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

FORM 10-Q

(Mark One)

Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the quarterly period ended: March 31, 2020

OR

Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the transition period from _____ to _____

Commission File Number 000-25434

BROOKS AUTOMATION, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

04-3040660
(I.R.S. Employer
Identification No.)

15 Elizabeth Drive
Chelmsford, Massachusetts
(Address of principal executive offices)

01824
(Zip Code)

Registrant's telephone number, including area code: (978) 262-2400

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$0.01 par value	BRKS	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date, April 24, 2020: common stock, \$0.01 par value and 73,758,981 shares outstanding.

BROOKS AUTOMATION, INC.

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PART I. FINANCIAL INFORMATION

Item 1. Consolidated Financial Statements

BROOKS AUTOMATION, INC.
CONSOLIDATED BALANCE SHEETS
(unaudited)
(In thousands, except share and per share data)

	March 31, 2020	September 30, 2019
Assets		
Current assets		
Cash and cash equivalents	\$ 242,274	\$ 301,642
Marketable securities	162	34,124
Accounts receivable, net	179,014	165,602
Inventories	107,699	99,445
Prepaid expenses and other current assets	43,379	46,332
Total current assets	572,528	647,145
Property, plant and equipment, net	108,744	100,669
Long-term marketable securities	2,555	2,845
Long-term deferred tax assets	5,080	5,064
Goodwill	498,502	488,602
Intangible assets, net	236,095	251,168
Other assets	55,827	20,506
Total assets	<u>\$ 1,479,331</u>	<u>\$ 1,515,999</u>
Liabilities and Stockholders' Equity		
Current liabilities		
Current portion of long-term debt	\$ 828	\$ 829
Accounts payable	63,958	58,919
Deferred revenue	29,090	29,435
Accrued warranty and retrofit costs	7,910	7,175
Accrued compensation and benefits	31,220	31,375
Accrued restructuring costs	935	1,040
Accrued income taxes payable	9,134	99,263
Accrued expenses and other current liabilities	53,960	44,234
Total current liabilities	197,035	272,270
Long-term debt	49,951	50,315
Long-term tax reserves	18,841	18,274
Long-term deferred tax liabilities	12,190	20,636
Long-term pension liabilities	5,594	5,338
Long-term operating lease liabilities	27,233	—
Other long-term liabilities	7,354	10,212
Total liabilities	318,198	377,045
Commitments and contingencies (Note 17)		
Stockholders' Equity		
Preferred stock, \$0.01 par value - 1,000,000 shares authorized, no shares issued or outstanding	—	—
Common stock, \$0.01 par value - 125,000,000 shares authorized, 87,214,622 shares issued and 73,752,753 shares outstanding at March 31, 2020, 85,759,700 shares issued and 72,297,831 shares outstanding at September 30, 2019	872	857
Additional paid-in capital	1,932,893	1,921,954
Accumulated other comprehensive income	7,299	3,511
Treasury stock, at cost- 13,461,869 shares	(200,956)	(200,956)
Accumulated deficit	(578,975)	(586,412)
Total stockholders' equity	1,161,133	1,138,954
Total liabilities and stockholders' equity	<u>\$ 1,479,331</u>	<u>\$ 1,515,999</u>

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

BROOKS AUTOMATION, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)
(In thousands, except per share data)

	Three Months Ended March 31,		Six Months Ended March 31,	
	2020	2019	2020	2019
Revenue				
Products	\$ 139,144	\$ 128,056	\$ 271,006	\$ 253,430
Services	81,083	70,334	159,721	124,327
Total revenue	<u>220,227</u>	<u>198,390</u>	<u>430,727</u>	<u>377,757</u>
Cost of revenue				
Products	83,970	77,803	163,941	152,376
Services	45,976	40,071	91,519	72,785
Total cost of revenue	<u>129,946</u>	<u>117,874</u>	<u>255,460</u>	<u>225,161</u>
Gross profit	<u>90,281</u>	<u>80,516</u>	<u>175,267</u>	<u>152,596</u>
Operating expenses				
Research and development	15,322	14,101	29,723	27,249
Selling, general and administrative	59,809	52,373	119,152	105,914
Restructuring charges	578	370	1,154	429
Total operating expenses	<u>75,709</u>	<u>66,844</u>	<u>150,029</u>	<u>133,592</u>
Operating income	14,572	13,672	25,238	19,004
Interest income	137	316	836	739
Interest expense	(718)	(8,018)	(1,455)	(13,308)
Loss on extinguishment of debt	—	(9,051)	—	(9,051)
Other expenses, net	(1,399)	(778)	(1,816)	(807)
Income (loss) before income taxes	12,592	(3,859)	22,803	(3,423)
Income tax provision (benefit)	3,400	(1,030)	437	(6,860)
Income (loss) from continuing operations	9,192	(2,829)	22,366	3,437
(Loss) income from discontinued operations, net of tax	(65)	6,250	(182)	14,399
Net income	<u>\$ 9,127</u>	<u>\$ 3,421</u>	<u>\$ 22,184</u>	<u>\$ 17,836</u>
Basic net income per share:				
Income (loss) from continuing operations	\$ 0.12	\$ (0.04)	\$ 0.30	\$ 0.05
(Loss) income from discontinued operations, net of tax	(0.00)	0.09	(0.00)	0.20
Basic net income per share	<u>\$ 0.12</u>	<u>\$ 0.05</u>	<u>\$ 0.30</u>	<u>\$ 0.25</u>
Diluted net income per share:				
Income (loss) from continuing operations	\$ 0.12	\$ (0.04)	\$ 0.30	\$ 0.05
(Loss) income from discontinued operations, net of tax	(0.00)	0.09	(0.00)	0.20
Diluted net income per share	<u>\$ 0.12</u>	<u>\$ 0.05</u>	<u>\$ 0.30</u>	<u>\$ 0.25</u>
Weighted average shares used in computing net income per share:				
Basic	73,708	72,077	73,331	71,760
Diluted	73,789	72,292	73,752	72,215

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

BROOKS AUTOMATION, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(unaudited)
(In thousands)

	<u>Three Months Ended</u> <u>March 31,</u>		<u>Six Months Ended</u> <u>March 31,</u>	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Net income	\$ 9,127	\$ 3,421	\$ 22,184	\$ 17,836
Other comprehensive (loss) income, net of tax:				
Foreign currency translation adjustments	(5,852)	(3,513)	3,793	(1,836)
Unrealized (losses) gains on marketable securities, net of tax effects of \$0 during each of the three and six months ended March 31, 2020, and \$0 during each of the three and six months ended March 31, 2019	(3)	232	7	111
Actuarial losses, net of tax effects of \$1 and \$2 during the three and six months ended March 31, 2020, \$0 and \$3 during the three and six months ended March 31, 2019	—	(1)	(12)	(10)
Total other comprehensive (loss) income, net of tax	<u>(5,855)</u>	<u>(3,282)</u>	<u>3,788</u>	<u>(1,735)</u>
Comprehensive income	<u>\$ 3,272</u>	<u>\$ 139</u>	<u>\$ 25,972</u>	<u>\$ 16,101</u>

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

BROOKS AUTOMATION, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)
(In thousands)

	Six Months Ended March 31,	
	2020	2019
Cash flows from operating activities		
Net income	\$ 22,184	\$ 17,836
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	33,079	26,339
Stock-based compensation	8,624	9,717
Amortization of premium on marketable securities and deferred financing costs	94	556
Earnings of equity method investments	—	(3,041)
Deferred income taxes	(9,477)	(12,472)
Loss on extinguishment of debt	—	9,051
Other losses on disposals of assets	125	34
Loss on sale of divestiture, net of tax	319	—
Taxes paid stemming from divestiture	(91,500)	—
Changes in operating assets and liabilities, net of acquisitions and divestiture:		
Accounts receivable	(12,670)	(9,654)
Inventories	(9,094)	(9,992)
Prepaid expenses and other assets	5,374	1,938
Accounts payable	5,807	(6,088)
Deferred revenue	(1,478)	5,410
Accrued warranty and retrofit costs	735	740
Accrued compensation and tax withholdings	(522)	(11,123)
Accrued restructuring costs	(112)	(57)
Proceeds from recovery on insurance claim	—	886
Accrued expenses and other liabilities	8,455	2,149
Net cash (used in) provided by operating activities	<u>(40,057)</u>	<u>22,229</u>
Cash flows from investing activities		
Purchases of property, plant and equipment	(21,170)	(9,676)
Purchases of marketable securities	(10,843)	(1,290)
Sales of marketable securities	2,492	48,904
Maturities of marketable securities	42,226	2,557
Acquisitions, net of cash acquired	(15,743)	(442,704)
Issuance of a note receivable	(1,000)	—
Net cash used in investing activities	<u>(4,038)</u>	<u>(402,209)</u>
Cash flows from financing activities		
Proceeds from term loans, net of discount	—	686,386
Proceeds from issuance of common stock	2,330	1,548
Payments of financing costs	—	(687)
Principal payments on debt	(414)	(352,289)
Payments of capital leases	(639)	(487)
Common stock dividends paid	(14,747)	(14,429)
Net cash (used in) provided by financing activities	<u>(13,470)</u>	<u>320,042</u>
Effects of exchange rate changes on cash and cash equivalents	<u>(1,803)</u>	<u>(553)</u>
Net decrease in cash, cash equivalents and restricted cash	(59,368)	(60,491)
Cash, cash equivalents and restricted cash, beginning of period	305,171	197,708
Cash, cash equivalents and restricted cash, end of period	<u>\$ 245,803</u>	<u>\$ 137,217</u>
Supplemental disclosure of non-cash investing and financing activities:		
Purchases of property, plant and equipment included in accounts payable	\$ 1,305	\$ 1,670
Reconciliation of cash, cash equivalents, and restricted cash to the consolidated balance sheets		
Cash and cash equivalents	\$ 242,274	\$ 137,168
Restricted cash included in prepaid expenses and other current assets	3,529	49
Total cash, cash equivalents and restricted cash shown in the consolidated statements of cash flows	<u>\$ 245,803</u>	<u>\$ 137,217</u>

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

BROOKS AUTOMATION, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(unaudited)
(In thousands, except share data)

	Common Stock Shares	Common Stock at Par Value	Additional Paid-In Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Treasury Stock	Total Equity
(In thousands, except share data)							
Balance September 30, 2018	84,164,130	\$ 841	\$ 1,898,434	\$ 13,587	\$ (994,074)	\$ (200,956)	\$ 717,832
Shares issued under restricted stock and purchase plans, net	1,429,052	15	1,533				1,548
Stock-based compensation			9,717				9,717
Common stock dividends declared, at \$0.20 per share					(14,428)		(14,428)
Foreign currency translation adjustments				(1,836)			(1,836)
Changes in unrealized gains on marketable securities, net of tax effects of \$0				111			111
Actuarial losses, net of tax effects of \$3				(10)			(10)
Net income				—	17,836		17,836
Cumulative effect of adoption of ASC 606					(859)		(859)
Balance March 31, 2019	<u>85,593,182</u>	<u>\$ 856</u>	<u>\$ 1,909,684</u>	<u>\$ 11,852</u>	<u>\$ (991,525)</u>	<u>\$ (200,956)</u>	<u>\$ 729,911</u>
Balance September 30, 2019	85,759,700	\$ 857	\$ 1,921,954	\$ 3,511	\$ (586,412)	\$ (200,956)	\$ 1,138,954
Shares issued under restricted stock and purchase plans, net	1,454,922	15	2,315				2,330
Stock-based compensation			8,624				8,624
Common stock dividends declared, at \$0.20 per share					(14,747)		(14,747)
Foreign currency translation adjustments				3,793			3,793
Changes in unrealized losses on marketable securities, net of tax effects of \$0				7			7
Actuarial losses, net of tax effects of \$2				(12)			(12)
Net income					22,184		22,184
Balance March 31, 2020	<u>87,214,622</u>	<u>\$ 872</u>	<u>\$ 1,932,893</u>	<u>\$ 7,299</u>	<u>\$ (578,975)</u>	<u>\$ (200,956)</u>	<u>\$ 1,161,133</u>

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

BROOKS AUTOMATION, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (unaudited)

1. Basis of Presentation

The unaudited consolidated financial statements of Brooks Automation, Inc. and its subsidiaries (“Brooks”, or the “Company”) included herein have been prepared in accordance with accounting principles generally accepted in the United States (“GAAP”). All intercompany accounts and transactions have been eliminated in consolidation. In the opinion of management, all material adjustments, which are of a normal and recurring nature and necessary for a fair statement of the financial position and results of operations and cash flows for the periods presented, have been reflected in the accompanying unaudited consolidated financial statements. The results of operations for the interim periods are not necessarily indicative of the results of operations to be expected for the full fiscal year.

