	usands)			
Cash equivalents	\$	_	\$	89,453	\$	_	\$	89,453
Other assets:								
Life insurance policies		_		28,169		_		28,169
Total assets measured at fair value	\$	_	\$	117,622	\$	_	\$	117,622
Other current liabilities measured at fair value:								
Contingent consideration	\$	_	\$	_	\$	2,142	\$	2,142
Total liabilities measured at fair value	\$	_	\$	_	\$	2,142	\$	2,142

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

Contingent Consideration

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

	Six Months Ended							
	June	June 27, 2020						
	(in thousands)							
Beginning balance	\$	712	\$	3,033				
Additions		2,131		2,869				
Payments		(230)		(5,252)				
Adjustment of previously recorded contingent liability		(468)		_				
Foreign currency		(3)		69				
Ending balance	\$	2,142	\$	719				
	·							

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

Debt Instruments

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

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

		June 27, 2	December 28, 2019				
	Bool	k Value	Fair Value		Book Value		Fair Value
2026 Senior Notes	\$ 5	00,000 \$	521,850	\$	500,000	\$	537,500
2028 Senior Notes	5	00,000	497,500		500,000		510,000

8. GOODWILL AND INTANGIBLE ASSETS

Goodwill

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

				Adjustment				
	Dec	December 28, 2019		Acquisitions		Foreign Exchange		June 27, 2020
				(in the		_		
RMS	\$	56,586	\$	209,104	\$	(156)	\$	265,534
DSA		1,345,223		(629)		(9,995)		1,334,599
Manufacturing		138,756		_		(3,248)		135,508
Goodwill	\$	1,540,565	\$	208,475	\$	(13,399)	\$	1,735,641

The increase in goodwill during the six months ended June 27, 2020 related primarily to the acquisition of HemaCare in the RMS reportable segment, which was partially offset by the impact of foreign exchange.

Intangible Assets, Net

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

		J	une 27, 2020			December 28, 2019							
	Gross	Accumulated Amortization Net					Gross	_	Accumulated Amortization		Net		
					(in the	ousands)							
Backlog	\$ 28,660	\$	(27,703)	\$	957	\$	28,865	\$	(26,895)	\$	1,970		
Technology	123,682		(67,548)		56,134		122,106		(57,737)		64,369		
Trademarks and trade names	15,458		(5,138)		10,320		8,430		(4,901)		3,529		
Other	20,056		(13,497)		6,559		18,279		(12,307)		5,972		
Other intangible assets	187,856		(113,886)		73,970		177,680		(101,840)		75,840		
Client relationships	1,088,035		(355,814)		732,221		934,668		(321,095)		613,573		
Intangible assets	\$ 1,275,891	\$	(469,700)	\$	806,191	\$	1,112,348	\$	(422,935)	\$	689,413		

The increase in intangible assets, net during the six months ended June 27, 2020 related primarily to the acquisition of HemaCare.

9. LONG-TERM DEBT AND FINANCE LEASE OBLIGATIONS

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

	 June 27, 2020	December 28, 2019		
	(in tho	usands)		
Term loans	\$ 175,000	\$	193,750	
Revolving facility	1,062,850		676,134	
2026 Senior Notes	500,000		500,000	
2028 Senior Notes	500,000		500,000	
Other debt	11,293		5,781	
Finance leases (Note 16)	27,883		30,527	
Total debt and finance leases	2,277,026		1,906,192	
Less:				
Current portion of long-term debt	50,505		35,548	
Current portion of finance leases (Note 16)	3,208		2,997	
Current portion of long-term debt and finance leases	53,713	'	38,545	
Long-term debt and finance leases	 2,223,313		1,867,647	
Debt discount and debt issuance costs	(16,156)		(17,981)	
Long-term debt, net and finance leases	\$ 2,207,157	\$	1,849,666	

As of June 27, 2020 and December 28, 2019, the weighted average interest rate on the Company's debt was 3.04% and 3.46%, respectively.

Term Loans and Revolving Facility

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

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

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

The Credit Facility includes certain customary representations and warranties, events of default, notices of material adverse changes to the Company's business and negative and affirmative covenants. These covenants include (1) maintenance of a ratio of consolidated earnings before interest, taxes, depreciation and amortization (EBITDA) less capital expenditures to consolidated cash interest expense, for any period of four consecutive fiscal quarters, of no less than 3.50 to 1.0 as well as (2) maintenance of a ratio of consolidated indebtedness to consolidated EBITDA for any period of four consecutive fiscal quarters, of no more than 4.00 to 1.0. As of June 27, 2020, the Company was compliant with all covenants.

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

During the six months ended June 27, 2020 and 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 Credit Facility, which ranged from \$300 million to \$400 million. This resulted in foreign currency losses recognized in Other income, net of \$4.2 million and \$2.8 million during the six months ended June 27, 2020 and June 29, 2019, respectively, related to the remeasurement of the underlying debt. The Company entered into foreign exchange forward contracts to limit its foreign currency exposures related to these borrowings and recognized gains of \$6.1 million and \$7.3 million during the six months ended June 27, 2020 and June 29, 2019, respectively, within Interest expense. As of June 27, 2020, the Company did not have any outstanding borrowings in a currency different than its respective functional currency. See Note 14, "Foreign Currency Contracts", for further discussion.

Base Indenture for Senior Notes

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

2026 Senior Notes

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

2028 Senior Notes

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

Letters of Credit

As of June 27, 2020 and December 28, 2019, the Company had \$8.1 million and \$7.5 million, respectively, in outstanding letters of credit.

10. EQUITY AND NONCONTROLLING INTERESTS

Earnings Per Share

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

	 Three Mo	nths	Ended		Six Mon	nths Ended		
	June 27, 2020		June 29, 2019	June 27, 2020			June 29, 2019	
			(in the	ousand	ls)			
Numerator:								
Net income	\$ 67,668	\$	44,309	\$	118,505	\$	99,997	
Less: Net income attributable to noncontrolling interests	233		581		301		1,136	
Net income attributable to common shareholders	\$ 67,435	\$	43,728	\$	118,204	\$	98,861	
Denominator:								
Weighted-average shares outstanding - Basic	49,553		48,772		49,371		48,615	
Effect of dilutive securities:								
Stock options, restricted stock units and performance share units	693		890		747		984	
Weighted-average shares outstanding - Diluted	50,246		49,662		50,118		49,599	

Options to purchase 0.6 million and 0.4 million shares for the three months ended June 27, 2020 and June 29, 2019, respectively, as well as a non-significant number of restricted stock units (RSUs) and performance share units (PSUs), were not included in computing diluted earnings per share because their inclusion would have been anti-dilutive. Options to purchase 0.6 million and 0.4 million shares for the six months ended June 27, 2020 and June 29, 2019, respectively, as well as a non-significant number of RSUs and PSUs, were not included in computing diluted earnings per share because their inclusion would have been anti-dilutive. Basic weighted-average shares outstanding for the six months ended June 27, 2020 and June 29, 2019 excluded the impact of 0.9 million and 1.0 million shares of non-vested RSUs and PSUs, respectively.

Treasury Shares

During the six months ended June 27, 2020 and June 29, 2019, the Company did not repurchase any shares under its authorized stock repurchase program. As of June 27, 2020, the Company had \$129.1 million remaining on the authorized stock repurchase program.

The Company's stock-based compensation plans permit the netting of common stock upon vesting of RSUs and PSUs in order to satisfy individual statutory tax withholding requirements. During the six months ended June 27, 2020 and June 29, 2019, the Company acquired 0.1 million shares for \$23.8 million and 0.1 million shares for \$17.9 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:

	Т	Foreign Currency ranslation Adjustment and Other	_	Pension and Other Post- Letirement Benefit Plans	Total
				(in thousands)	_
December 28, 2019	\$	(87,578)	\$	(90,441)	\$ (178,019)
Other comprehensive loss before reclassifications		(37,611)		_	(37,611)
Amounts reclassified from accumulated other comprehensive loss		_		2,739	2,739
Net current period other comprehensive income (loss)		(37,611)		2,739	(34,872)
Income tax expense (benefit)		(761)		584	(177)
June 27, 2020	\$	(124,428)	\$	(88,286)	\$ (212,714)

Nonredeemable Noncontrolling Interest

The Company has an investment in an entity whose financial results are consolidated in the Company's unaudited condensed consolidated financial statements, as it has the ability to exercise control over this entity. The interest of the noncontrolling party in this entity has been recorded as noncontrolling interest within Equity in the accompanying unaudited condensed consolidated balance sheets. The activity within the nonredeemable noncontrolling interest was immaterial during the three and six months ended June 27, 2020 and June 29, 2019.

Redeemable Noncontrolling Interests

The Company has a 92% equity interest in Vital River with an 8% redeemable noncontrolling interest. The Company has the right to purchase, and the noncontrolling interest holders with the right to sell, the remaining 8% equity interest at a contractually defined redemption value, subject to a redemption floor, which represents a derivative embedded within the equity instrument. These rights are exercisable beginning in 2022 and are accelerated in certain events. The redeemable noncontrolling interest is measured at the greater of the amount that would be paid if settlement occurred as of the balance sheet date based on the contractually defined redemption value (\$14.8 million as of June 27, 2020) and the carrying amount adjusted for net income (loss) attributable to the noncontrolling interest. As the noncontrolling interest holders have the ability to require the Company to purchase the remaining 8% interest, the noncontrolling interest is classified in the mezzanine section of the unaudited condensed consolidated balance sheets, which is presented above the equity section and below liabilities. The amount that the Company could be required to pay to purchase the remaining 8% equity interest is not limited.