Certain information and footnote disclosures normally included in the Company’s annual consolidated financial statements have been condensed or omitted and, accordingly, the accompanying financial information should be read in conjunction with the audited consolidated financial statements and notes thereto contained in the Company’s Annual Report on Form 10-K filed with the United States Securities and Exchange Commission (the “SEC”) for the fiscal year ended September 30, 2019 (the “2019 Annual Report on Form 10-K”). The accompanying Consolidated Balance Sheet as of September 30, 2019 was derived from the audited annual consolidated financial statements as of the period then ended.

Discontinued Operations

In the fourth quarter of fiscal year 2018, the Company entered into a definitive agreement to sell its semiconductor cryogenics business (the “Disposition”) to Edwards Vacuum LLC (a member of the Atlas Copco Group) (“Edwards”). The Company determined that the semiconductor cryogenics business met the “held for sale” criteria and the “discontinued operations” criteria in accordance with Financial Accounting Standard Boards (“FASB”) Accounting Standards Codification (“ASC”) 205, Presentation of Financial Statements, (“FASB ASC 205”) as of September 30, 2018. The Consolidated Balance Sheets and Consolidated Statements of Operations, and the notes to the Consolidated Financial Statements were restated for all periods presented to reflect the discontinuation of the semiconductor cryogenics business, in accordance with FASB ASC 205. The discussion in the notes to these Consolidated Financial Statements, unless otherwise noted, relate solely to the Company’s continuing operations. Please refer to Note 3, “Discontinued Operations” for further information.

On July 1, 2019, the Company completed the sale of the semiconductor cryogenics business for \$661.1 million, which excludes \$6.3 million retained by Edwards at closing as a result of the initial net working capital adjustments. Net cash proceeds from the sale were \$553.1 million, after deducting estimated taxes payable and closing costs, which remains subject to adjustment for the final determination of working capital and other items.

Risks and Uncertainties

The Company is subject to risks common to companies in the markets we serve, including, but not limited to, global economic and financial market conditions, fluctuations in customer demand, acceptance of new products, development by its competitors of new technological innovations, risk of disruption in its supply chain, the implementation of tariffs and export controls, dependence on key personnel, protection of proprietary technology, and compliance with domestic and foreign regulatory authorities and agencies.

During the COVID 19 pandemic, the Company’s facilities have remained operational with only required personnel on site, and the balance of employees working from home. Both business segments fall within the classification of an “Essential Critical Infrastructure Sector” as defined by the U.S. Department of Homeland Security and have continued operations during the COVID-19 pandemic. We have followed government guidance in each region and have implemented Center for Disease Control social distancing guidelines and other best practices to protect the health and

safety of the Company's employees. The Company's year-to-date financial results have only been modestly affected by the COVID-19 pandemic and a portion of this impact has been mitigated by realignment of resources and by addressing the incremental orders related to virus research. The future impacts on the Company's financial results will depend on multiple variables which are not fully determinable as the full impact of the pandemic will depend on the depth of the effects which the pandemic has on the economy and markets which we serve. The variables are many, but fundamentally include the negative effect on demand from the Company's customers, the degree if any that the supply chain may be constrained to support the Company's delivery of product, as well as the amount of incremental demand caused by research and treatments in the areas of COVID-19 or related threats.

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of unaudited consolidated financial statements in conformity with GAAP requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the unaudited consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Significant estimates are associated with recording accounts receivable, inventories, goodwill, intangible assets other than goodwill, long-lived assets, derivative financial instruments, deferred income taxes, warranty obligations, revenue recognized in accordance with the percentage of completion method, and stock-based compensation expense. The Company bases its estimates on historical experience and various other assumptions, including in certain circumstances future projections that management believes to be reasonable under the circumstances. Although the Company regularly assesses these estimates, actual results could differ from those estimates. Changes in estimates are recorded in the period in which they occur and become known.

The full extent to which the COVID-19 pandemic will directly or indirectly impact our business, results of operations and financial condition, including sales, expenses, reserves and allowances, manufacturing and employee-related amounts, will depend on future developments that are highly uncertain, including as a result of new information that may emerge concerning COVID-19 and the actions taken to contain or treat COVID-19, as well as the economic impact on local, regional, national and international customers and markets. The Company has made estimates of the impact of COVID-19 within our financial statements and there may be changes to those estimates in future periods.

Foreign Currency Translation

Certain transactions of the Company and its subsidiaries are denominated in currencies other than their functional currency.

Foreign currency exchange losses generated from the settlement and remeasurement of these transactions are recognized in earnings and presented within "Other expenses, net" in the Company's unaudited Consolidated Statements of Operations. Net foreign currency transaction and remeasurement losses totaled \$2.0 million and \$0.6 million, respectively, during the three months ended March 31, 2020 and 2019 and \$2.7 million and \$0.6 million, respectively, during the six months ended March 31, 2020 and 2019.

Derivative Instruments

The Company has transactions and balances denominated in currencies other than the U.S. dollar. Most of these transactions or balances are denominated in Euros, British Pounds and a variety of Asian currencies. The Company enters into foreign exchange contracts to reduce its exposure to currency fluctuations. The forward contract arrangements that the Company enters into, typically mature in three months or less. These transactions do not qualify for hedge accounting. Net gains and losses related to these contracts are recorded as a component of "Other expenses,

net" in the accompanying unaudited Consolidated Statements of Operations and are as follows for the three and six months ended March 31, 2020 and 2019 (in thousands):

	Three Months Ended		Six Months Ended	
	March 31,		March 31,	
	2020	2019	2020	2019
Realized gains (losses) on derivatives not designated as hedging instruments	\$ 4,424	\$ (3,831)	\$ 756	\$ (854)

The fair values of the forward contracts are recorded in the Company's accompanying unaudited Consolidated Balance Sheets as "Prepaid expenses and other current assets" and "Accrued expenses and other current liabilities". Foreign exchange contract assets and liabilities are measured and reported at fair value based on observable market inputs and classified within Level 2 of the fair value hierarchy described below due to a lack of an active market for these contracts.

Fair Value Measurements

The Company measures at fair value certain financial assets and liabilities, including cash equivalents and available for sale securities. FASB ASC 820, *Fair Value Measurement and Disclosures*, establishes a fair value hierarchy that requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The following levels of inputs may be used to measure fair value:

Level 1 Inputs: Quoted prices in active markets for identical assets or liabilities as of the reporting date. Active markets are those in which transactions for the asset and liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis.

Level 2 Inputs: Observable inputs other than prices included in Level 1, including quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 Inputs: Unobservable inputs that are significant to the fair value of the assets or liabilities and reflect an entity's own assumptions in pricing assets or liabilities since they are supported by little or no market activity.

As of March 31, 2020, the Company had no assets or liabilities measured and recorded at fair value on a recurring basis using Level 3 inputs.

Leases

The Company has operating leases for real estate and non-real estate and finance leases for non-real estate. The classification of a lease as operating or finance and the determination of the right-of-use asset (ROU asset) and lease liability are determined at lease inception. The ROU asset represents the Company's right to use an underlying asset for the lease term and the lease liability represents the Company's obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As most of the Company's leases do not provide an implicit rate, an incremental borrowing rate is used based on the estimated rate of interest for collateralized borrowing over a similar term of the lease payments at commencement date. Lease terms may include options to extend or terminate the lease when it is reasonably certain that the option will be exercised. Lease expense is recognized on a straight-line basis over the lease term.

The Company's lease agreements may contain lease and non-lease components. Non-lease components primarily include payments for maintenance and utilities. Fixed payments for non-lease components are combined with lease payments and accounted for as a single lease component which increases the amount of the ROU asset and liability.

The ROU asset for operating leases is included within Other assets and the ROU asset for finance leases is included within Property, plant, and equipment, net on the Consolidated Balance Sheets. The short-term lease liabilities for both

operating leases and finance leases are included within Accrued expenses and other current liabilities. The long-term lease liabilities for operating leases and finance leases are included within Long-term operating lease liabilities, and Other long-term liabilities, respectively, on the Consolidated Balance Sheets.

Recently Issued Accounting Pronouncements

In March 2020, the FASB issued Accounting Standards Update (“ASU”) 2020-04, *Facilitation of the Effects of Reference Rate Reform on Financial Reporting*. The ASU provides temporary optional expedients and exceptions to the GAAP guidance on contract modifications and hedge accounting to ease the financial reporting burdens related to the expected market transition from the London Interbank Offered Rate (LIBOR) and other interbank offered rates to alternative reference rates. The provisions of this ASU are only available until December 31, 2022, when the reference rate replacement activity is expected to be completed. The Company is currently evaluating the impact this guidance may have on its consolidated financial statements and related disclosures.

In December 2019, the FASB issued ASU 2019-12: *Simplifying the Accounting for Income Taxes (Topic 740)*, which removes certain exceptions to the general principles in Topic 740 and improves consistent application of and simplifies GAAP for other areas of Topic 740 clarifying and amending existing guidance. This ASU is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2020. Early adoption is permitted. The Company is evaluating the impact of this ASU.

In August 2018, the FASB issued ASU 2018-15, *Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*. The amendments align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). The accounting for the service element of a hosting arrangement that is a service contract is not affected by these amendments. The provisions may be adopted prospectively or retrospectively. This ASU is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2019. Early adoption is permitted. The Company is currently evaluating the impact of this ASU.

In August 2018, the FASB issued ASU 2018-14, *Disclosure Framework — Changes to the Disclosure Requirements for Defined Benefit Plans*, which amends ASC 715 to add, remove, and clarify disclosure requirements related to defined benefit pension and other postretirement plans. The amendments require additional disclosure for the weighted-average interest crediting rates, a narrative description of the reasons for significant gains and losses, and an explanation of any other significant changes in the benefit obligation or plan assets. The amendment removes disclosure requirement for accumulated other comprehensive income expected to be recognized over the next year, information about plan assets to be returned to the entity, and the effects of a one-percentage-point change on the assumed health care costs and the effect of this change in rates on service cost, interest cost, and the benefit obligation for postretirement health care benefits. The ASU is effective for fiscal years ending after December 15, 2020. Early adoption is permitted. The ASU does not amend the interim disclosure requirements of ASC 715-20. The Company is currently evaluating the impact of this ASU.

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*, which amends ASC 820 to add and remove disclosure requirements related to fair value measurement. The amendments include new disclosure requirements for changes in unrealized gains or losses included in other comprehensive income for recurring Level 3 fair value measurements held at the end of the reporting period and the range and weighted average used to develop significant unobservable inputs for Level 3 fair value measurements. The amendments eliminated disclosure requirements for amount of and reasons for transfers between Level 1 and Level 2, valuation processes for Level 3 fair value measurements, and policy for timing of transfers between levels of the fair value hierarchy. In addition, the amendments modified certain disclosure requirement to provide clarification or to promote appropriate exercise of discretion by entities. ASU 2018-13 is effective for fiscal years beginning after December 15, 2019, including interim periods therein. Early adoption is permitted. The Company is currently evaluating the impact of this ASU.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses: Measurement of Credit Losses on Financial Instruments*. The FASB subsequently issued ASU 2019-04, *Codification Improvements to Topic 326, Financial Instruments - Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments*, ASU 2019-05 “*Financial Instruments-Credit Losses*”, ASU 2019-11, *Codification Improvements to Topic 326, Financial Instruments - Credit Losses, and ASU 2020-02, Financial Instruments-Credit Losses (Topic 326) and Leases (Topic 842)* to clarify and address certain items related to the amendments in ASU 2016-13. Topic 326 provides guidance for recognizing credit losses on financial instruments based on an estimate of current expected credit losses model. The amendments are effective for fiscal years, and interim periods within those years, beginning after December 15, 2019. Early adoption is permitted. The Company is currently evaluating the impact of this ASU.

Recently Adopted Accounting Pronouncements

In July 2019, the FASB issued ASU 2019-07, *Codification Updates to SEC Sections - Amendments to SEC Paragraphs Pursuant to SEC Final Rule Releases No. 33-10532, Disclosure Update and Simplification, and Nos. 33-10231 and 33-10442, Investment Company Reporting Modernization and Miscellaneous Updates (SEC Update)*. ASU 2019-07 aligns the guidance in various SEC sections of the Codification with the requirements of certain SEC final rules. ASU 2019-07 was effective immediately during the Company’s last quarter of fiscal 2019 and the adoption did not have any impact on our consolidated financial statements and related disclosures.

In March 2018, the FASB issued ASU 2018-02, *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*, which amends ASC 220 to add, remove, and clarify disclosure requirements related to reporting comprehensive income. This ASU gives entities the option to reclassify tax effects recorded in accumulated other comprehensive income as a result of tax reform to retained earnings. The entities have the option to apply the guidance retrospectively or in the period of adoption. The guidance requires entities to make new disclosures, regardless of whether they elect to reclassify tax effects. The guidance is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption in any period is permitted. The Company adopted the guidance during the first quarter of fiscal year 2020. There is no accounting impact on the Company’s consolidated financial statements and related disclosures because the Company does not have stranded tax effects in accumulated other comprehensive income as a result of the Tax Cuts and Jobs Act.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, an amendment of the FASB ASC 840. Under Topic 842, lessees are required to recognize a ROU asset and lease liability on the balance sheet for all leases with terms beyond twelve months. The new standard also requires enhanced disclosures that provide more transparent information to financial statement users about lease portfolios. The Company adopted Topic 842 effective October 1, 2019 using the modified retrospective approach. The Company applied Topic 842 to all its leases as of October 1, 2019 with comparative prior periods continuing to be reported under Topic 840. With the adoption of Topic 842, the Company assumed the assessment determined under Topic 840 of whether contracts contain leases, the classification of leases as operating or finance and the remaining lease term of each lease. Certain leases contain both lease and non-lease components, which the Company has elected to treat as a single lease component. On October 1, 2019, the Company recorded a ROU asset related to its operating leases of \$28.1 million and a lease liability related to its operating leases of \$27.1 million on its Consolidated Balance Sheets. There was no impact to the Company’s finance ROU asset and liability on October 1, 2019. The adoption of the standard does not impact the Consolidated Results of Operations or Consolidated Statement of Cash Flows. See Note 9, “Leases” for further information.

Other

For further information with regard to the Company’s significant accounting policies, please refer to Note 2 “Summary of Significant Accounting Policies” to the Company’s consolidated financial statements included in the 2019 Annual Report on Form 10-K.

3. Discontinued Operations

On August 27, 2018, the Company entered into a definitive agreement to sell its semiconductor cryogenics business to Edwards for \$675.0 million in cash, subject to adjustments. On July 1, 2019, the Company completed the sale of the

semiconductor cryogenics business for \$661.1 million, which excludes \$6.3 million retained by Edwards at closing based on the initial adjustment for net working capital. Net proceeds from the sale were approximately \$553.1 million, after deducting estimated taxes payable and closing costs, which remains subject to adjustment for the final determination of working capital and other items.

The semiconductor cryogenics business consists of the CTI pump business, Polycold chiller business, the related services business and the Company's 50% share in Ulvac Cryogenics, Inc., a joint venture based in Japan. The semiconductor cryogenics business was originally acquired by the Company in its 2005 merger with Helix Technology Corporation. The operating results of the semiconductor cryogenics business had been included in the Brooks Semiconductor Solutions Group segment before the plan of disposition.

In connection with the closing of the Disposition on July 1, 2019, the Company and Edwards entered into a transition service agreement, a supply agreement, and lease agreements. The transition service agreement outlines the information technology, people, and facility support the Company would provide to Edwards for a period up to 9 months after transaction closing date. The supply agreement allows the Company to purchase CTI and Polycold goods at cost from Edwards up to an aggregate amount equal to \$1.0 million during the one-year term after closing of the Disposition. The lease agreements provide facility space to Edwards free of charge for three years after the transaction closing date. Edwards will have the option to renew each lease at the then current market rates after the initial three-year lease term has ended. This Disposition is consistent with the Company's long-standing strategy to increase shareholder value by accelerating the growth of its Life Sciences business with further acquisitions and strengthening its semiconductor automation business with opportunistic acquisitions.

The Disposition met the "held for sale" criteria and the "discontinued operation" criteria in accordance with FASB ASC 205 as of September 30, 2018. As such, its operating results have been reported as a discontinued operation for all periods presented.

The following table presents the financial results of discontinued operations (in thousands):

	Three Months Ended March 31,		Six Months Ended March 31,	
	2020	2019	2020	2019
Revenue				
Products	\$ -	\$ 23,895	\$ -	\$ 52,681
Services	-	11,759	-	22,297
Total revenue	-	35,654	-	74,978
Cost of revenue				
Products	-	15,182	-	31,698
Services	-	6,678	-	12,727
Total cost of revenue	-	21,860	-	44,425
Gross profit	-	13,794	-	30,553
Operating expenses				
Research and development	-	2,168	-	4,326
Selling, general and administrative	86	4,993	(171)	12,196
Total operating expenses	86	7,161	(171)	16,522
Operating income	(86)	6,633	171	14,031
Other (loss) income, net	-	278	(410)	567
(Loss) income before income taxes and earnings of equity method investment	(86)	6,911	(239)	14,598
Income tax (benefit) provision	(21)	1,930	(57)	3,240
(Loss) income before equity in earnings of equity method investment	(65)	4,981	(182)	11,358
Equity in earnings of equity method investment	-	1,269	-	3,041
Net (loss) income	\$ (65)	\$ 6,250	\$ (182)	\$ 14,399

The following table presents the summarized financial information for Ulvac Cryogenics, Inc., the unconsolidated subsidiaries accounted for based on the equity method (in thousands):

	Three Months Ended	Six Months Ended
	March 31, 2019	March 31, 2019
Statements of Operations:		
Total revenue	\$ 22,756	\$ 45,050
Gross profit	8,305	17,241
Operating Income	4,078	9,214
Net income	2,602	6,108

The following table presents the significant non-cash items and capital expenditures for the discontinued operations that are included in the Consolidated Statements of Cash Flows (in thousands):

	Three Months Ended	Six Months Ended
	March 31, 2019	March 31, 2019
Capital expenditures	\$ 99	\$ 407
Stock-based compensation	129	420
Earnings of equity method investment	(1,269)	(3,041)

4. Marketable Securities

The Company invests in marketable securities that are classified as available-for-sale and records them at fair value in the Company's unaudited Consolidated Balance Sheets. Marketable securities reported as current assets represent investments that mature within one year from the balance sheet date. Long-term marketable securities represent investments with maturity dates greater than one year from the balance sheet date. The securities are valued using matrix pricing and benchmarking and classified within Level 2 of the fair value hierarchy because they are not actively traded. Matrix pricing is a mathematical technique used to value securities by relying on the securities' relationship to other benchmark quoted prices.

Unrealized gains and losses are excluded from earnings and reported as a separate component of accumulated other comprehensive income until the security is sold or matures. Gains or losses realized from sales of marketable securities are computed based on the specific identification method and recognized as a component of "Other expenses, net" in the accompanying unaudited Consolidated Statements of Operations. There were no sales of marketable securities during the three months ended March 31, 2019. During the six months ended March 31, 2019, the Company sold marketable securities with a fair value and amortized cost of \$49.4 million and \$49.5 million, respectively, and recognized net losses of \$0.1 million. As a result, during this period, the Company collected cash proceeds of \$48.9 million from the sale of marketable securities and reclassified net unrealized holding losses of \$0.1 million from accumulated other comprehensive income into "Other expenses, net" in the accompanying unaudited Consolidated Statements of Operations as a result of these transactions. During both the three and six months ended March 31, 2020, the Company sold marketable securities with a fair value and amortized cost of \$2.5 million, and recognized a net gain of less than \$0.1 million in each period. As a result, during each of these periods, the Company collected cash proceeds of \$2.5 million from the sale of marketable securities and reclassified net unrealized holding gains of less than \$0.1 million from accumulated other comprehensive income into "Other expenses, net" in the accompanying unaudited Consolidated Statements of Operations as a result of these transactions.

The following is a summary of the amortized cost and the fair value, including accrued interest receivable and unrealized holding gains (losses) on the short-term and long-term marketable securities as of March 31, 2020 and September 30, 2019 (in thousands):

	Amortized Cost	Gross Unrealized Losses	Gross Unrealized Gains	Fair Value
March 31, 2020:				
Bank certificates of deposits	\$ 101	\$ —	\$ —	\$ 101
Corporate securities	2,555	—	—	2,555
Other debt securities	61	—	—	61
	<u>\$ 2,717</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 2,717</u>
September 30, 2019:				
U.S. Treasury securities and obligations of U.S. government agencies	\$ 31,863	\$ (2)	\$ 5	\$ 31,866
Bank certificates of deposits	750	—	—	750
Corporate securities	4,317	—	1	4,318
Other debt securities	35	—	—	35
	<u>\$ 36,965</u>	<u>\$ (2)</u>	<u>\$ 6</u>	<u>\$ 36,969</u>

The fair values of the marketable securities by contractual maturities at March 31, 2020 are presented below (in thousands):

	Fair Value
Due in one year or less	\$ 162
Due after one year through five years	—
Due after five years through ten years	—
Due after ten years	2,555
Total marketable securities	<u>\$ 2,717</u>

Expected maturities could differ from contractual maturities because the security issuers may have the right to prepay obligations without prepayment penalties.

The Company reviews the marketable securities for impairment at each reporting period to determine if any of the securities have experienced an other-than-temporary decline in fair value. The Company considers factors, such as the length of time and extent to which the market value has been less than the cost, the financial condition and near-term prospects of the issuer, the Company's intent to sell, or whether it is more likely than not it will be required to sell the investment before recovery of its amortized cost basis. If the Company believes that an other-than-temporary decline in fair value has occurred, it writes down the investment to its fair value and recognizes the credit loss in earnings and the non-credit loss in accumulated other comprehensive income or loss. There were no securities in an unrealized loss position as of March 31, 2020. The aggregate fair value of the marketable securities in an unrealized loss position was \$12.0 million as of September 30, 2019. Aggregate unrealized losses for these securities were insignificant as of September 30, 2019 and are presented in the table above. The securities in an unrealized loss position as of September 30, 2019 were not considered other-than-temporarily impaired and, as such, the Company did not recognize impairment losses during the period then ended. The unrealized losses were attributable to changes in interest rates that impacted the value of the investments.