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

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

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

	Six Months Ended						
		June 27, 2020		June 29, 2019			
		(in the	usan	ds)			
Beginning balance	\$	28,647	\$	18,525			
Acquisition of noncontrolling interest		(3,732)		_			
Adjustment to Vital River redemption value (three months ended March 30, 2019)		_		1,451			
Purchase of Vital River 5% equity interest		_		(8,745)			
Change in fair value of Vital River 8% equity interest, included in additional-paid-incapital		_		2,708			
Modification of Vital River 8% purchase option		_		2,196			
Acquisition of a 10% non-controlling interest through acquiring Citoxlab		_		4,095			
Net (loss) income attributable to noncontrolling interests		(538)		284			
Foreign currency translation		(493)		(35)			
Ending balance	\$	23,884	\$	20,479			

11. INCOME TAXES

The Company's effective tax rates for the three months ended June 27, 2020 and June 29, 2019 were 19.4% and 24.9%, respectively. The Company's effective tax rates for the six months ended June 27, 2020 and June 29, 2019 were 15.0% and 20.2%, respectively. For the three and six months ended June 27, 2020, the decrease was primarily attributable to an increased

tax benefit from stock-based compensation deductions in 2020 as well as a reduction in non-deductible transaction costs compared to the corresponding period in 2019.

For the three months ended June 27, 2020, the Company's unrecognized tax benefits decreased by \$1.2 million to \$17.9 million, primarily due to audit settlements of prior period positions. The amount of unrecognized income tax benefits that would impact the effective tax rate decreased by \$1.2 million to \$15.1 million, for the same reasons listed above. The accrued interest on unrecognized tax benefits was \$2.0 million at June 27, 2020. The Company estimates that it is reasonably possible that the unrecognized tax benefits will decrease by up to \$1.4 million over the next twelve-month period, primarily due to the outcome of pending tax audits.

The Company conducts business in a number of tax jurisdictions. As a result, it is subject to tax audits on a regular basis including, but not limited to, such major jurisdictions as the U.S., the U.K., China, France, Germany, and Canada. With few exceptions, the Company is no longer subject to U.S. and international income tax examinations for years before 2016.

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

12. PENSION AND OTHER POST-RETIREMENT BENEFIT PLANS

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

		Three Mo	nths E	nded		Six Mon	ths En	ded
	Ju	me 27, 2020		June 29, 2019	Ju	ıne 27, 2020		June 29, 2019
				(in thou	sands)			
Service cost	\$	798	\$	757	\$	1,595	\$	1,387
Interest cost		2,354		2,875		4,709		5,750
Expected return on plan assets		(2,982)		(3,235)		(5,963)		(6,470)
Amortization of prior service cost (credit)		(126)		91		(251)		182
Amortization of net loss		1,586		488		3,172		977
Other adjustments		125		_		250		_
Net periodic cost	\$	1,755	\$	976	\$	3,512	\$	1,826

Service cost is recorded as an operating expense within the accompanying unaudited condensed consolidated statements of income. All other components of net periodic costs are recorded in Other expense, net in the accompanying unaudited condensed consolidated statements of income. The net periodic cost for the Company's other post-retirement benefit plan for the three and six months ended June 27, 2020 and June 29, 2019 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 Mo	nths 1	Ended	Six Months Ended					
	June 27, 2020			June 29, 2019		June 27, 2020		June 29, 2019		
				(in the	ousan	ds)				
Cost of revenue	\$	2,320	\$	2,489	\$	4,355	\$	4,438		
Selling, general and administrative		10,823		14,016		19,748		24,966		
Stock-based compensation, before			'							
income taxes		13,143		16,505		24,103		29,404		
Provision for income taxes		(1,988)		(2,855)		(3,539)		(4,902)		
Stock-based compensation, net of income taxes	\$	11,155	\$	13,650	\$	20,564	\$	24,502		

During the six months ended June 27, 2020, the Company granted stock options representing 0.3 million common shares with a per-share weighted-average grant date fair value of \$53.20, RSUs representing 0.2 million common shares with a per-share weighted-average grant date fair value of \$178.73, and PSUs representing 0.1 million common shares with a per-share

weighted-average grant date fair value of \$210.55. The maximum number of common shares to be issued upon vesting of PSUs granted during the six months ended June 27, 2020 is 0.2 million.

14. FOREIGN CURRENCY CONTRACTS

Cross currency loans

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

The Company had no open forward contracts related to a U.S. dollar denominated loan borrowed by a non-U.S. Euro functional currency at June 27, 2020 or December 28, 2019. Additionally, the Company did not enter into any these contracts during the three months ended June 27, 2020.

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

		June 2	27, 2020	0	June 29, 2019					
Location of gain (loss)		Financial statement Amount of gain caption amount (loss)				ncial statement ption amount	An	nount of gain (loss)		
				(in the	housands)					
Three Months Ended:										
Interest expense	\$	(19,352)	\$	_	\$	(20,835)	\$	(1,606)		
Six Months Ended:										
Interest expense	\$	(34,419)	\$	6,067	\$	(30,822)	\$	7,311		

Intercompany loans

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

The Company entered into foreign currency forward contracts during 2020 and 2019. One contract remained open at December 28, 2019, which had a duration of less than one month and is recorded at fair value in the Company's accompanying unaudited condensed consolidated balance sheets. The Company did not have any open foreign currency forward contracts related to certain intercompany loans at June 27, 2020. The notional amount and fair value of the open contract is summarized as follows:

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

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

	June	27, 202	0	June 29, 2019									
Location of gain (loss)	Financial statement Amount of gai caption amount (loss)				ncial statement ption amount	Aı	mount of gain (loss)						
	 (in thousands)												
Three Months Ended:													
Other (expense) income, net	\$ 26,260	\$	_	\$	(213)	\$	_						
Six Months Ended:													
Other income (expense), net	\$ 2,189	\$	(892)	\$	6,093	\$	_						

15. RESTRUCTURING AND ASSET IMPAIRMENTS

Global Restructuring Initiatives

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

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

		Three Months Ended											
	June 27, 2020							June 29, 2019					
	Tra	rance and ansition Costs		Asset pairments Other Costs	Total	Severance and Impairments Transition Costs and Other Costs					Total		
	·					(in tho	usands						
Cost of services provided and products sold (excluding amortization of													
intangible assets)	\$	3,299	\$	30	\$	3,329	\$	371	\$	356	\$	727	
Selling, general and administrative		2,089		2,933		5,022		940		18		958	
Total	\$	5,388	\$	2,963	\$	8,351	\$	1,311	\$	374	\$	1,685	

					Six Mon	ths End	led					
			Jui	ne 27, 2020		June 29, 2019						
	Tr	erance and cansition Costs		Asset pairments Other Costs	Total		erance and sition Costs		Asset pairments Other Costs		Total	
Cost of services provided and products sold (excluding amortization of												
intangible assets)	\$	3,545	\$	259	\$ 3,804	\$	638	\$	1,505	\$	2,143	
Selling, general and administrative		2,172		2,933	5,105		1,073		18		1,091	
Total	\$	5,717	\$	3,192	\$ 8,909	\$	1,711	\$	1,523	\$	3,234	

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

	 Three Months Ended				Six Months Ended			
	June 27, 2020		June 29, 2019		June 27, 2020		June 29, 2019	
	(in thousands)							
RMS	\$ 769	\$	641	\$	759	\$	942	
DSA	6,186		672		6,498		685	
Manufacturing	1,396		372		1,652		1,607	
Total	\$ 8,351	\$	1,685	\$	8,909	\$	3,234	

Rollforward of restructuring activities

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

	Three Months Ended				Six Months Ended			
	Jı	ıne 27, 2020		June 29, 2019		June 27, 2020		June 29, 2019
	(in t				thou	sands)		
Beginning balance	\$	2,531	\$	2,113	\$	6,405	\$	2,921
Expense (excluding non-cash charges)		6,357		1,609		6,874		2,855
Payments / utilization		(1,674)		(970)		(5,917)		(3,004)
Foreign currency adjustments		(15)		6		(163)		(14)
Ending balance	\$	7,199	\$	2,758	\$	7,199	\$	2,758

As of June 27, 2020 and June 29, 2019, \$7.0 million and \$2.7 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 \$0.2 million and \$0.1 million, respectively, were included in other long-term liabilities within the Company's unaudited condensed consolidated balance sheets.

16. LEASES

Operating and Finance Leases

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

	J	June 27, 2020	December 28, 2019		
		(in the	usands)		
Operating leases					
Operating lease right-of-use assets, net	\$	169,192	\$	140,085	
Other current liabilities	\$	24,450	\$	20,357	
Operating lease right-of-use liabilities		147,348		116,252	
Total operating lease liabilities	\$	171,798	\$	136,609	
Finance leases					
Property, plant and equipment, net	\$	30,225	\$	32,519	
Current portion of long-term debt and finance leases	\$	3,208	\$	2,997	
Long-term debt, net and finance leases		24,675		27,530	
Total finance lease liabilities	\$	27,883	\$	30,527	

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

	Three Months Ended				Six Mon	ths Ended		
		June 27, 2020		June 29, 2019		June 27, 2020		June 29, 2019
		(in thou			usan	ds)		
Operating lease costs	\$	7,893	\$	7,887	\$	15,971	\$	15,594
Finance lease costs:								
Amortization of right-of-use assets		937		931		1,888		1,852
Interest on lease liabilities		323		345		663		641
Short-term lease costs		525		204		1,114		396
Variable lease costs		1,067		930		2,112		1,265
Sublease income		(190)		(45)		(776)		(91)
Total lease costs	\$	10,555	\$	10,252	\$	20,972	\$	19,657

Other information related to leases was as follows:

Supplemental cash flow information

		Six Months Ended		
	Jui	June 27, 2020		une 29, 2019
		(in thousands)		
Cash flows included in the measurement of lease liabilities:				
Operating cash flows from operating leases	\$	14,149	\$	13,214
Operating cash flows from finance leases		663		715
Finance cash flows from finance leases		2,467		1,842
Non-cash leases activity:				
Right-of-use lease assets obtained in exchange for new operating lease liabilities	\$	46,493	\$	5,028
Right-of-use lease assets obtained in exchange for new finance lease liabilities		735		4,508

Lease term and discount rate

	As of June 27, 2020
Weighted-average remaining lease term (in years)	
Operating lease	8.36
Finance lease	12.61
Weighted-average discount rate	
Operating lease	4.18
Finance lease	4.53

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 27, 2020, maturities of operating and finance lease liabilities for each of the following five years and a total thereafter were as follows:

	Op	erating Leases	Finance Leases		
		(in tho			
2020 (excluding the six months ended June 27, 2020)	\$	15,601	\$	2,378	
2021		29,819		3,789	
2022		25,533		3,236	
2023		22,487		2,933	
2024		21,872		2,719	
Thereafter		91,026		21,795	
Total minimum future lease payments		206,338		36,850	
Less: Imputed interest		34,540		8,967	
Total lease liabilities	\$	171,798	\$	27,883	

Total minimum future lease payments (predominantly operating leases) of approximately \$44 million for leases that have not commenced as of June 27, 2020, as the Company does not yet control the underlying assets, are not included in the unaudited condensed consolidated financial statements. These leases are expected to commence between fiscal years 2021 and 2024 with lease terms of approximately 10 to 15 years.