Cash equivalents of less than \$0.1 million and \$6.2 million, respectively, at March 31, 2020 and September 30, 2019 consist of money market funds and are classified within Level 1 of the fair value hierarchy because they are valued using quoted market prices in active markets. Cash equivalents of \$10.0 million as of September 30, 2019 consist primarily of treasury bills and agency bonds and are classified within Level 2 of the fair value hierarchy because they are not actively traded. Cash equivalents from level 1 and level 2 are recorded in "Cash and cash equivalents" within the accompanying unaudited Consolidated Balance Sheet.

5. Acquisitions

Acquisition Completed in Fiscal Year 2020

Acquisition of RURO Inc.

On February 11, 2020, the Company acquired RURO, Inc. (“RURO”), an informatics software company based in Frederick, Maryland. RURO provides cloud-based software solutions to manage laboratory workflow and bio-sample data for a broad range of customers in the biotech, healthcare, and pharmaceutical sectors. The addition of RURO’s capabilities and offerings will enable the Company to offer enhanced on-site and off-site management of biological sample inventories as well as integration solutions to its customers for their increasingly distributed workflow. The total cash purchase price of the acquisition was \$15.6 million, net of cash acquired.

The Company recorded the assets acquired and liabilities assumed related to RURO at their fair values as of the acquisition date, from a market participant’s perspective. While the Company uses its best estimates and assumptions as part of the purchase price allocation process to value the assets acquired and liabilities assumed on the acquisition date, its estimates and assumptions are subject to refinement. Fair value estimates are based on a complex series of judgments about future events and uncertainties and rely heavily on estimates and assumptions. The judgments used to determine the estimated fair value assigned to each class of assets acquired and liabilities assumed, as well as asset lives, can materially impact the Company’s results of operations. The finalization of the assignment of fair values will be completed within one year. The following table presents the preliminary net purchase price and the fair values of the assets and liabilities of RURO (in thousands):

	Fair Value of Assets and Liabilities
Accounts receivable	\$ 1,220
Prepaid expenses and other current assets	29
Goodwill	11,117
Intangible assets	6,042
Other assets	229
Accounts payable	(15)
Deferred revenue	(1,320)
Accrued compensation and benefits	(344)
Other current liabilities	(91)
Long-term deferred tax liabilities	(1,091)
Long-term operating lease liabilities	(147)
Total purchase price, net of cash acquired	<u>\$ 15,629</u>

The Company applied variations of the income approach to estimate the fair values of the intangible assets acquired. The identifiable intangible assets include customer relationships (excess earnings method) of \$2.9 million with a useful life of 12 years, technology (relief from royalty method) of \$2.9 million with a useful live of 9 years and trademarks (relief from royalty method) of \$0.2 million with a useful life of 5 years. The intangible assets acquired are amortized over the total weighted average period of 10.6 years using methods that approximate the pattern in which the economic benefits are expected to be realized.

Goodwill of \$11.1 million largely reflects the potential synergies and expansion of the Company’s core technologies and offerings in the Life Sciences business. The goodwill from this acquisition is not tax deductible.

The Company reports the results of operations for RURO in the Brooks Life Science segment starting from the acquisition date. The revenues and net loss from RURO recognized in the Company’s consolidated results of operations were \$0.4 million and \$0.2 million, respectively, for the post-acquisition period ended March 31, 2020. During the post-acquisition period ended March 31, 2020, the amortization expense of acquired intangible assets was less than \$0.1 million. During the post-acquisition period ended March 31, 2020, the Company incurred \$0.2 million in transaction

costs, which were recorded in "Selling, general and administrative" expenses within the accompanying unaudited Consolidated Statements of Operations.

The Company did not present a pro forma information summary for its consolidated results of operations because such results were immaterial.

Acquisition Completed in Fiscal Year 2019

Acquisition of the GENEWIZ Group

On November 15, 2018, the Company acquired all the outstanding capital stock of GENEWIZ Group ("GENEWIZ"), a leading global genomics service provider headquartered in South Plainfield, New Jersey. GENEWIZ provides genomics services that enable research scientists to advance their discoveries within the pharmaceutical, academic, biotechnology, agriculture and other markets. It provides gene sequencing and synthesis services for more than 4,000 institutional customers worldwide supported by their global network of laboratories spanning the United States, China, Japan, Germany and the United Kingdom. This transaction has added a new and innovative platform which further enhances the Company's core capabilities, and added even more value to samples that are under the Company's care.

The total cash purchase price for the acquisition was \$442.7 million, net of cash acquired, which included a working capital settlement of \$0.4 million. The Company used the proceeds of the incremental term loan described in Note 8, "Debt" to pay a portion of the purchase price.

On the acquisition date, the Company paid \$32.3 million to escrow accounts related to the satisfaction of the seller's indemnification obligations with respect to their representations and warranties and other indemnities. The Company also retained an amount equal to \$1.5 million as collateral for any adjustment shortfall based on the final merger consideration calculation. During the fiscal year 2019, the final merger consideration was calculated to be \$4.0 million less than the merger consideration paid at closing. To satisfy the shortfall, the Company reversed the \$1.5 million liability associated with the holdback, received approval from the former shareholders to retain \$0.7 million of funds the Company received on their behalf, and collected \$1.8 million from the escrow accounts.

The Company recorded the assets acquired and liabilities assumed related to GENEWIZ at their fair values as of the acquisition date, from a market participant's perspective. Fair value estimates are based on a complex series of judgments about future events and uncertainties and rely heavily on estimates and assumptions. The judgments used to determine the estimated fair value assigned to each class of assets acquired and liabilities assumed, as well as asset lives,

can materially impact the Company's results of operations. The following table presents the net purchase price and the fair values of the assets and liabilities of GENEWIZ (in thousands):

	Fair Value of Assets and Liabilities
Accounts receivable	\$ 28,566
Inventories	4,370
Prepaid expenses and other current assets	11,635
Property, plant and equipment	36,379
Goodwill	235,160
Intangible assets	189,129
Other assets	15,998
Current portion of long-term debt	(3,170)
Accounts payable	(6,522)
Deferred revenue	(67)
Accrued compensation and benefits	(5,145)
Other current liabilities	(10,073)
Long-term debt	(2,482)
Long-term tax reserves	(13,400)
Long-term deferred tax liabilities	(34,993)
Other long-term liabilities	(2,681)
Total purchase price, net of cash acquired	<u>\$ 442,704</u>

The Company applied variations of the income approach to estimate the fair values of the intangible assets acquired. The identifiable intangible assets include customer relationships (excess earnings method) of \$125.5 million with a useful life of 14 years, completed technology (relief from royalty method) of \$44.5 million with useful lives from 10 to 15 years and trademarks (relief from royalty method) of \$19.1 million with a useful life of 13 years. The intangible assets acquired are amortized over the total weighted average period of 13.3 years using methods that approximate the pattern in which the economic benefits are expected to be realized.

Goodwill of \$235.2 million largely reflects the potential synergies and expansion of the Company's core technologies and offerings in the Life Sciences business. The goodwill from this acquisition is reported within the Brooks Life Sciences segment and is not tax deductible.

The revenues and net income from GENEWIZ recognized in the Company's consolidated results of operations were \$41.0 million and \$0.2 million, respectively, for the three months ended March 31, 2020. The revenues and net loss from GENEWIZ recognized in the Company's consolidated results of operations were \$32.8 million and \$0.3 million, respectively, for the three months ended March 31, 2019. During the three months ended March 31, 2020, and the comparable reporting period since the acquisition in fiscal year 2019, net income included \$5.1 million and \$3.2 million, respectively, related to amortization expense of acquired intangible assets. The revenues and net income from GENEWIZ recognized in the Company's consolidated results of operations were \$81.0 million and \$1.0 million, respectively, for the six months ended March 31, 2020. The revenues and net income from GENEWIZ recognized in the Company's consolidated results of operations were \$49.3 million and \$0.5 million, respectively during the period from the acquisition date to March 31, 2019. During the six months ended March 31, 2020, and the comparable reporting period since the acquisition in fiscal year 2019, net income included \$10.1 million and \$4.8 million, respectively, related to amortization expense of acquired intangible assets. During the three months ended March 31, 2019 and the period from the acquisition date to March 31, 2019, the Company incurred \$0.1 million and \$6.4 million, respectively, in transaction costs, which were recorded in "Selling, general and administrative" expenses within the accompanying unaudited Consolidated Statements of Operations. During both the three and six months ended March 31, 2020, the Company incurred less than \$0.1 million in transaction costs, which were recorded in "Selling, general and administrative" expenses within the accompanying unaudited Consolidated Statements of Operations.

The following unaudited pro forma information reflects the Company's consolidated results of operations as if the acquisition had taken place on October 1, 2017. The unaudited pro forma information is not necessarily indicative of the results of operations that the Company would have reported had the transaction actually occurred at the beginning of these periods nor is it necessarily indicative of future results. The unaudited pro forma financial information does not reflect the impact of future events that may occur after the acquisition, including, but not limited to, anticipated costs savings from synergies or other operational improvements (in thousands). The pro forma amounts in below table were adjusted to reflect a correction made during the 2019 fiscal year, see the 2019 Annual Report on Form 10-K Note 4, "Acquisitions" for further information.

	Three Months Ended March 31, 2019	Six Months Ended March 31, 2019
Revenue	\$ 198,390	\$ 394,411
Net (loss) income from continuing operations	(2,709)	4,086

The unaudited pro forma financial information presented in the table above includes adjustments for the application of the Company's accounting policies, elimination of related party transactions, depreciation and amortization related to fair value adjustments to property, plant and equipment and intangible assets, and transaction costs, and interest expense on acquisition related debt.

To present the Company's consolidated results of operations as if the acquisition had taken place on October 1, 2017, the unaudited pro forma earnings for the three months ended March 31, 2019 has been adjusted to exclude \$0.1 million non-recurring transaction cost. The unaudited pro forma earnings for the six months ended March 31, 2019 has been adjusted to include \$1.6 million property, plant, and equipment, leases, and intangible asset step-up depreciation and amortization expense and \$2.0 million interest expense related to financing activities and to exclude \$42.2 million non-recurring compensation expenses and transaction costs.

6. Goodwill and Intangible Assets

Goodwill represents the excess of net book value over the estimated fair value of net tangible and identifiable intangible assets of a reporting unit. Goodwill is tested for impairment annually or more often if impairment indicators are present at the reporting unit level. If events occur or circumstances change that would more likely than not reduce fair values of the reporting units below their carrying values, goodwill will be evaluated for impairment between annual tests. No triggering events indicating goodwill impairment occurred during the six months ended March 31, 2020. Please refer to Note 7, "Goodwill and Intangible Assets" to the Company's consolidated financial statements included in the

2019 Annual Report on Form 10-K for further information on the goodwill impairment testing performed during fiscal year 2019.

The changes in the Company's goodwill by reportable segment at March 31, 2020 and September 30, 2019 are as follows (in thousands):

	Brooks Semiconductor Solutions Group	Brooks Life Sciences	Other	Total
Gross goodwill, at September 30, 2019	\$ 636,791	\$ 440,755	\$ 26,014	\$ 1,103,560
Accumulated goodwill impairments	(588,944)	—	(26,014)	(614,958)
Goodwill, net of accumulated impairments, at September 30, 2019	47,847	440,755	—	488,602
Acquisitions and adjustments	119	9,781	—	9,900
Gross goodwill, at March 31, 2020	636,910	450,536	26,014	1,113,460
Accumulated goodwill impairments	(588,944)	—	(26,014)	(614,958)
Goodwill, net of accumulated impairments, at March 31, 2020	<u>\$ 47,966</u>	<u>\$ 450,536</u>	<u>\$ —</u>	<u>\$ 498,502</u>

During the six months ended March 31, 2020, the Company recorded a goodwill increase of \$9.9 million primarily related to the RURO acquisition partially offset by the impact of foreign currency translation adjustments.

The components of the Company's identifiable intangible assets as of March 31, 2020 and September 30, 2019 are as follows (in thousands):

	March 31, 2020			September 30, 2019		
	Cost	Accumulated Amortization	Net Book Value	Cost	Accumulated Amortization	Net Book Value
Patents	\$ 8,251	\$ 4,833	\$ 3,418	\$ 5,302	\$ 4,628	\$ 674
Completed technology	88,309	43,946	44,363	88,288	38,778	49,510
Trademarks and trade names	25,591	7,543	18,048	25,340	5,807	19,533
Customer relationships	267,921	97,665	170,256	265,450	84,047	181,403
Other intangibles	231	221	10	231	183	48
	<u>\$ 390,303</u>	<u>\$ 154,208</u>	<u>\$ 236,095</u>	<u>\$ 384,611</u>	<u>\$ 133,443</u>	<u>\$ 251,168</u>

Amortization expense for intangible assets was \$20.9 million and \$17.2 million, respectively, during the six months ended March 31, 2020 and 2019.

Estimated future amortization expense for the intangible assets for the remainder of fiscal year 2020, the subsequent four fiscal years and thereafter is as follows (in thousands):

Fiscal year ended September 30,	
2020	\$ 20,942
2021	38,689
2022	35,417
2023	32,128
2024	27,314
Thereafter	81,605
	<u>\$ 236,095</u>

7. Line of Credit

The Company maintains a revolving line of credit under a credit agreement with Wells Fargo Bank, N.A. and JPMorgan Chase Bank, N.A. that provides for revolving credit facility of up to \$75.0 million, subject to borrowing base availability, as defined in the credit agreement. The line of credit matures on October 4, 2022 and expires no less than 90 days prior to the term loan expiration. The proceeds from the line of credit are available for permitted acquisitions and general corporate purposes.

On October 4, 2017, the Company entered into a \$200.0 million Senior Secured Term Loan Facility (the “term loan”) with Morgan Stanley Senior Funding, Inc., JPMorgan Chase Bank, N.A. and Wells Fargo Securities, LLC (collectively, the “lenders”). Coincident with the entry into the credit agreement for the term loan discussed in Note 8, “Debt” below, the Company amended certain terms and conditions of the credit agreement. Based on the amended terms of the credit agreement, the line of credit continues to provide for a revolving credit facility of up to \$75.0 million, subject to borrowing base availability. Borrowing base availability under the amended credit agreement excludes collateral related to fixed assets and is redetermined periodically based on certain percentage of certain eligible U.S. assets, including accounts receivable and inventory. The sub-limits for letters of credit were reduced to \$7.5 million under the amended terms of the credit agreement. All outstanding borrowings under the credit agreement are guaranteed by the Company and Brooks Life Sciences, Inc. (fka BioStorage Technologies, Inc.), the Company’s wholly-owned subsidiary (“guarantor”), and subordinated to the obligations under the term loan which are secured by a first priority lien on substantially all of the assets of the Company and the guarantor, other than accounts receivable and inventory. Please refer to Note 8, “Debt”, for further information on the term loan transaction.

As of March 31, 2020, the Company had approximately \$44.7 million available for borrowing under the line of credit. There were no amounts outstanding under the line of credit as of March 31, 2020 and September 30, 2019. The Company records commitment fees and other costs directly associated with obtaining line of credit facility as deferred financing costs which are presented within "Other assets" in the accompanying unaudited Consolidated Balance Sheets. Deferred financing costs were \$0.3 million and \$0.4 million, respectively, at March 31, 2020 and September 30, 2019. Such costs are amortized over the term of the related facility arrangement and are included in “Interest expense” in the accompanying unaudited Consolidated Statements of Operations. The line of credit contains certain customary representations and warranties, a financial covenant and affirmative and negative covenants as well as events of default. The Company was in compliance with the line of credit covenants as of March 31, 2020 and September 30, 2019.

8. Debt

Term Loans

On October 4, 2017, the Company entered into a \$200.0 million term loan with the lenders pursuant to the terms of a credit agreement. The term loan was issued at \$197.6 million, or 98.8% of its par value, resulting in a discount of \$2.4 million, or 1.2%, which represented loan origination fees paid at the closing.

On November 15, 2018, the Company entered into an incremental amendment (the “First Amendment”) to the existing credit agreement. Under the First Amendment, the Company obtained an incremental term loan in an aggregate principal amount of \$350.0 million. The proceeds of the incremental term loan were used to finance a portion of the purchase price for the Company’s acquisition of GENEWIZ. The incremental term loan was issued at \$340.5 million, or 97.3% of its par value, resulting in a discount of \$9.5 million, or 2.7%, which represented financing cost of the incremental term loan. Except as provided in the First Amendment, the incremental term loan was subject to the same terms and conditions as set forth in the existing credit agreement.

On February 15, 2019, the Company entered into the second amendment to the credit agreement (the “Second Amendment”) and syndicated the incremental term loan to a group of new lenders which met the criteria of a debt extinguishment. The Company wrote off the carrying value of the incremental term loan of \$340.1 million as of February 15, 2019 and recorded the syndicated incremental term loan at its present value for \$349.1 million and a loss on debt extinguishment for \$9.1 million. The syndicated incremental term loan was issued at \$345.2 million, or 98.9% of its par value resulting in a discount of \$4.0 million which represented financing costs which are presented as a reduction

of the incremental term loan principal balance in the accompanying unaudited Consolidated Balance Sheets and was accreted over the life of the incremental term loan. Except as provided in the Second Amendment with respect to an increase of the applicable interest rates, the syndicated incremental term loan was subject to the same terms and conditions as the initial incremental term loan.

On July 1, 2019, the Company completed the sale of its semiconductor cryogenics business and used \$348.3 million of the proceeds from the Disposition to extinguish the outstanding balance of the incremental term loan. In addition, the Company used \$147.0 million of the proceeds from the Disposition to extinguish a portion of the outstanding balance of the term loan. The Company recorded a loss on debt extinguishment of \$5.2 million for the two term loans.

The Company's obligations under the term loan are also guaranteed by Brooks Life Sciences, Inc. (fka BioStorage Technologies, Inc.) as the guarantor, subject to the terms and conditions of the credit agreement. The Company and the guarantor granted the lenders a perfected first priority security interest in substantially all of the assets of the Company and the guarantor to secure the repayment of the term loan.

The loan principal amount under the credit agreement may be increased by an aggregate amount equal to \$75.0 million plus any voluntary repayments of the term loans plus any additional amount such that the secured leverage ratio of the Company is less than 3.00 to 1.00.

Subject to certain conditions stated in the credit agreement, the Company may redeem the term loan at any time at its option without a significant premium or penalty, except for a repricing transaction, as defined in the credit agreement. The Company is required to redeem the term loan at the principal amount then outstanding upon occurrence of certain events, including (i) net proceeds received from the sale or other disposition of the Company's or the guarantor's assets, subject to certain limitations, (ii) casualty and condemnation proceeds received by the Company or the guarantor, subject to certain exceptions, (iii) net proceeds received by the Company or the guarantor from the issuance of debt or disqualified capital stock after October 4, 2017. Commencing on December 31, 2018, the Company was required to make principal payments equal to the excess cash flow amount, as defined in the credit agreement. Such prepayments are equal to 50% of the preceding year excess cash flow amount reduced by voluntary prepayments of the term loan, subject to certain limitations.

The deferred financing costs are accreted over the term of the loan using the effective interest rate method and are included in "Interest expense" in the accompanying unaudited Consolidated Statements of Operations. At March 31, 2020, deferred financing costs were \$0.5 million.

The credit agreement contains certain customary representations and warranties, covenants and events of default. If any of the events of default occur and are not waived or cured within applicable grace periods, any unpaid amounts under the credit agreement will bear an annual interest rate at 2.00% above the rate otherwise applicable under the terms and conditions of such agreement. The credit agreement does not contain financial maintenance covenants. As of March 31, 2020, the Company was in compliance with all covenants and conditions under the credit agreement.

In connection with the GENEWIZ acquisition, the Company assumed three five-year term loans for a total of \$3.3 million and two one-year short term loans for a total of \$3.2 million. The three five-year term loans were initiated during 2016 and mature in 2021. The principal payments are payable in eight installments equal to 12.5% of the initial principal amount of the term loans on December 14th and June 14th of each year. The three five-year term loans were secured by GENEWIZ to fund equipment procurement and new building related payments and the interest rates are equal to the LIBOR plus 3.1%. The two one-year term loans were secured by GENEWIZ to fund operations. Both of the one-year term loans were initiated in 2018 and matured in 2019. The interest rates of these two loans were 4.56% and 4.35%. There are no deferred financing costs related to either the five-year term loans or the one-year term loans. At March 31, 2020, the Company had an aggregate outstanding principal balance of \$1.2 million for the three five-year term loans. Both of the two one-year short term loans matured and were repaid in full as of September 30, 2019.

During the six months ended March 31, 2020, the weighted average stated interest rate paid on all outstanding debt was 4.5%. During the six months ended March 31, 2020, the Company incurred aggregate interest expense of \$1.3 million in connection with the borrowings, including \$0.1 million of deferred financing costs amortization.

The following are the future minimum principal payment obligations under all of the Company's outstanding debt as of March 31, 2020 (in thousands):

	Amount
Fiscal year ended September 30,	
2020	\$ 828
2021	413
2022	—
2023	—
2024	—
Thereafter	50,000
Total outstanding principal balance	51,241
Unamortized deferred financing costs	(462)
	50,779
Current portion of long-term debt	828
Non-current portion of long-term debt	\$ 49,951

9. Leases

The Company has operating leases for real estate and non-real estate and finance leases for non-real estate in North America, Europe, and Asia. Non-real estate leases are primarily related to vehicles and office equipment. Lease expiration dates range between 2020 and 2039.

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

	<u>Three months ended March 31, 2020</u>	<u>Six Months Ended March 31, 2020</u>
Operating lease costs	\$ 2,275	\$ 4,397
Finance lease costs:		
Amortization of assets	311	622
Interest on lease liabilities	26	55
Total finance lease costs	<u>337</u>	<u>677</u>
Variable lease costs	460	866
Short-term lease costs	<u>132</u>	<u>296</u>
Total lease costs	<u>\$ 3,204</u>	<u>\$ 6,236</u>

Supplemental balance sheet information related to leases is as follows (in thousands, except lease term and discount rate):

	<u>As of March 31, 2020</u>	
Operating Leases:		
Operating lease right-of-use assets	\$	34,671
Accrued expenses and other current liabilities	\$	6,841
Long-term operating lease liabilities		<u>27,233</u>
Total operating lease liabilities	\$	<u>34,074</u>
Finance Leases:		
Property, plant and equipment, at cost	\$	2,540
Accumulated amortization		(623)
Property, plant and equipment, net	\$	<u>1,917</u>
Accrued expenses and other current liabilities	\$	1,211
Other long-term liabilities		867
Total finance lease liabilities	\$	<u>2,078</u>
Weighted average remaining lease term (in years):		
Operating leases		8.26
Finance leases		1.78
Weighted average discount rate:		
Operating leases		4.7 %
Finance leases		4.2 %

Supplemental cash flow information related to operating leases was as follows (in thousands, unaudited):

	<u>Three months ended March 31, 2020</u>	<u>Six Months Ended March 31, 2020</u>
Cash paid for amounts included in measurement of liabilities:		
Operating cash flows from operating leases	\$ 2,067	\$ 3,874
Operating cash flows from finance leases	26	55
Financing cash flows from finance leases	293	583

Future lease payments for operating and capital leases as of March 31, 2020 were as follows (in thousands):

	Operating Leases		Finance Leases	
2020	\$	4,288	\$	638
2021		7,141		1,171
2022		5,380		364
2023		4,375		-
2024		4,188		-
Thereafter		15,884		-
Total future lease payments		41,256		2,173
Less imputed interest		(7,182)		(95)
Total lease liability balance	\$	34,074	\$	2,078

Future lease payments for operating and finance leases as of September 30, 2019 were as follows (in thousands):

	Operating Leases		Capital Leases	
2020	\$	6,794	\$	1,276
2021		5,520		1,171
2022		3,904		363
2023		3,110		-
2024		2,934		-
Thereafter		10,499		-
Total future lease payments		32,761		2,810
Less imputed interest		(5,685)		(150)
Total lease liability balance	\$	27,076	\$	2,660

As of March 31, 2020, the Company has not entered any significant leases that have not commenced yet.