17. COMMITMENTS AND CONTINGENCIES

Litigation

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

18. SUBSEQUENT EVENT

On August 4, 2020 the Company signed a definitive agreement to acquire Cellero, LLC (Cellero), a provider of cellular products for cell therapy developers and manufacturers worldwide. The addition of Cellero will enhance the Company's unique, comprehensive solutions for the high-growth cell therapy market, strengthening the ability to help accelerate clients' critical programs from basic research and proof-of-concept to regulatory approval and commercialization. It will also expand the Company's access to high-quality, human-derived biomaterials with Cellero's donor sites in the United States. The proposed purchase price will be approximately \$38 million in cash, and the transaction is expected to close in August 2020, subject to customary closing conditions. The acquisition is expected to be funded by cash on hand. Cellero is expected to be reported as part of the Company's RMS segment.

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

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

Overview

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

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

Segment Reporting

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

COVID-19

Overview

On March 11, 2020, the World Health Organization declared the outbreak of a strain of novel coronavirus disease, COVID-19, a global pandemic. The COVID-19 pandemic is dynamic and expanding, and its ultimate scope, duration and effects are uncertain. This pandemic has had and continues to result in direct and indirect adverse effects on our industry and customers, which in turn has impacted our business, results of operations, and financial condition. Further, the COVID-19 pandemic may also affect our operating and financial results in ways that are and are not presently known to us, or that we currently do not expect to present significant risks to our operations or financial results but which may in fact turn out to negatively affect us to a magnitude greater than anticipated. Refer to Item 1A, Risk Factors, included herein for risk factors reflecting the impact of the COVID-19 pandemic. Giving consideration to each of these risk factors, the following is our current estimate and belief of the impact of the COVID-19 pandemic during the three and six months ended June 27, 2020 and how it may continue to affect us in subsequent periods.

Business continuity

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

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

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

Supply chain

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

Financial condition and results of our global operations

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

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

Our DSA business was not significantly impacted by the COVID-19 pandemic during the six months ended June 27, 2020. Towards the end of the first fiscal quarter of 2020, we experienced some client work shifting towards subsequent quarters of fiscal year 2020 due to the various actions and restrictions put in place by governments around the world intended to slow the spread of the COVID-19 pandemic. The work performed in our Discovery Services and Safety Assessment businesses are largely dependent on our internal sites being open. Therefore, to the extent that clients require work to be completed, we have

been able to continue to meet client demands and perform the work so long as our work force at the specific site the work is done is not significantly adversely impacted by the COVID-19 pandemic. This trend is expected to continue as government actions to slow the spread of the COVID-19 pandemic begin to subside, employees return to work, and economies across the world begin to reopen. Costs of supply have and may continue to increase as we procure the materials required to perform our

work. We expect a small adverse impact to our revenue growth, operating income, operating income margin and cash flows through the rest of the year.

Our Manufacturing business was not significantly impacted by the COVID-19 pandemic during the six months ended June 27, 2020. We experienced some adverse impacts due to the COVID-19 pandemic as our customers experienced disruptions in their manufacturing operations, specifically where we are not able to access client sites to deliver and install certain products. We expect Manufacturing products, such as Microbial Solutions endotoxin products and avian products, to see continued demand through the remainder of fiscal 2020. Our Biologics testing facilities remain open and performing services for our clients. Similar to our other services businesses, our ability to perform work is contingent on our internal facilities and our work force not being significantly adversely impacted by the COVID-19 pandemic. We expect a small adverse impact to our revenue growth, operating income, operating income margin and cash flows through the rest of the year.

Liquidity, capital and financial resources

We require cash to fund working capital needs as well as capital expansion, acquisitions, venture capital and strategic investments, debt obligations, leases, and pension obligations. The principal sources of liquidity have been cash flows from operations, supplemented by long-term borrowings. In fiscal year 2019, we issued \$500 million Senior Notes, repaid part of our term loan for \$500 million, and increased our multi-currency revolving facility by \$500 million, from \$1.55 billion to \$2.1 billion. As of June 27, 2020, we had \$2.3 billion of debt and finance leases outstanding, of which \$53.7 million is current. Available on the revolving line of credit (Revolver) is approximately \$1 billion, which matures on March 26, 2023 and does not require scheduled payments before that date should additional borrowings occur. The term loan facility matures in 19 quarterly installments with the last installment due March 26, 2023. The Senior Notes become due in 2026 and 2028.

Due to the uncertainty resulting from the COVID-19 pandemic, we borrowed an additional \$150 million from the Revolver during the three months ended March 28, 2020. While there remains uncertainty for the remainder of 2020, we currently do not anticipate needing to use these borrowings to fund operations. The purpose of borrowing the additional funds was to protect against any prolonged adverse impacts on liquidity markets that are currently unforeseeable. We expect to generate cash inflows from our operating activities sufficient to satisfy our working capital needs as well as to service our debt, pension, and venture capital obligations. Due to this higher debt, we do expect an increase to interest expense, however, this additional charge is not expected to materially adversely impact us. We do not currently anticipate we will need to borrow additional funds during 2020. However, we have analyzed the cash flows and debt balances noting there is significant capacity on the remaining Revolver assuming we achieve the results of operations consistent with what we have described herein. Accordingly, we do not anticipate a material risk of non-compliance with our debt covenants based on our current estimate of future earnings. Our debt levels consist of a combination of fixed and variable debt, which include \$1.0 billion of fixed senior notes (2026 and 2028 Senior Notes). To protect against adverse liquidity concerns, there are various mechanisms for us to improve cash flows. To date we have implemented cost reduction plans including delaying compensation related increases during the six months ended June 27, 2020, implementing hiring restrictions, reducing working hours, reducing all non-essential travel, and reducing certain discretionary spending. Beginning in the third fiscal quarter of 2020, we have reinstated certain annual compensation increases, which had previously been delayed from the beginning of the second quarter of 2020. Additionally, we reduced our investment activity, including acquisitions and capi

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

Recoverability and/or impairment of assets

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

Internal controls over financial reporting in a remote work environment

Internal controls over financial reporting are a focus for us to ensure they continue to be designed and operating effectively. As of June 27, 2020 and through the issuance of these unaudited condensed consolidated financial statements, we did not have any material changes to our internal controls over financial reporting. For personnel responsible for internal control activities and working remote, the ability to work effectively enabled us to continue to maintain effective internal control over financial

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

Recent Acquisitions

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

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

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

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

Overview of Results of Operations and Liquidity

Revenue for the three months ended June 27, 2020 was \$682.6 million compared to \$657.6 million in the corresponding period in 2019. This increase of \$25.0 million, or 3.8%, was primarily due to the recent acquisitions of Citoxlab and HemaCare as well as growth in our DSA and Manufacturing segments; partially offset by a reduction in RMS product revenue due to the impact of the COVID-19 pandemic, and by the negative effect of changes in foreign currency exchange rates which decreased revenue by \$5.5 million, or 0.8%, when compared to the corresponding period in 2019. Revenue for the six months ended June 27, 2020 was \$1.4 billion compared to \$1.3 billion in the corresponding period in 2019. The increase of \$127.5 million, or 10.1%, was primarily due to the reasons described above; partially offset by the negative effect of changes in foreign currency exchange rates, which decreased revenue by \$10.1 million, or 0.8%, when compared to the corresponding period in 2019.

In the three months ended June 27, 2020, our operating income and operating income margin were \$76.8 million and 11.3%, respectively, compared with \$79.8 million and 12.1%, respectively, in the corresponding period of 2019. The decreases in operating income and operating income margin were primarily due to lower RMS operating income on lower sales volume for research model products due to the COVID-19 pandemic and due to the recent acquisition of HemaCare, which increased amortization of intangible assets, partially offset by higher Manufacturing and DSA operating income and operating income margins. In the six months ended June 27, 2020, our operating income and operating margin were \$171.0 million and 12.3%, respectively, compared with \$149.6 million and 11.8%, respectively, in the corresponding period of 2019. The increases in operating income and operating income margin were primarily due to contributions from our DSA and Manufacturing segments, partially offset by lower RMS operating income and operating income margin due to the impact of the COVID-19 pandemic, as well as increased amortization of intangible assets and costs related to our recent acquisition of HemaCare.