10. Income Taxes

The Company recorded an income tax provision of \$3.4 million and \$0.4 million, respectively, during the three and six months ended March 31, 2020. The tax expense for the three months ended March 31, 2020 was primarily driven by the provision on earnings from operations during the period. During the quarter ended March 31, 2020, the Company recorded a \$0.3 million discrete stock compensation windfall benefit for tax deductions that exceeded the associated compensation expense. The tax provision for the six months ended March 31, 2020 was primarily driven by the provision on earnings from operations during the period, which was offset by a \$6.1 million discrete stock compensation windfall benefit for tax deductions that exceeded the associated compensation expense in the period. During the six months ended March 31, 2020, the Company also recorded a discrete benefit of \$0.5 million from a reduction of deferred tax liabilities related to the extension of a tax rate incentive in China.

The Company recorded an income tax benefit of \$1.0 million and \$6.9 million, respectively, during the three and six months ended March 31, 2019. The tax benefit for the three months ended March 31, 2019 was driven by U.S. losses during the period and included a \$0.4 million benefit from stock compensation windfalls. Partially offsetting these benefits was a discrete expense related to interest accruing on uncertain tax positions. The tax benefit for the six months ended March 31, 2019 was primarily driven by discrete benefits related to stock compensation windfalls of \$4.1 million for tax deductions that exceeded the associated compensation expense, \$1.4 million of tax benefits related to the remeasurement of net U.S. deferred tax assets due to state tax rate changes, and a \$1.1 million transition tax reduction. These discrete benefits were slightly increased by the tax benefit recorded on losses during the six month period.

During 2018, the Internal Revenue Service issued proposed regulations on the federal toll charge and various other aspects of the Tax Cuts and Jobs Act. The Company finalized its analysis of the toll charge and related liabilities, including uncertain tax positions, during the three months ended December 31, 2018 pursuant to U.S. Securities and

Exchange Commission (“SEC”) Staff Accounting Bulletin No. 118. As a result of the new guidance issued and additional work to complete the calculation of the federal toll charge, the Company reduced the provisional accrual for federal, state and foreign taxes by net \$1.1 million during the three months ended December 31, 2018.

The Company evaluates the realizability of its deferred tax assets by tax-paying component and assesses the need for a valuation allowance on a quarterly basis. The Company evaluates the profitability of each tax-paying component on a historic cumulative basis and a forward-looking basis while performing this analysis. The Company maintains a U.S. valuation allowance related to the realizability of certain foreign tax credits, state tax credits and state net operating loss carry-forwards, as well as a valuation allowance against net deferred tax assets on certain foreign tax-paying components as of March 31, 2020.

During the three months ended March 31, 2020, the Company recorded \$1.1 million of deferred tax liabilities in connection with the acquisition of RURO.

The Company maintains liabilities for uncertain tax positions. These liabilities involve judgment and estimation and are monitored based on the best information available. The Company recognizes interest related to unrecognized tax benefits as a component of the income tax expense or benefit. The Company recognized interest expense related to its unrecognized tax benefits of \$0.3 million and \$0.6 million, respectively, during the three and six months ended March 31, 2020.

The Company is subject to U.S. federal, state, local and international income taxes in various jurisdictions. The amount of income taxes paid is subject to the Company’s interpretation of applicable tax laws in the jurisdictions in which it files tax returns. In the normal course of business, the Company is subject to income tax audits in the various global jurisdictions in which it operates. The years subject to examination vary for the U.S. and international jurisdictions, with the earliest tax year being 2011. Based on the outcome of these examinations or the expiration of statutes of limitations for specific jurisdictions, it is reasonably possible that the related unrecognized tax benefits could change from those recorded in the Company’s unaudited Consolidated Balance Sheets. The Company currently anticipates that it is reasonably possible that the unrecognized tax benefits will be reduced by approximately \$0.2 million within the next twelve months.

11. Other Balance Sheet Information

The following is a summary of accounts receivable at March 31, 2020 and September 30, 2019 (in thousands):

	March 31, 2020	September 30, 2019
Accounts receivable	\$ 183,324	\$ 169,317
Less allowance for doubtful accounts	(4,225)	(3,644)
Less allowance for sales returns	(85)	(71)
Accounts receivable, net	<u>\$ 179,014</u>	<u>\$ 165,602</u>

The following is a summary of inventories at March 31, 2020 and September 30, 2019 (in thousands):

	March 31, 2020	September 30, 2019
Inventories		
Raw materials and purchased parts	\$ 73,473	\$ 67,176
Work-in-process	13,443	13,684
Finished goods	20,783	18,585
Total inventories	<u>\$ 107,699</u>	<u>\$ 99,445</u>

Reserves for excess and obsolete inventory were \$16.1 million and \$16.3 million, respectively, at March 31, 2020 and September 30, 2019.

At March 31, 2020 and September 30, 2019, the Company had cumulative capitalized direct costs of \$14.1 million and \$11.6 million, respectively, associated with the development of software for its internal use. As of March 31, 2020, this balance included \$1.7 million associated with software still in the development stage which are included within "Property, plant and equipment, net" in the accompanying unaudited Consolidated Balance Sheets. During the six months ended March 31, 2020, the Company capitalized direct costs of \$2.5 million associated with the development of software for its internal use.

The Company establishes reserves for estimated costs of product warranties based on historical information. Product warranty reserves are recorded at the time product revenue is recognized, and retrofit accruals are recorded at the time retrofit programs are established. The Company's warranty obligation is affected by product failure rates, utilization levels, material usage, service delivery costs incurred in correcting a product failure and supplier warranties on parts delivered to the Company.

The following is a summary of product warranty and retrofit activity on a gross basis for the three and six months ended March 31, 2020 and 2019 (in thousands):

Activity -Three Months Ended March 31, 2020				
Balance December 31, 2019	Accruals	Costs Incurred	Balance March 31, 2020	
\$ 7,493	\$ 2,174	\$ (1,757)	\$ 7,910	
Activity -Three Months Ended March 31, 2019				
Balance December 31, 2018	Accruals	Costs Incurred	Balance March 31, 2019	
\$ 6,851	\$ 1,807	\$ (1,456)	\$ 7,202	
Activity -Six Months Ended March 31, 2020				
Balance September 30, 2019	Accruals	Costs Incurred	Balance March 31, 2020	
\$ 7,175	\$ 4,653	\$ (3,918)	\$ 7,910	
Activity -Six Months Ended March 31, 2019				
Balance September 30, 2018	Accruals	Costs Incurred	Balance March 31, 2019	
\$ 6,340	\$ 4,161	\$ (3,299)	\$ 7,202	

12. Stock-Based Compensation

The Company may issue to eligible employees options to purchase shares of the Company's stock, restricted stock and other equity incentives which vest upon the satisfaction of a performance condition and/or a service condition. In addition, the Company issues shares to participating employees pursuant to an employee stock purchase plan and stock awards, restricted stock awards and deferred stock and restricted stock units to its directors in accordance with its director compensation program.

The following table reflects stock-based compensation expense recorded during the three and six months ended March 31, 2020 and 2019 (in thousands):

	<u>Three Months Ended March 31,</u>		<u>Six Months Ended March 31,</u>	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
Restricted stock units	\$ 3,921	\$ 4,923	\$ 8,014	\$ 8,883
Employee stock purchase plan	293	198	610	414
Total stock-based compensation expense	<u>\$ 4,214</u>	<u>\$ 5,121</u>	<u>\$ 8,624</u>	<u>\$ 9,297</u>

The fair value of restricted stock units is determined based on the number of shares granted and the closing price of the Company's common stock quoted on the Nasdaq Stock Market on the date of grant. For awards that vest based on service conditions, the Company recognizes stock-based compensation expense on a straight-line basis over the requisite service period. For awards that vest subject to performance conditions, the Company recognizes stock-based compensation expense ratably over the performance period if it is probable that performance condition will be met and adjusted for the probability percentage of achieving the performance goals. The Company makes estimates of stock award forfeitures and the number of awards expected to vest. The Company considers many factors in developing forfeiture estimates, including award types, employee classes and historical experience. Each quarter, the Company assesses the probability of achieving the performance goals. Current estimates may differ from actual results and future changes in estimates.

The Company grants restricted stock units that vest over a required service period and/or achievement of certain operating performance goals. Restricted stock units granted with performance goals may also have a required service period following the achievement of all or a portion of the performance goals. The following table reflects restricted stock units, including stock awards, granted during the six months ended March 31, 2020 and 2019:

	<u>Total Units</u>	<u>Time-Based Units</u>	<u>Stock Grants</u>	<u>Performance-Based Units</u>
Six months ended March 31, 2020	408,827	163,390	23,867	221,570
Six months ended March 31, 2019	789,409	327,500	38,520	423,389

Time-Based Grants

Restricted stock units granted with a required service period typically have three-year vesting schedules in which one-third of awards vest at the first anniversary of the grant date, one-third vest at the second anniversary of the grant date and one-third vest at the third anniversary of the grant date, subject to the award holders meeting service requirements.

Stock Grants

The stock awards granted to the members of the Company's Board of Directors include stock awards, restricted stock awards and deferred stock and restricted stock units.

Certain members of the Board of Directors have elected to defer receiving their annual stock awards and related quarterly dividends until they attain a certain age or cease to provide services as the Company's Board members. Restricted stock awards granted in fiscal years 2019 and 2020 were vested as of the respective grant dates.

Performance-Based Grants

Performance-based restricted stock units are earned based on the achievement of performance criteria established by the Human Resources and Compensation Committee and approved by the Board of Directors. The criteria for performance-based awards are weighted and have threshold, target and maximum performance goals.

Performance-based awards granted in fiscal year 2020, 2019 and 2018 allow participants to earn 100% of restricted stock units if the Company's performance meets its target goal for each applicable financial metric, and up to a

maximum of 200% if the Company's performance for such metrics meets or exceeds the maximum or stretch goal. Performance below the minimum threshold for each financial metric results in award forfeiture. Performance goals will be measured over a three-year period for each year's awards and at the end of the period to determine the number of units earned by recipients who continue to meet the service requirement. Around the third anniversary of each year awards' grant date, the Company's Board of Directors determines the number of units earned for participants who continue to meet the service requirements on the vest date.

Restricted Stock Unit Activity

The following table summarizes restricted stock unit activity for the six months ended March 31, 2020:

	<u>Shares</u>	<u>Weighted Average Grant-Date Fair Value</u>
Outstanding at September 30, 2019	1,782,726	\$ 24.63
Granted	408,827	46.64
Vested	(890,778)	26.01
Forfeited	(97,363)	34.86
Outstanding at March 31, 2020	<u>1,203,412</u>	36.04

The weighted average grant date fair value of restricted stock units granted during the three months ended March 31, 2020 and 2019 was \$42.22 and \$29.73, respectively. The weighted average grant date fair value of restricted stock units granted during the six months ended March 31, 2020 and 2019 was \$46.64 and \$30.45, respectively. The fair value of restricted stock units vested during the three months ended March 31, 2020 and 2019 was \$2.9 million and \$3.4 million, respectively. The fair value of restricted stock units vested during the six months ended March 31, 2020 and 2019 was \$41.4 million and \$31.1 million, respectively. During the six months ended March 31, 2020 and 2019, the Company remitted \$24.1 million and \$14.2 million, respectively, collected from employees to satisfy their tax obligations as a result of share issuances. Such proceeds collected and remitted were insignificant during the three months ended March 31, 2020 and 2019.

As of March 31, 2020, the unrecognized compensation cost related to restricted stock units that are expected to vest is \$27.0 million and will be recognized over an estimated weighted average service period of approximately 1.8 years.

Employee Stock Purchase Plan

The Company maintains an employee stock purchase plan that allows its employees to purchase shares of common stock at a price equal to 85% of the fair market value of the Company's stock at the beginning or the end of the semi-annual period, whichever is lower. There were 63,885 and 59,549 shares, respectively, purchased by employees under the employee stock purchase plan during the six months ended March 31, 2020 and 2019.

13. Earnings per Share

The calculations of basic and diluted net income per share and basic and diluted weighted average shares outstanding are as follows for the three and six months ended March 31, 2020 and 2019 (in thousands, except per share data):

	Three Months Ended March 31,		Six Months Ended March 31,	
	2020	2019	2020	2019
Income (loss) from continuing operations	\$ 9,192	\$ (2,829)	\$ 22,366	\$ 3,437
(Loss) income from discontinued operations, net of tax	(65)	6,250	(182)	14,399
Net income	<u>\$ 9,127</u>	<u>\$ 3,421</u>	<u>\$ 22,184</u>	<u>\$ 17,836</u>
Weighted average common shares outstanding used in computing basic earnings per share	73,708	72,077	73,331	71,760
Dilutive restricted stock units	81	215	421	455
Weighted average common shares outstanding used in computing diluted earnings per share	<u>73,789</u>	<u>72,292</u>	<u>73,752</u>	<u>72,215</u>
Basic net income per share:				
Income (loss) from continuing operations	\$ 0.12	\$ (0.04)	\$ 0.30	\$ 0.05
(Loss) income from discontinued operations, net of tax	(0.00)	0.09	(0.00)	0.20
Basic net income per share	<u>\$ 0.12</u>	<u>\$ 0.05</u>	<u>\$ 0.30</u>	<u>\$ 0.25</u>
Diluted net income per share:				
Income (loss) from continuing operations	\$ 0.12	\$ (0.04)	\$ 0.30	\$ 0.05
(Loss) income from discontinued operations, net of tax	(0.00)	0.09	(0.00)	0.20
Diluted net income per share	<u>\$ 0.12</u>	<u>\$ 0.05</u>	<u>\$ 0.30</u>	<u>\$ 0.25</u>
Dividend declared per share	\$ 0.10	\$ 0.10	\$ 0.20	\$ 0.20

During the three and six months ended March 31, 2020, antidilutive restricted stock units of 190,723 and 167,161, respectively, were excluded from the computation of diluted earnings per share based on the treasury stock method. During the three and six months ended March 31, 2019, antidilutive restricted stock units of 4,599 and 8,751, respectively, were excluded from the computation of diluted earnings per share based on the treasury stock method.

14. Revenue from Contracts with Customers

Disaggregated Revenue

The Company disaggregates revenue from contracts with customers in a manner that depicts how the nature, amount, timing, and uncertainty of revenue and cash flows are affected by economic factors. The Company disaggregates revenue based on the transfer of control of the underlying performance obligations, the geographic location in which customer orders are placed and by reporting unit.

The Company transfers control of its performance obligations at a point in time or over time, depending on the nature of the product or service being provided. Revenue from contracts with customers is attributed to geographic areas based on locations in which the customer orders are placed. The Company reports financial results for two reportable segments which consist of Brooks Semiconductor Solutions Group segment and Brooks Life Sciences segment. The Company also consists of five reporting units, including three reporting units within the Brooks Semiconductor Solutions Group reportable segment and two reporting units within the Brooks Life Sciences reportable segment. The

following is a reconciliation of revenue disaggregated in a manner discussed above to segment revenue for the three and six months ended March 31, 2020 and 2019 (in thousands):

	Brooks Semiconductor Solutions Group	Brooks Life Sciences	Total
Three months ended March 31, 2020			
Point in time	\$ 122,694	\$ 24,341	\$ 147,035
Over time	2,229	70,963	73,192
	<u>\$ 124,923</u>	<u>\$ 95,304</u>	<u>\$ 220,227</u>
Three months ended March 31, 2019			
Point in time	\$ 111,710	\$ 24,983	\$ 136,693
Over time	1,167	60,530	61,697
	<u>\$ 112,877</u>	<u>\$ 85,513</u>	<u>\$ 198,390</u>
Six Months Ended March 31, 2020			
Point in time	\$ 239,483	\$ 45,660	\$ 285,143
Over time	4,251	141,333	145,584
	<u>\$ 243,734</u>	<u>\$ 186,993</u>	<u>\$ 430,727</u>
Six Months Ended March 31, 2019			
Point in time	\$ 223,626	\$ 48,150	\$ 271,776
Over time	1,958	104,023	105,981
	<u>\$ 225,584</u>	<u>\$ 152,173</u>	<u>\$ 377,757</u>

The following is revenue by geographic location and reporting unit for the three and six months ended March 31, 2020 and 2019 (in thousands):

	Three months ended March 31,		Six months ended March 31,	
	2020	2019	2020	2019
Geographic Location				
North America	\$ 85,887	\$ 83,156	\$ 166,118	\$ 152,053
Asia/Pacific/Other	105,014	77,653	208,553	157,112
United Kingdom	10,384	12,540	20,305	24,618
Rest of Europe	18,942	25,041	35,751	43,974
	<u>\$ 220,227</u>	<u>\$ 198,390</u>	<u>\$ 430,727</u>	<u>\$ 377,757</u>
Reporting Unit				
Automation Solutions	\$ 68,733	\$ 72,445	\$ 132,970	\$ 146,120
Contamination Control Solutions	45,463	30,047	89,804	58,003
Global Semiconductor Services	10,727	10,385	20,960	21,461
Brooks Semiconductor Solutions Group	124,923	112,877	243,734	225,584
Sample Management	54,289	52,590	106,007	102,892
GENEWIZ	41,015	32,923	80,986	49,281
Brooks Life Sciences	95,304	85,513	186,993	152,173
Total	<u>\$ 220,227</u>	<u>\$ 198,390</u>	<u>\$ 430,727</u>	<u>\$ 377,757</u>

Contract Balances

Accounts Receivable, Net. Accounts receivable represent rights to consideration in exchange for products or services that have been transferred by the Company, when payment is unconditional and only the passage of time is required before payment is due. Accounts receivable do not bear interest and are recorded at the invoiced amount. The Company

maintains an allowance for doubtful accounts representing its best estimate of probable credit losses related to its existing accounts receivable and their net realizable value. The Company determines the allowance for doubtful accounts based on a number of factors, including an evaluation of customer credit worthiness, the age of the outstanding receivables, economic trends and historical experience. Accounts receivable, net were \$179.0 million and \$165.6 million at March 31, 2020 and September 30, 2019, respectively.

Contract Assets. Contract assets represent rights to consideration in exchange for products or services that have been transferred by the Company, when payment is conditional on something other than the passage of time. These amounts typically relate to contracts within the Brooks Life Sciences segment where the right to payment is not present until completion of the contract or the achievement of specified milestones and the value of the products or services transferred exceed this constraint. Contract assets are classified as current. Contract asset balances which are included within “Prepaid expenses and other current assets” on the Company’s Consolidated Balance Sheet, were \$15.1 million and \$14.0 million at March 31, 2020 and September 30, 2019, respectively.

Deferred Commissions. Deferred commissions represent a direct and incremental cost of obtaining a contract. These amounts primarily relate to sales commissions within the Brooks Life Sciences segment and are deferred and amortized over a 60 month period, which represents the average period of contract performance. The Company classifies deferred commissions as noncurrent as the original amortization period of this asset is greater than one year. Deferred commissions balances are included within “Other assets” on the Company’s Consolidated Balance Sheet. Deferred commissions were \$0.6 million and \$0.8 million at March 31, 2020 and September 30, 2019, respectively. The Company recorded amortization expense related to deferred commissions of \$0.1 million and \$0.3 million, respectively for the three and six months ended March 31, 2020.

Contract Liabilities. Contract liabilities represent the Company’s obligation to transfer products or services to a customer for which consideration has been received, or for which an amount of consideration is due from the customer. Contract assets and liabilities are reported on a net basis at the contract level, depending on the contracts position at the end of each reporting period. Contract liabilities are included within Deferred revenue on the Company’s Consolidated Balance Sheet. Contract liabilities were \$29.1 million and \$29.4 million at March 31, 2020 and September 30, 2019, respectively. Revenue recognized from the contract liability balance at September 30, 2019 was \$10.1 million for the six months ended March 31, 2020.

Remaining Performance Obligations. Remaining performance obligations represent the transaction price of unsatisfied or partially satisfied performance obligations within contracts with an original expected contract term that is greater than one year and for which fulfillment of the contract has started as of the end of the reporting period. The aggregate amount of transaction consideration allocated to remaining performance obligations as of March 31, 2020 was \$34.1 million. The following table summarizes when the Company expects to recognize the remaining performance obligations as revenue, the Company will recognize revenue associated with these performance obligations as transfer of control occurs (in thousands):

	As of March 31, 2020		
	Less than 1 Year	Greater than 1 Year	Total
Remaining Performance Obligations	\$ 25,337	\$ 8,805	\$ 34,142

Cost to Obtain and Fulfill a Contract

The Company capitalizes sales commissions when incurred if they are (i) incremental costs of obtaining a contract, (ii) expected to be recovered and (iii) have an expected amortization period that is greater than one year. As part of the Company’s cumulative effect adjustment, incremental costs associated with obtaining a contract were capitalized and have been classified as deferred commissions within the Company’s Consolidated Balance Sheet. These amounts primarily relate to sales commissions within the Brooks Life Sciences segment and are being amortized over a 60 month period, which represents the average period of contract performance. The Company did not capitalize any sales commissions during the three or six months ended March 31, 2020 as the amount of sales commissions that qualified for capitalization during the reporting period was insignificant. Sales commissions incurred during the reporting period have

been expensed as incurred. These costs are recorded within “Selling, general, and administration expenses”. The Company has concluded that none of its costs incurred in fulfillment of customer contracts meet the capitalization criteria. The Company will account for shipping and handling activities as fulfillment activities and recognize the associated expense when transfer of control of the product has transferred to the customer.

15. Segment Information

The Company operates in two reportable segments: the Brooks Semiconductor Solutions Group segment and the Brooks Life Sciences segment. Brooks Life Sciences consists of two operating segments aggregated into one reportable segment.

The Brooks Semiconductor Solutions Group segment provides a variety of products, services and solutions that enable improved throughput and yield in controlled operating environments, as well as an extensive range of support services. The solutions include atmospheric and vacuum robots, robotic modules, tool automation systems, contamination control of wafer carrier front opening unified pods and reticle storage. The support services include repair services, diagnostic support services, and installation services in support of the products, which enable customers to maximize process tool uptime and productivity. This segment also provides end-user customers with spare parts and productivity enhancement upgrades to maximize tool productivity.