Net income attributable to common shareholders increased to \$67.4 million in the three months ended June 27, 2020, from \$43.7 million in the corresponding period of 2019. The increase in Net income attributable to common shareholders was primarily due to higher net gains on our venture capital investments and life insurance policy investments in 2020 as compared to net losses for both investments in the corresponding period in 2019. Net income attributable to common shareholders increased to \$118.2 million in the six months ended June 27, 2020, from \$98.9 million in the corresponding period of 2019. The increase in Net income attributable to common shareholders was primarily due to higher operating income mentioned above compared to the corresponding period in 2019.

During the first six months of 2020, our cash flows from operations was \$230.9 million compared with \$144.4 million for the same period in 2019. The increase was driven by higher net income and certain favorable changes in working capital items,

including favorable timing of net contract balances from contracts with customers (collectively trade receivables, net; deferred revenue; and customer contract deposits), deferral of income and payroll tax payments, and lower compensation payments; partially offset by the unfavorable timing of vendor and supplier payments compared to the same period in 2019.

Results of Operations

Three Months Ended June 27, 2020 Compared to the Three Months Ended June 29, 2019

Revenue and Operating Income

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

		Three M	onths End	led				
	Jur	ie 27, 2020	Ju	ne 29, 2019	_	\$ change	% change	
				(in millions, e	xcept pe	ercentages)		
Service revenue	\$	550.6	\$	505.9	\$	44.7	8.8 %	
Product revenue		132.0		151.7		(19.7)	(13.0)%	
Total revenue	\$	682.6	\$	657.6	\$	25.0	3.8 %	
		Three Months Ended						
	Jun	e 27, 2020	Jur	ne 29, 2019		\$ change	% change	Impact of FX
				(ir	millior	ıs, except percentag	es)	
RMS	\$	116.5	\$	136.1	\$	(19.6)	(14.3)%	(0.6)%
DSA		442.6		405.5		37.1	9.1 %	(0.8)%
Manufacturing		123.5		116.0		7.5	6.4 %	(1.6)%
Total revenue	\$	682.6	\$	657.6	\$	25.0	3.8 %	(0.8)%

The following table presents operating income by reportable segment:

		Three Moi	ıths	Ended			
	June 27, 2020			June 29, 2019	\$ change		% change
				(in millions, exce	pt pe	rcentages)	
RMS	\$	3.8	\$	31.5	\$	(27.7)	(87.8)%
DSA		72.2		63.5		8.7	13.7 %
Manufacturing		42.9		33.1		9.8	29.5 %
Unallocated corporate		(42.1)		(48.3)		6.2	(12.7)%
Total operating income	\$	76.8	\$	79.8	\$	(3.0)	(3.8)%
Operating income % of revenue		11.2 %		12.1 %			(0.9)%

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

RMS

		Three Mor	ths	Ended				
		June 27, 2020		June 29, 2019		\$ change	% change	Impact of FX
				(in m	illioi	ns, except percentages)		
Revenue	\$	116.5	\$	136.1	\$	(19.6)	(14.3)%	(0.6)%
Cost of revenue (excluding amortization of intangible assets)		89.0		84.1		4.9	5.8 %	
Selling, general and administrative)	19.8		20.2		(0.4)	(1.3)%	
Amortization of intangible assets		3.9		0.3		3.6	1,008.9 %	
Operating income	\$	3.8	\$	31.5	\$	(27.7)	(87.8)%	
Operating income % of revenue		3.3 %		23.2 %			(19.9)%	

RMS revenue decreased \$19.6 million due primarily to lower research model product revenue in North America, Europe, and Asia due to the impact of the COVID-19 pandemic, largely driven by many closures of our academic clients, and the effect of changes in foreign currency exchange rates. Partially offsetting these decreases were the recent acquisition of HemaCare, which contributed \$6.4 million to revenue growth; and higher research model services revenue, specifically our Insourcing Solutions and GEMS businesses.

RMS operating income decreased \$27.7 million compared to the corresponding period in 2019. RMS operating income as a percentage of revenue for the three months ended June 27, 2020 was 3.3%, a decrease of 19.9% from 23.2% for the corresponding period in 2019. Operating income and operating income as a percentage of revenue decreased primarily due to lower operating income on lower sales volume for research model products due to the COVID-19 pandemic as described above and due to the recent acquisition of HemaCare, which increased amortization of intangible assets and an inventory fair value adjustment.

DSA

	Three Mon	ths 1	Ended				
	June 27, 2020		June 29, 2019		\$ change	% change	Impact of FX
			(in m	illion	ıs, except percentages)		
Revenue	\$ 442.6	\$	405.5	\$	37.1	9.1 %	(0.8)%
Cost of revenue (excluding amortization of intangible assets)	302.9		277.5		25.4	9.2 %	
Selling, general and administrative	45.7		44.7		1.0	2.2 %	
Amortization of intangible assets	21.8		19.8		2.0	9.6 %	
Operating income	\$ 72.2	\$	63.5	\$	8.7	13.7 %	
Operating income % of revenue	16 3 %		15.7 %			0.6 %	

DSA revenue increased \$37.1 million due primarily to the acquisition of Citoxlab which contributed \$14.8 million to service revenue growth. Additionally, service revenue increased in both the Safety Assessment and Discovery Services businesses due to demand from biotechnology clients and increased pricing of services. These increases were partially offset by the effect of changes in foreign currency exchange rates. DSA revenue was not significantly impacted by the COVID-19 pandemic during the three months ended June 27, 2020.

DSA operating income increased \$8.7 million during the three months ended June 27, 2020 compared to the corresponding period in 2019. DSA operating income as a percentage of revenue for the three months ended June 27, 2020 was 16.3%, an increase of 0.6% from 15.7% for the corresponding period in 2019. Operating income and operating income as a percentage of revenue increased primarily due to higher revenue described above and realizing the favorable impact of recent cost saving efficiencies. This increase was partially offset by increased costs in both cost of revenue and selling, general, and administrative expenses related to recent site closures, which increased severance costs, site consolidation costs, and asset impairments; and higher amortization of intangible assets associated with our recent acquisitions.

Manufacturing

	Three Mor	iths	Ended				
	June 27, 2020		June 29, 2019		\$ change	% change	Impact of FX
	(in m				ns, except percentages)		
Revenue	\$ 123.5	\$	116.0	\$	7.5	6.4 %	(1.6)%
Cost of revenue (excluding amortization of intangible assets)	58.4		57.9		0.5	1.0 %	
Selling, general and administrative	19.9		22.7		(2.8)	(12.4)%	
Amortization of intangible assets	2.3		2.3		_	(2.5)%	
Operating income	\$ 42.9	\$	33.1	\$	9.8	29.5 %	
Operating income % of revenue	34.8 %		28.6 %			6.2 %	

Manufacturing revenue increased \$7.5 million due primarily to higher demand for products in our Avian business and higher service revenue in the Biologics business due to our facility in Pennsylvania being fully operational in 2020 compared to 2019 where work continued to be transitioned from a legacy facility; partially offset by lower product revenue in our Microbial Solutions business, which was impacted by delays in instrument installation caused by the COVID-19 pandemic, and the effect of changes in foreign currency exchange rates. Overall, Manufacturing revenue was not significantly impacted by the COVID-19 pandemic during the three months ended June 27, 2020.

Manufacturing operating income increased \$9.8 million during the three months ended June 27, 2020 compared to the corresponding period in 2019. Manufacturing operating income as a percentage of revenue for the three months ended June 27, 2020 was 34.8%, an increase of 6.2% from 28.6% for the corresponding period in 2019. The increases were due primarily to higher revenue as well as improved production efficiencies, including the absence of duplicative Biologics facilities in 2020 compared to 2019, and the impact of certain cost savings initiatives in the three months ended June 27, 2020 compared to the same period in 2019.

Unallocated Corporate

		Three M	onths E	nded			
	Jui	ne 27, 2020	J	June 29, 2019		\$ change	% change
				(in millions, exce	pt perce	entages)	
Unallocated corporate	\$	42.1	\$	48.3	\$	(6.2)	(12.7)%
Unallocated corporate % of							
revenue		6.2 %	ó	7.4 %			(1.2)%

Unallocated corporate costs consist of selling, general and administrative expenses that are not directly related or allocated to the reportable segments. The decrease in unallocated corporate costs of \$6.2 million, or 12.7%, compared to the corresponding period in 2019 is predominantly associated with the decreased costs associated with the evaluation and integration of our recent acquisition activity. Costs as a percentage of revenue for the three months ended June 27, 2020 was 6.2%, a decrease of 1.2% from 7.4% for the corresponding period in 2019.

Interest Income

Interest income, which represents earnings on cash, cash equivalents, and time deposits was \$0.3 million for each of the three months ended June 27, 2020 and the corresponding period in 2019.

Interest Expense

Interest expense for the three months ended June 27, 2020 was \$19.4 million, a decrease of \$1.4 million, or 7.1%, compared to \$20.8 million for the corresponding period in 2019. The decrease results from the absence of a foreign currency loss recognized in connection with a debt-related foreign exchange forward contract in the three months ended June 27, 2020 compared to the corresponding period in 2019.

Other Income (Expense), Net

Other income, net, was \$26.3 million for the three months ended June 27, 2020, an increase of \$26.5 million, compared to Other expense, net of \$0.2 million for the corresponding period in 2019. The increase was due primarily to net gains on our venture capital investments and life insurance policy investments for the three months ended June 27, 2020 as compared to net losses for these investments in the corresponding period in 2019.

Income Taxes

Income tax expense for the three months ended June 27, 2020 was \$16.3 million, an increase of \$1.6 million compared to \$14.7 million for the corresponding period in 2019. Our effective tax rate was 19.4% for the three months ended June 27, 2020, compared to 24.9% for the corresponding period in 2019. The decrease in our effective tax rate in the 2020 period compared to the 2019 period was primarily attributable to increased tax benefits from stock-based compensation deductions in 2020 as well as a reduction in non-deductible transaction costs compared to the corresponding period in 2019.

Six Months Ended June 27, 2020 Compared to the Six Months Ended June 29, 2019

Revenue and Operating Income

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

		Six Mon	ths Er	ıded			
	Ju	ne 27, 2020		June 29, 2019		\$ change	% change
				(in millions, ex	cept per	rcentages)	
Service revenue	\$	1,097.1	\$	956.8	\$	140.3	14.7 %
Product revenue		292.5		305.3		(12.8)	(4.2)%
Total revenue	\$	1,389.6	\$	1,262.1	\$	127.5	10.1 %

		Six Mon	ths E	nded				
	Jı	me 27, 2020		June 29, 2019		\$ change	% change	Impact of FX
				(in	milli	ons, except percentag	es)	
RMS	\$	262.5	\$	273.2	\$	(10.7)	(3.9)%	(0.7)%
DSA		881.2		759.7		121.5	16.0 %	(0.6)%
Manufacturing		245.9		229.2		16.7	7.3 %	(1.5)%
Total revenue	\$	1,389.6	\$	1,262.1	\$	127.5	10.1 %	(0.8)%

The following table presents operating income by reportable segment:

	Six Mont	ths E	nded			
	June 27, 2020		June 29, 2019	\$ change		% change
			(in millions, exce	pt pe	rcentages)	
RMS	\$ 31.2	\$	69.3	\$	(38.1)	(55.0)%
DSA	144.5		110.2		34.3	31.1 %
Manufacturing	84.0		64.6		19.4	30.0 %
Unallocated corporate	(88.7)		(94.5)		5.8	(6.2)%
Total operating income	\$ 171.0	\$	149.6	\$	21.4	14.4 %
Operating income % of revenue	12.3 %		11.8 %			0.5 %

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

RMS

		Six Mont	hs E	nded				
		June 27, 2020		June 29, 2019		\$ change	% change	Impact of FX
				(in m	illion	ıs, except percentages)		
Revenue	\$	262.5	\$	273.2	\$	(10.7)	(3.9)%	(0.7)%
Cost of revenue (excluding amortization of intangible assets)		184.9		167.0		17.9	10.7 %	
Selling, general and administrative	1	39.0		36.2		2.8	7.6 %	
Amortization of intangible assets		7.4		0.7		6.7	966.0 %	
Operating income	\$	31.2	\$	69.3	\$	(38.1)	(55.0)%	
Operating income % of revenue		11.9 %		25.4 %			(13.5)%	

RMS revenue decreased \$10.7 million due primarily to lower research model product revenue in North America, Europe, and Asia due to the impact of the COVID-19 pandemic, largely driven by many closures of our academic clients, and the effect of changes in foreign currency exchange rates. Partially offsetting these decreases were the recent acquisition of HemaCare, which contributed \$18.7 million to revenue growth; and higher research model services revenue, specifically our Insourcing Solutions and GEMS businesses.

RMS operating income decreased \$38.1 million compared to the corresponding period in 2019. RMS operating income as a percentage of revenue for the six months ended June 27, 2020 was 11.9%, a decrease of 13.5% from 25.4% for the

corresponding period in 2019. Operating income and operating income as a percentage of revenue decreased primarily due to lower operating income on lower sales volume for research model products due to the COVID-19 pandemic as described above and due to the recent acquisition of HemaCare, which increased amortization of intangible assets and an inventory fair value adjustment.

DSA

		Six Mon	ths End	ded				
	Ju	ne 27, 2020	J	June 29, 2019		\$ change	% change	Impact of FX
				(in n	illions	except percentages		
Revenue	\$	881.2	\$	759.7	\$	121.5	16.0 %	(0.6)%
Cost of revenue (excluding amortization of intangible assets)		604.0		529.7		74.3	14.0 %	
Selling, general and administrative		89.0		83.3		5.7	6.8 %	
Amortization of intangible assets		43.7		36.5		7.2	19.7 %	
Operating income	\$	144.5	\$	110.2	\$	34.3	31.1 %	
Operating income % of revenue		16.4 %		14.5 %			1.9 %	

DSA revenue increased \$121.5 million due primarily to the acquisition of Citoxlab which contributed \$60.2 million to service revenue growth. Additionally, service revenue increased in both the Safety Assessment and Discovery Services businesses due to demand from biotechnology clients and increased pricing of services. These increases were partially offset by the effect of changes in foreign currency exchange rates. DSA revenue was not significantly impacted by the COVID-19 pandemic during the six months ended June 27, 2020.

DSA operating income increased \$34.3 million during the six months ended June 27, 2020 compared to the corresponding period in 2019. DSA operating income as a percentage of revenue for the six months ended June 27, 2020 was 16.4%, an increase of 1.9% from 14.5% for the corresponding period in 2019. These increases were primarily attributable to higher revenue described above, realizing the favorable impact of recent cost saving efficiencies, and lower acquisition related costs. These increases were partially offset by increased costs in both cost of revenue and selling, general, and administrative expenses related to recent site closures, which increased severance costs, site consolidation costs, and asset impairments; and higher amortization of intangible assets associated with our recent acquisitions.

Manufacturing

	Six Mont	hs E	nded				
	June 27, 2020		June 29, 2019		\$ change	% change	Impact of FX
			(in m	illion	s, except percentages)		
Revenue	\$ 245.9	\$	229.2	\$	16.7	7.3 %	(1.5)%
Cost of revenue (excluding amortization of intangible assets)	116.5		115.6		0.9	0.7 %	
Selling, general and administrative	40.9		44.3		(3.4)	(7.7)%	
Amortization of intangible assets	4.5		4.7		(0.2)	(2.9)%	
Operating income	\$ 84.0	\$	64.6	\$	19.4	30.0 %	
Operating income % of revenue	34.2 %		28.2 %			6.0 %	

Manufacturing revenue increased \$16.7 million due primarily to higher demand for products in both our Microbial Solutions' Endotoxin business and our Avian business, and higher service revenue in the Biologics business due to our facility in Pennsylvania being fully operational in 2020 compared to 2019 where work continued to be transitioned from a legacy facility; partially offset by lower product revenue in our Microbial Solutions' Bioburden business, specifically due to the timing of a large stocking order from a strategic partner in 2019, which did not recur in 2020, and delays in instrument installations caused by the COVID-19 pandemic; and the effect of changes in foreign currency exchange rates. Overall, Manufacturing revenue was not significantly impacted by the COVID-19 pandemic during the six months ended June 27, 2020.

Manufacturing operating income increased \$19.4 million during the six months ended June 27, 2020 compared to the corresponding period in 2019. Manufacturing operating income as a percentage of revenue for the six months ended June 27, 2020 was 34.2%, an increase of 6.0% from 28.2% for the corresponding period in 2019. The increases were due primarily to higher revenue as well as improved production efficiencies, including the absence of duplicative Biologics facilities in 2020 compared to 2019, and the impact of certain cost savings initiatives in the six months ended June 27, 2020 compared to the same period in 2019.

Unallocated Corporate

		Six Months Ended					
	Jui	ne 27, 2020	Jı	ine 29, 2019		\$ change	% change
				(in millions, exce	pt perc	entages)	
Unallocated corporate	\$	88.7	\$	94.5	\$	(5.8)	(6.2)%
Unallocated corporate % of revenue		6.4 %	,)	7.5 %			(1.1)%

Unallocated corporate costs consist of selling, general and administrative expenses that are not directly related or allocated to the reportable segments. The decrease in unallocated corporate costs of \$5.8 million is predominantly associated with the decreased costs associated with the evaluation and integration of our recent acquisition activity. Costs as a percentage of revenue for the six months ended June 27, 2020 was 6.4%, a decrease of 1.1% from 7.5% for the corresponding period in 2019.

Interest Income

Interest income, which represents earnings on cash, cash equivalents, and time deposits was \$0.6 million and \$0.5 million for the six months ended June 27, 2020 and the corresponding period in 2019, respectively.

Interest Expense

Interest expense for the six months ended June 27, 2020 was \$34.4 million, an increase of \$3.6 million, or 11.7%, compared to \$30.8 million for the corresponding period in 2019. The increase was due primarily to higher interest expense from increased debt to fund our recent acquisitions and a lower foreign currency gain recognized in connection with a debt-related foreign exchange forward contract in the six months ended June 27, 2020 compared to the corresponding period in 2019.

Other Income (Expense), Net

Other income, net, was \$2.2 million for the six months ended June 27, 2020, a decrease of \$3.9 million, or 64.1%, compared to \$6.1 million for the corresponding period in 2019. The decrease was due to lower foreign currency gains recognized in connection with a U.S. dollar denominated loan borrowed by a non-U.S. entity with a different functional currency and lower net gains on our venture capital investments and life insurance policy investments for the six months ended June 27, 2020 as compared to the corresponding period in 2019.

Income Taxes

Income tax expense for the six months ended June 27, 2020 was \$20.9 million, a decrease of \$4.4 million compared to \$25.3 million for the corresponding period in 2019. Our effective tax rate was 15.0% for the six months ended June 27, 2020 compared to 20.2% for the corresponding period in 2019. The decrease in our effective tax rate in the 2020 period compared to the 2019 period was primarily attributable to increased tax benefits from stock-based compensation deductions in 2020 as well as a reduction in non-deductible transaction costs compared to the corresponding period in 2019.

Liquidity and Capital Resources

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

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

	June 27, 2020	D	ecember 28, 2019
	(in millions)		
Cash and cash equivalents:			
Held in U.S. entities	\$ 194.0	\$	56.5
Held in non-U.S. entities	208.0		181.5
Total cash and cash equivalents	 402.0		238.0
Short-term investments:			
Held in non-U.S. entities	0.9		1.0
Total cash, cash equivalents and short-term investments	\$ 402.9	\$	239.0

Borrowings

We have a credit facility, which consists of a \$750.0 million term loan, of which \$175.0 million remains outstanding as of June 27, 2020, and a \$2.05 billion multi-currency revolving facility (Credit Facility). The term loan facility matures in 19 quarterly installments with the last installment due March 26, 2023. The revolving facility matures on March 26, 2023, and requires no scheduled payment before that date. Under specified circumstances, we have the ability to increase the term loan and/or revolving facility by up to \$1.0 billion in the aggregate.

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

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

	Ju	June 27, 2020		ecember 28, 2019
		(in millions)		
Term loans	\$	175.0	\$	193.8
Revolving facility		1,062.9		676.1
2026 Senior Notes		500.0		500.0
2028 Senior Notes		500.0		500.0
Total	\$	2,237.9	\$	1,869.9

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

Repurchases of Common Stock

During the six months ended June 27, 2020, we did not repurchase any shares under our authorized stock repurchase program. As of June 27, 2020, we had \$129.1 million remaining on the authorized \$1.3 billion stock repurchase program and we do not intend to repurchase shares for the remainder of 2020. Our stock-based compensation plans permit the netting of common stock upon vesting of restricted stock, restricted stock units, and performance share units in order to satisfy individual statutory tax withholding requirements. During the six months ended June 27, 2020, we acquired 0.1 million shares for \$23.8 million through such netting.

Cash Flows

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

	Six Months Ended			1
	Jui	June 27, 2020 June 29,		ne 29, 2019
	(in millions)			
Net income	\$	118.5	\$	100.0
Adjustments to reconcile net income to net cash provided by operating activities		137.3		119.5
Changes in assets and liabilities		(24.9)		(75.1)
Net cash provided by operating activities	\$	230.9	\$	144.4

Net cash provided by cash flows from operating activities represents the cash receipts and disbursements related to all of our activities other than investing and financing activities. Operating cash flow is derived by adjusting our net income for (1) non-cash operating items such as depreciation and amortization, stock-based compensation, deferred income taxes, gains and/or losses on venture capital and strategic equity investments, as well as (2) changes in operating assets and liabilities, which reflect timing differences between the receipt and payment of cash associated with transactions and when they are recognized in our results of operations. For the six months ended June 27, 2020, compared to the six months ended June 29, 2019, the increase in net cash provided by operating activities was driven by higher net income and certain favorable changes in working capital items, including favorable timing of net contract balances from contracts with customers (collectively trade receivables, net; deferred revenue; and customer contract deposits), deferral of income and payroll tax payments, and lower compensation payments; partially offset by the unfavorable timing of vendor and supplier payments compared to the same period in 2019.

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

		Six Months Ended		
	Ju	June 27, 2020 June 29,		
		(in millions)		
Acquisitions of businesses and assets, net of cash acquired	\$	(382.3)	\$	(492.4)
Capital expenditures		(52.5)		(41.5)
Investments, net		(6.4)		(14.7)
Other, net		(1.1)		(0.6)
Net cash used in investing activities	\$	(442.3)	\$	(549.2)

For the six months ended June 27, 2020, the primary use of cash used in investing activities related to the acquisition of HemaCare, capital expenditures to support the growth of the business, and investments in certain venture capital and strategic equity investments. 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 strategic equity investments.

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

	Six Months Ended			led
	Ji	June 27, 2020 June 29, 20		
		(in m	illions)	
Proceeds from long-term debt and revolving credit facility	\$	1,412.0	\$	1,485.7
Payments on long-term debt, revolving credit facility, and finance lease obligations		(1,045.2)		(1,076.8)
Proceeds from exercises of stock options		36.6		23.9
Purchase of treasury stock		(23.8)		(17.9)
Other, net		(4.5)		(10.5)
Net cash provided by financing activities	\$	375.1	\$	404.4

For the six months ended June 27, 2020, net cash provided by financing activities reflected the net proceeds of \$366.8 million on our Credit Facility and finance lease obligations. Included in the net proceeds are the following amounts:

• Proceeds of approximately \$415 million from our revolving Credit Facility to fund our recent acquisitions. Additionally, towards the end of the first fiscal quarter, we borrowed an additional \$150 million from our revolving Credit Facility to secure cash on hand in response to uncertainties due to the COVID-19 pandemic; partially offset by,

- Payments of approximately \$19 million on our term loan and payments of \$178 million to our revolving Credit Facility in the normal course of business throughout the six months ended June 27, 2020;
- Additionally, we had \$798 million of gross payments, partially offset by \$794 million of gross proceeds in connection with a non-U.S. Euro functional currency entity repaying Euro loans and replacing the Euro loans with U.S. dollar denominated loans. A series of forward currency contracts were executed to mitigate any foreign currency gains or losses on the U.S. dollar denominated loans. These proceeds and payments are presented as gross financing activities.

Net cash provided by financing activities also reflected proceeds from exercises of employee stock options of \$36.6 million, offset by treasury stock purchases of \$23.8 million made due to the netting of common stock upon vesting of stock-based awards in order to satisfy individual statutory tax withholding requirements.

For the six months ended June 29, 2019, net cash provided by financing activities reflected the net proceeds of \$408.9 million on our Credit Facility and finance lease obligations. Included in the net proceeds are the following amounts:

- · Borrowings of \$556 million, which were primarily used for the purchase of Citoxlab; partially offset by,
- Payments of \$19 million on our term loan and payments of \$32 million to our revolving Credit Facility in the normal course of business throughout the six months ended June 29, 2019;
- Additionally, we had \$943 million of gross payments, partially offset by \$848 million of gross proceeds in connection with a non-U.S. Euro
 functional currency entity repaying Euro loans and replacing the Euro loans with U.S. dollar denominated loans. A series of forward currency
 contracts were executed to mitigate any foreign currency gains or losses on the U.S. dollar denominated loans. These proceeds and payments are
 presented as gross financing activities.

Net cash provided by financing activities also reflected proceeds from exercises of employee stock options of \$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.

Contractual Commitments and Obligations

The disclosure of our contractual commitments and obligations was reported in our Annual Report on Form 10-K for fiscal 2019. There have been no material changes from the contractual commitments and obligations previously disclosed in our Annual Report on Form 10-K for fiscal 2019 other than the changes described in Note 2, "Business Combinations," Note 7, "Fair Value," Note 9, "Long-Term Debt and Finance Lease Obligations," Note 16, "Leases," and Note 17, "Commitments and Contingencies" in our notes to the unaudited condensed consolidated financial statements in this Quarterly Report on Form 10-Q.

Off-Balance Sheet Arrangements

As of June 27, 2020, we did not have any significant off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of SEC Regulation S-K promulgated under the Exchange Act, except as disclosed below.

Venture Capital Investments

We invest in several venture capital funds that invest in start-up companies, primarily in the life sciences industry. Our total commitment to the funds as of June 27, 2020 was \$130.4 million, of which we funded \$87.5 million through June 27, 2020. Refer to Note 6, "Venture Capital and Strategic Equity Investments" in this Quarterly Report on Form 10-Q for additional information.

Letters of Credit

Our off-balance sheet commitments related to our outstanding letters of credit as of June 27, 2020 were \$8.1 million.

Critical Accounting Policies and Estimates

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

We believe that the application of our accounting policies, each of which require significant judgments and estimates on the part of management, are the most critical to aid in fully understanding and evaluating our reported financial results. Our

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

Recent Accounting Pronouncements

For a discussion of recent accounting pronouncements please refer to Note 1, "Basis of Presentation," in this Quarterly Report on Form 10-Q. Other than as discussed in Note 1, "Basis of Presentation," we did not adopt any other new accounting pronouncements during the six months ended June 27, 2020 that had a significant effect on our unaudited condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

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

Interest Rate Risk

We are exposed to changes in interest rates while conducting normal business operations as a result of ongoing financing activities. As of June 27, 2020, our debt portfolio was comprised primarily of floating interest rate borrowings. A 100-basis point increase in interest rates would increase our annual pretax interest expense by \$12.4 million.

Foreign Currency Exchange Rate Risk

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

While the financial results of our global activities are reported in U.S. dollars, our foreign subsidiaries typically conduct their operations in their respective local currency. The principal functional currencies of the Company's foreign subsidiaries are the Euro, Canadian Dollar, British Pound and Chinese Yuan Renminbi. During the six months ended June 27, 2020, the most significant drivers of foreign currency translation adjustment the Company recorded as part of Other comprehensive income (loss) were the Canadian Dollar, British Pound, Hungarian Forint, Euro, Brazilian real, 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 27, 2020, our revenue would have increased by \$43.8 million and our operating income would have decreased by \$1.4 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 27, 2020, we entered into foreign exchange forward contracts to limit our foreign currency exposure related to both intercompany loans and a U.S. dollar denominated loan borrowed by a non-U.S. Euro functional currency entity under our Credit Facility. Refer to Note 14, "Foreign Currency Contracts" in this Quarterly Report on Form 10-Q for additional information regarding these types of forward contracts.

Item 4. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

Based on their evaluation, required by paragraph (b) of Rules 13a-15 or 15d-15, promulgated by the Securities Exchange Act of 1934, as amended (Exchange Act), the Company's principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act, are effective, at a reasonable assurance level, as of June 27, 2020, to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurances of achieving the desired control objectives, and management necessarily was required to apply its judgment in designing and evaluating the controls and procedures.

(b) Changes in Internal Controls

The Company continued to execute a plan to centralize certain accounting transaction processing functions to internal shared service centers during the three months ended June 27, 2020. There were no other material changes in the Company's internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of the Exchange Act Rules 13a-15 or 15d-15 that occurred during the quarter ended June 27, 2020 that materially affected, or were reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

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

Item 1A. Risk Factors

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

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

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

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

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

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

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

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

A reduction in demand may adversely affect our business.

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

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

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

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

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

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

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

We depend on a limited international source of supply for certain products, such as large research models. Disruptions to their continued supply from time to time arise from health problems (including as a result of the COVID-19 pandemic and the spread of other diseases), export or import laws/restrictions or embargoes, tariffs, international trade regulations, foreign government or economic instability, severe weather conditions, increased competition among suppliers for models, disruptions to the air travel system, activist campaigns, commercial disputes, supplier insolvency, geopolitical disputes, measures intended to slow the spread of COVID-19 or other ordinary course or unanticipated events. Any disruption of supply could materially harm our business if we cannot remove the disruption or are unable to secure an alternative or secondary supply source on comparable commercial terms. While we continue to take steps to find alternative supply channels and lock in supply with preferred sources through multi-year and/or minimum commitment contracts, such mitigating efforts may not prove successful at ensuring a steady and timely supply or may require (and in the past have required) us to pay significantly higher prices for such products during periods of global shortage or restrictions on the transportation of products. In addition, limited global supply or regional restrictions on transportation for certain products may require us to source products from non-preferred vendors.

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

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

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

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

- the invocation of force majeure clauses, or the legal doctrines of impossibility or impracticability (or other similar legal doctrines), as a result of the COVID-19 pandemic;
- · the products being tested fail to satisfy safety requirements;
- · unexpected or undesired study results;
- production problems resulting in shortages of the drug being tested;
- a client's decision to forego or terminate a particular study;
- our competitors' establishment of alternative distribution channels;

- dissatisfaction with our performance under the agreement;
- the loss of funding for the particular research study; or
- general convenience/counterparty preference.

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

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

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

We operate large and complex information systems that contain significant amounts of client data. As a routine element of our business, we collect, analyze and retain substantial amounts of data pertaining to the non-clinical studies we conduct for our clients. Unauthorized third parties could attempt to gain entry to such information systems to steal data or disrupt the systems or for financial gain. Like other companies, we have on occasion experienced, and will continue to experience, threats and incursions to our data and systems, including malicious codes and viruses, phishing, business email compromise and social engineering attacks or other cyber-attacks. The number and complexity of these threats continue to increase over time.

While we have taken measures to protect our information systems from intrusion, in March 2019, we detected evidence that an unauthorized third party,

who we believe was well resourced and highly sophisticated, accessed certain of our information systems and copied data. We worked with a leading cyber security firm to assist in our investigation and coordinated with law enforcement authorities. Our investigation indicated that the affected information included client information.

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

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

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

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

Our contracts with our clients typically contain provisions that require us to keep confidential the information generated from the studies we conduct. In the event the confidentiality of such information is compromised, whether by unauthorized access or other breaches, we could be exposed to significant harm, including termination of customer contracts, damage to our customer relationships, damage to our reputation and potential legal claims from customers, employees and other parties. In addition, we may face investigations by government regulators and agencies as a result of a breach.

Further, we are required to comply with the data privacy and security laws in many jurisdictions. For example, we are required to comply with the European Union (EU) General Data Protection Regulation (GDPR), which became effective on May 25, 2018 and imposes heightened obligations and enhanced penalties for noncompliance (including up to four percent (4%) of

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

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

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

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

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

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

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

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

In recent years FDA has issued guidance that now requires submissions to be presented in a format that conforms with the FDA's SEND (Standardization for Exchange of Nonclinical Data) standards that apply to our clients' NDA and IND submissions and require us to provide electronic data in specific formats that will allow for more efficient, higher quality regulatory reviews. Accordingly, our clients expect us to timely deliver their nonclinical data compliant with SEND.

Notwithstanding, some of these standards require additional operating and capital expenses that will impact not only us and our industry competitors, but clients in the biomedical research community. Non-compliance with any of these expectations could lead to official action by a government authority, damage to our reputation and a potential loss of business.

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

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

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

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

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

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

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

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

In March 2010, the U.S. Congress enacted healthcare reform legislation, the Patient Protection and Affordable Care Act (ACA), which includes provisions impacting drug manufacturers, such as (1) the expansion of access to health insurance coverage, (2) the expansion of the Medicaid program, (3) the enactment of an industry fee on pharmaceutical companies and (4) the imposition of an excise tax on the sale of medical devices. In addition, the Tax Cuts and Jobs Act, enacted in 2017, repeals the ACA's individual health insurance mandate, which is considered a key component of the ACA. Since the ACA and its implementation continue to face challenges in Congress and federal courts, and from certain state governments, opposition advocacy groups and some small business organizations, the ultimate effects of this legislation are unclear on our business and are unable to predict what legislative proposals will be adopted in the future.

Implementation of healthcare reform legislation may have certain benefits, but also may contain costs that could limit the profits that can be made from the development of new drugs. This could adversely affect R&D expenditures by pharmaceutical

and biotechnology companies, which could in turn decrease the business opportunities available to us both in the U.S. and abroad. In addition, new laws or regulations may create a risk of liability, increase our costs or limit our service offerings. Furthermore, if health insurers were to change their practices with respect to reimbursements for pharmaceutical products, our clients may spend less or reduce their growth in spending on R&D.

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

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

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

Acquisitions and alliances involve numerous risks which may include:

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

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

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

- difficulties in the separation of operations, services, products, and personnel;
- diversion of management's attention from other business concerns; and
- · the need to agree to retain or assume certain current or future liabilities in order to complete the divestiture.

We continually evaluate the performance and strategic fit of our businesses (including specific product lines and service offerings) to determine whether any divestitures are appropriate. Any divestitures may result in significant write-offs, including those related to goodwill and other intangible assets and which could have an adverse effect on our results of operations and

financial condition. In addition, we may encounter difficulty in finding buyers or alternative exit strategies at acceptable prices and terms, and in a timely manner. We may not be successful in managing these or any other significant risks that we encounter in divesting a business, site or product line or service offering and, as a result, we may not achieve some or all of the expected benefits of the divestiture.

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

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

If the future growth and operating results of our business are not as strong as anticipated, overall macroeconomic or industry conditions deteriorate and/or our market capitalization declines, this could impact the assumptions used in establishing the carrying value of goodwill or other intangible assets. Should the COVID-19 pandemic have a prolonged impact on our industry, triggering events may arise resulting in intangible asset or goodwill impairments. To the extent goodwill or other intangible assets are impaired, their carrying value will be written down to their implied fair values and a charge will be made to our income from continuing operations. Such an impairment charge could materially and adversely affect our operating results. As of June 27, 2020, the carrying amount of goodwill and other intangibles on our consolidated balance sheet was \$2.5 billion.

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

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

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

Our exposure to currency exchange rate fluctuations results from the currency translation exposure associated with the preparation of our consolidated financial statements, as well as from the exposure associated with transactions of our subsidiaries that are denominated in a currency other than the respective subsidiary's functional currency. While our financial results are reported in U.S. Dollars, the financial statements of many of our subsidiaries outside the U.S. are prepared using the local currency as the functional currency. During consolidation, these results are translated into U.S. Dollars by applying appropriate exchange rates. As a result, fluctuations in the exchange rate of the U.S. Dollar relative to the local currencies in which our foreign subsidiaries report could cause significant fluctuations in our reported results. Moreover, as exchange rates vary, revenue and other operating results may differ materially from our expectations. Adjustments resulting from financial statement translations are included as a separate component of shareholders' equity.

Other risks associated with our international business include:

- general economic and political conditions in the markets in which we operate, including implications of Brexit and the COVID-19 pandemic;
- potentially negative consequences from changes in U.S. and/or foreign tax laws, or interpretations thereof, notably tax regulations issued and to-be-issued with respect to U.S. Tax Reform and the EU Anti-Tax Avoidance Directives I and II;
- potential international conflicts, including terrorist acts;
- exchange controls, adverse tax consequences and legal restrictions on the repatriation of funds into the U.S.;
- difficulties and costs associated with staffing and managing foreign operations, including risks of COVID-19 pandemic related suspensions of operations, work stoppages and/or strikes, as well as violations of local laws or anti-

bribery laws such as the U.S. Foreign Corrupt Practices Act (FCPA), the U.K. Bribery Act and the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions;

- · unexpected changes in regulatory requirements (including as a result of the COVID-19 pandemic);
- the difficulties of compliance with a wide variety of foreign laws and regulations (including those relating to the COVID-19 pandemic);
- unfavorable labor regulations in foreign jurisdictions (including those relating to the COVID-19 pandemic);
- longer accounts receivable cycles in certain foreign countries (including as a result of the COVID-19 pandemic and the impact of measures intended to reduce the spread of COVID-19); and
- compliance with export controls, import requirements and other trade regulations, including those relating to certain products of which there is limited supply.

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

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

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

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

We are subject to licensing and regulation under laws and regulations relating to the protection of the environment and human health and safety, including laws and regulations relating to the handling, transportation and disposal of medical specimens, infectious and hazardous waste and radioactive materials, as well as regulations relating to the safety and health of laboratory employees and protecting employees from the spread of COVID-19. Failure to comply with these laws and regulations could subject us to denial of the right to conduct business, fines, criminal penalties and/or other enforcement actions that could have a material adverse effect on our business. In addition, compliance with future legislation could impose additional requirements on us that may be costly.

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

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

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

Negative attention from special interest groups may impair our business.

The products and services that we provide our clients are essential to the drug discovery, development and manufacturing processes, and a significant amount are mandated by law. Notwithstanding, certain special interest groups categorically object to the use of animals for valid research purposes. Historically, our core research model activities with rats, mice and other rodents have not been the subject of significant animal rights media attention. However, research activities with animals have been the subject of adverse attention, including shareholder proposals and attempts to disrupt air carriers from transporting research models, impacting the industry. This has included periodic demonstrations near facilities operated by us and at our annual meetings, as well as shareholder proposals we received for some of our past Annual Meetings of Shareholders. Any negative attention, threats or acts of vandalism directed against either our animal research activities or our third-party service providers, such as our airline carriers, in the future could impair our ability to operate our business efficiently.

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

As of June 27, 2020, we had \$2.3 billion of debt and finance leases (debt). Our debt could have significant adverse effects on our business, including making it more difficult for us to obtain additional financing on favorable terms; requiring us to dedicate a substantial portion of our cash flows from operations to the repayment of debt and the interest on this debt; limiting our ability to capitalize on significant business opportunities; and making us more vulnerable to rising interest rates. For additional information regarding our debt, please see Note 9, "Long-Term Debt and Finance Lease Obligations", included in the notes to our unaudited condensed consolidated financial statements included elsewhere in this Form 10-Q.

The interest rate on our credit facility (Credit Facility), which matures in fiscal year 2023, is linked to LIBOR. As of June 27, 2020, amounts outstanding on our Credit Facility were \$175.0 million on our term loan and \$1.1 billion on our revolving credit facility, for which there is an aggregate available borrowing capacity of \$2.05 billion. In 2017, the Financial Conduct Authority (FCA) in the U.K. announced that it would phase out LIBOR as a benchmark by the end of 2021. It is unclear whether new methods of calculating LIBOR will be established such that it continues to exist after 2021, or whether different benchmark rates used to price indebtedness will develop. If LIBOR ceases to exist, the method and rate used to calculate our interest rates and/or payments on our debt in the future may result in interest rates and/or payments that are higher than, or that do not otherwise correlate over time with, the interest rates and/or payments that would have been applicable to our obligations if LIBOR was available in its current form, which could have a material adverse effect on our financial position, results of operations and liquidity. While we continue to take steps to mitigate the impact of the phase-out or replacement of LIBOR, such efforts may not prove successful. In addition, the overall financial market may be disrupted as a result of the phase-out or replacement of LIBOR. Disruption in the financial market could also have a material adverse effect on our financial position, results of operations and liquidity.

Costs increasing more rapidly than market prices could reduce profitability.

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

The industries in which we operate are highly competitive.

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

- reputation for on-time quality performance;
- reputation for regulatory compliance;
- expertise and experience in multiple specialized areas;

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

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

Changes in U.S. and International Tax Law.

In 2017, significant U.S. tax law changes from the Tax Cuts and Jobs Act of 2017 (U.S. Tax Reform) went into effect and reduced the U.S. federal statutory tax rate, broadened the corporate tax base through the elimination or reduction of deductions, exclusions and credits, limited the ability of U.S. corporations to deduct interest expense and allowed for the repatriation of foreign earnings to the U.S. with a 100% federal dividends received deduction prospectively. In addition, U.S. Tax Reform required a one-time transitional tax on foreign cash equivalents and previously unremitted earnings. Several of the new provisions enacted as part of U.S. Tax Reform still require clarification and guidance from the Internal Revenue Service (IRS) and Treasury Department. These or other changes in U.S. tax laws could impact our profits, effective tax rate and cash flows.

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

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

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

Contract research services create a risk of liability.

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

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

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

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

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

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

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

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

having to procure and pay for licenses from the holders of intellectual property rights that we seek to use; and having to pay damages, fines, court costs and attorney's fees in connection with intellectual property litigation.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The following table provides information relating to the purchases of shares of our common stock during the three months ended June 27, 2020.

	Total Number of Shares Purchased	 Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet Be Purchased Under he Plans or Programs (in thousands)
March 29, 2020 to April 25, 2020	_	\$ _	_	\$ 129,105
April 26, 2020 to May 23, 2020	569	154.99	_	129,105
May 24, 2020 to June 27, 2020	165	179.66	_	129,105
Total	734			

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 27, 2020, we did not repurchase any shares of common stock under our stock repurchase program or in open market trading. As of June 27, 2020, we had \$129.1 million remaining on the authorized stock repurchase program.

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

Item 6. Exhibits

(a) Exhibits	Description of Exhibits
10.1+*	<u>Charles River Laboratories International, Inc. Form of Non-Qualified Stock Option granted under the 2018 Incentive Plan</u>
10.2+*	Charles River Laboratories International, Inc. Form of Restricted Stock Unit granted under the 2018 Incentive Plan
10.3+*	Charles River Laboratories International, Inc. Form of Performance Share 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+	<u>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</u>
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

⁺ Furnished herein.

^{*} Management contract or compensatory plan, contract or arrangement.

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.

August 5, 2020 /s/ JAMES C. FOSTER

James C. Foster Chairman, President and Chief Executive Officer

/s/ DAVID R. SMITH August 5, 2020

David R. Smith

Corporate Executive Vice President and Chief Financial Officer

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 [Participant Name:First Name Last Name] 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 [Grant Date:Month DD, YYYY] to the Employee of an option to purchase, in whole or in part, on the terms herein provided, a total of [Granted:Options Granted] shares of common stock of Charles River (the "Shares") at [Price:Option Price] 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 [Expiration Date:Month DD, YYYY]. 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:

[Vesting Table:Month DD, YYYY, quantity]

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. Death.

If the Employee's employment with the Company is terminated by virtue of the Employee's death, any portion of the option that is not then exercisable shall immediately become exercisable and, notwithstanding Section 4.a(5)(C) of the Plan, this option shall remain exercisable for the period ending on the Final Exercise Date.

3. <u>Full Career Retirement</u>.

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 5.

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 5.

4. <u>Exercise of Option</u>.

- (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 4(c) or 4(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 (including by virtue of Section 2), may be exercised at any time 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.

5. 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.

6. <u>Notice of Disposition</u>.

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.

7. 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).

8. 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).

9. 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.

10. 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.

11. 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.

12. <u>Provisions of the Plan</u>.

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: Victoria Creamer CSVP & Chief People Officer
Dated: [Grant Date:Month DD, YYYY]	

2018IP Prospectus English 2018IP Plan Document English

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) 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; however any dividend equivalents on the unvested portion of your restricted stock units will be held in an escrow account until such shares vest.

Name: [Participant Name:First Name Last Name]
Total Number of Units Granted:	Granted:Shares Granted]
Date of Grant:	Grant Date:Month DD, YYYY]
Vesting Schedule:	/esting is per below schedule

[Vesting Table:Month DD, YYYY, quantity]

Picione Creanes

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.

Victoria Creamer

CSVP & Chief People 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 your death or 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 your death, all of the unvested RSUs that you receive under this Award shall vest and be settled on the date of such termination.

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, clawback 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.

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 May 29, 2020 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 29, 2019 through and ending on December 31, 2022 (the "Performance Period")

Date of Grant: May 29, 2020

Nature of Award. The Target Award represents the opportunity to receive a future payment equal to a number of shares of SECTION 2. 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.

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 31, 2022, 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	2020 Non-GAAP EPS as % of 2020 Non-GAAP EPS Target	EPS Payout Percentage
Below Threshold	Less than 80%	0%
Threshold	80%	50%
Target	90%	100%
Maximum	100%	150%
Above Maximum	Greater than 100%	150%

As shown in the table above, if 2020 Non-GAAP EPS falls at or between 80% and 100% of the 2020 Non-GAAP EPS Target, EPS Payout Percentage will be calculated based upon a linear interpolation using the table above. The calculation of 2020 Non-GAAP EPS as % of 2020 Non-GAAP EPS Target will round down to the nearest 0.1%.

"2020 Non-GAAP EPS" means the Company's reported 2020 Non-GAAP earnings per share.

"2020 Non-GAAP EPS Target" means \$7.86, representing the Company's Non-GAAP earnings per share target for 2020, as approved by the Company's Board of Directors.

"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
>90 th Percentile	135%
75 th Percentile	125%
50 th Percentile	100%
25 th Percentile	75%
<10 th 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 2021, 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 2023; 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) 2020 Non-GAAP EPS as a % of 2020 Non-GAAP EPS Target is less than 80% but at or greater than 75% and (b) the Relative 3-year TSR Percentile is 75th 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:

2020 Non-GAAP EPS as % of 2020 Non-GAAP EPS Target	TSR Outperformance Payout Percentage
75.0%	10.00%
77.5%	32.96%
79.9%	55.00%

As shown in the table above, between 75% of 2020 Non-GAAP EPS Target and 79.9% Non-GAAP EPS Target, TSR Outperformance Payout Percentage will be calculated based upon a linear interpolation. The calculation of 2020 Non-GAAP EPS as % of 2020 Non-GAAP EPS Target will round down to the nearest 0.1%.

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.

i.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 Senior Vice President & Chief People 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 26, 2020, the # of Shares shall be deemed to be equal to the # Target Award and (B) after December 26, 2020 and prior to December 31, 2022, 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, 2023 and March 15, 2023, 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, as amended, a copy of which is attached hereto and additional copies of which are available upon request by Participant. Information about the Plan is also included in the Prospectus for the Plan, which is 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_»
Picroire Creame?	By:
By: Victoria Creamer	
Corporate Senior Vice President & Chief People Officer	DATE:
DATE: 16 00 0000	

DATE: <u>May 29, 2020</u>

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 27, 2020 of the registrant;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and
 - d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ James C. Foster

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

August 5, 2020

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 27, 2020 of the registrant;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and
 - d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ David R. Smith

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

August 5, 2020

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 27, 2020 of Charles River Laboratories International, Inc. (the "Company") as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, James C. Foster, Chairman, President and Chief Executive Officer of the Company, and David R. Smith, Corporate Executive Vice President and Chief Financial Officer of the Company, each hereby certifies, to the best of his knowledge and pursuant to 18 U.S.C. Section 1350, that:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act"); and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ James C. Foster

James C. Foster

August 5, 2020 Chairman, President and Chief Executive Officer
Charles River Laboratories International, Inc.

/s/ David R. Smith

David R. Smith

Corporate Executive Vice President and Chief Financial Officer

August 5, 2020 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.