The Brooks Life Sciences segment provides comprehensive life cycle sample management solutions for life science and bioscience customers including complete end-to-end “cold chain of custody” solutions and sample-based laboratory services such as genomic sequencing and gene synthesis to advance scientific research and support drug development. The segment’s product offerings include automated cold sample management systems for compound and biological sample storage, equipment for sample preparation and handling, consumables, and informatics that help customers manage samples throughout their research discovery and development workflows. The segment’s service offerings include sample storage, genomic sequencing, gene synthesis, laboratory processing services, laboratory analysis, and other support services which are provided to a wide range of life science customers, including pharmaceutical companies, biotechnology companies, biorepositories and research institutes.

The Company considers adjusted operating income, which excludes charges related to amortization of completed technology, the acquisition accounting impact on inventory contracts acquired and restructuring related charges as the primary performance metric when evaluating the business. Please refer to Note 21, “Segment and Geographic Information” to the Company’s consolidated financial statements included in the 2019 Annual Report on Form 10-K for further information on the operating segments’ description and accounting policies.

In conjunction with the acquisition of GENEWIZ during the quarter ended December 31, 2018, the Company reassessed its segment reporting structure and determined that GENEWIZ represents a separate operating segment based on ASC 280, Segment Reporting (“ASC 280”). As permitted by ASC 280, the Company elected to aggregate the Sample Management operating segment and the GENEWIZ operating segment as a single reportable segment titled Brooks Life Sciences. The aggregation was based on similarities in long-term forecasted economic characteristics, particularly adjusted operating income, similarity in services they offer, the customers they serve, the nature of their service delivery models, and their regulatory environments. The Company believes that the aggregated presentation is more useful to investors and other financial users. Management formally assesses the long-term financial outlook of its operating segments on an annual basis as part of its strategic planning process and more frequently on an informal basis. The customer bases of the operating segments overlap, serving life science and bioscience customers in the pharmaceutical and bio-technology companies as well as academic and government institutions. Both of these operating segments provide services relating to the biological samples needed to advance non-clinical and clinical research, serving scientific and business operations functions. In a typical customer workflow, a biological sample is collected, processed and analyzed with results interpreted and used to make scientific judgements. Critical or valuable samples are then annotated and stored for many years in environments where they can be easily retrieved for additional study. These operating segments provide services across this workflow. Both of these operating segments offer services meeting the standards of Good Manufacturing Practices set forth by the U.S. Food and Drug Administration.

The following is the summary of the financial information for the Company's reportable segments for the three and six months ended March 31, 2020 and 2019 (in thousands):

	Three Months Ended March 31,		Six Months Ended March 31,	
	2020	2019	2020	2019
Revenue:				
Brooks Semiconductor Solutions Group	\$ 124,923	\$ 112,877	\$ 243,734	\$ 225,584
Brooks Life Sciences	95,304	85,513	186,993	152,173
Total revenue	<u>\$ 220,227</u>	<u>\$ 198,390</u>	<u>\$ 430,727</u>	<u>\$ 377,757</u>
Operating income:				
Brooks Semiconductor Solutions Group	\$ 16,707	\$ 18,903	\$ 31,707	\$ 36,166
Brooks Life Sciences	8,117	5,018	14,091	7,678
Reportable segment adjusted operating income	<u>24,824</u>	<u>23,921</u>	<u>45,798</u>	<u>43,844</u>
Amortization of completed technology	2,740	2,791	5,416	4,798
Acquisition accounting impact on inventory contracts acquired	—	—	—	184
Amortization of acquired intangible assets	7,615	6,614	15,525	12,382
Restructuring charges	578	370	1,154	429
Other unallocated corporate (income) expenses	(681)	474	(1,535)	7,047
Total operating income	<u>14,572</u>	<u>13,672</u>	<u>25,238</u>	<u>19,004</u>
Interest income	137	316	836	739
Interest expense	(718)	(8,018)	(1,455)	(13,308)
Loss on extinguishment of debt	—	(9,051)	—	(9,051)
Other expenses, net	(1,399)	(778)	(1,816)	(807)
Income (loss) before income taxes	<u>\$ 12,592</u>	<u>\$ (3,859)</u>	<u>\$ 22,803</u>	<u>\$ (3,423)</u>

	Brooks		
	Semiconductor	Brooks	
	Solutions Group	Life Sciences	Total
Assets:			
March 31, 2020	\$ 275,754	\$ 949,977	\$ 1,225,731
September 30, 2019	259,641	909,154	1,168,795

The following is a reconciliation of the Company's reportable segments' segment assets to the corresponding amounts presented in the accompanying Consolidated Balance Sheets as of March 31, 2020 and September 30, 2019 (in thousands):

	March 31, 2020	September 30, 2019
Segment assets	\$ 1,225,731	\$ 1,168,795
Cash, cash equivalents, restricted cash, and marketable securities	248,520	342,140
Deferred tax assets	5,080	5,064
Total assets	<u>\$ 1,479,331</u>	<u>\$ 1,515,999</u>

16. Significant Customers

The Company had one customer that accounted for 10% or more of its consolidated revenue, at 16% and 15%, respectively, during the three and six months ended March 31, 2020. The Company had no customer that accounted for 10% or more of its consolidated revenue during the three and six months ended March 31, 2019. As of March 31, 2020, the Company had one customer that accounted for more than 10% of its accounts receivable balance of the Company's

total receivables, at 10%. There were no customers that accounted for more than 10% of its accounts receivable balance of the Company's total receivables as of September 30, 2019.

17. Commitments and Contingencies

Letters of Credit

As of March 31, 2020, the Company had approximately \$1.2 million of letters of credit outstanding related primarily to customer advances and other performance obligations. These arrangements guarantee the refund of advance payments received from the Company's customers in the event that the product is not delivered, or warranty obligations are not fulfilled in accordance with the contract terms. These obligations could be called by the beneficiaries at any time before the expiration date of the particular letter of credit if the Company fails to meet certain contractual requirements. None of these obligations were called during the three months ended March 31, 2020, and the Company currently does not anticipate any of these obligations to be called in the near future.

Purchase Commitments

At March 31, 2020, the Company had non-cancellable commitments of \$127.3 million, including purchase orders for inventory of \$89 million, information technology related commitments of \$21.7 million, China facility commitments of \$16.6 million and no other commitments.

Contingencies

The Company is subject to various legal proceedings, both asserted and unasserted, that arise in the ordinary course of business. The Company cannot predict the ultimate outcome of such legal proceedings or in certain instances provide reasonable ranges of potential losses. However, as of the date of this report, the Company believes that none of these claims will have a material adverse effect on its consolidated financial position or results of operations. In the event of unexpected subsequent developments and given the inherent unpredictability of these legal proceedings, there can be no assurance that the Company's assessment of any claim will reflect the ultimate outcome, and an adverse outcome in certain matters could, from time to time, have a material adverse effect on the Company's consolidated financial position or results of operations in particular quarterly or annual periods.

18. Subsequent Events

Dividend

On April 29, 2020, the Company's Board of Directors declared a cash dividend of \$0.10 per share payable on June 26, 2020 to common stockholders of record as of June 5, 2020. Dividends are declared at the discretion of the Company's Board of Directors and depend on the Company's actual cash flows from operations, its financial condition and capital requirements and any other factors the Company's Board of Directors may consider relevant. Future dividend declarations, as well as the record and payment dates for such dividends, will be determined by the Company's Board of Directors on a quarterly basis.

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

The Management's Discussion and Analysis of Financial Condition and Results of Operations, or MD&A, describes principal factors affecting the results of our operations, financial condition and liquidity as well as our critical accounting policies and estimates that require significant judgment and thus have the most significant potential impact on our unaudited consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q. Our MD&A is organized as follows:

- *Overview.* This section provides a general description of our business and operating segments as well as a brief discussion and overall analysis of our business and financial performance, including key developments affecting the Company during the three and six months ended March 31, 2020 and 2019.
- *Critical Accounting Policies and Estimates.* This section discusses accounting policies and estimates that require us to exercise subjective or complex judgments in their application. We believe these accounting policies and estimates are important to understanding the assumptions and judgments incorporated in our reported financial results.
- *Results of Operations.* This section provides an analysis of our financial results for the three and six months ended March 31, 2020 compared to the three and six months ended March 31, 2019.
- *Liquidity and Capital Resources.* This section provides an analysis of our liquidity and changes in cash flows as well as a discussion of available borrowings and contractual commitments.

You should read the MD&A in conjunction with our unaudited consolidated financial statements and related notes included elsewhere in this Quarterly Report on Form 10-Q. In addition to historical information, the MD&A contains forward-looking statements that involve risks and uncertainties. You should read "Information Related to Forward-Looking Statements" below for a discussion of important factors that could cause our actual results to differ materially from our expectations.

In the fourth quarter of fiscal year 2018, we entered into a definitive agreement to sell our semiconductor cryogenics business to Edwards Vacuum LLC (a member of the Atlas Copco Group) for approximately \$675.0 million in cash subject to customary adjustments. We originally acquired the semiconductor cryogenics business in 2005 as part of the acquisition of Helix Technology Corporation. On July 1, 2019, we completed the sale of the semiconductor cryogenics business for \$675.0 million in cash, subject to adjustments for working capital and other items. As part of this sale, we transferred our intellectual property, or IP, for our cryogenics pump products, but not our IP related to our semiconductor automation or life sciences businesses. The semiconductor cryogenics business has been classified as discontinued operations and, unless otherwise noted, the description of our business and the results of operations in this MD&A relates solely to our continuing operations and does not include the operations of the semiconductor cryogenics business.

Impact of the COVID-19 Pandemic

During the COVID 19 pandemic, our facilities have remained operational with only required personnel on site, and the balance of employees working from home. Both business segments fall within the classification of an "Essential Critical Infrastructure Sector" as defined by the U.S. Department of Homeland Security and have continued operations during the COVID-19 pandemic. We have followed government guidance in each region and have implemented Center for Disease Control social distancing guidelines and other best practices to protect the health and safety of our employees. In the Life Sciences business, GENEWIZ and Sample Management operations are accepting customer orders for all of their offerings and are fast tracking customer requests which support research and development and testing related to the COVID-19 virus. The Semiconductor Solutions business continues to supply critical chip manufacturing equipment and support services globally. Our year-to-date financial results have only been modestly affected by the COVID-19 pandemic and a portion of this impact has been mitigated by realignment of resources and by addressing the incremental orders related to virus research. The future impacts on our financial results will depend on multiple variables which are not fully determinable as the full impact of the pandemic will depend on the depth of the

effects which the pandemic has on the economy and markets which we serve. The variables are many, but fundamentally include the negative effect on demand from our customers, the degree if any that the supply chain may be constrained to support our delivery of product, as well as the amount of incremental demand caused by research and treatments in the areas of COVID-19 or related threats.

Information Related to Forward-Looking Statements

This Quarterly Report on Form 10-Q contains statements that are, or may be considered to be, forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995, as amended, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements that are not historical facts, including statements about our beliefs or expectations, are forward-looking statements. These statements may be identified by such forward-looking terminology as “expect,” “estimate,” “intend,” “believe,” “anticipate,” “may,” “will,” “should,” “could,” “continue,” “likely” or similar statements or variations of such terms. Forward-looking statements include, but are not limited to, statements that relate to our future revenue, margins, costs, earnings, profitability, product development, demand, acceptance and market share, competitiveness, market opportunities and performance, levels of research and development, the success of our marketing, sales and service efforts, outsourced activities, operating expenses, anticipated manufacturing, customer and technical requirements, the ongoing viability of the solutions that we offer and our customers’ success, tax expenses, our management’s plans and objectives for our current and future operations and business focus, the impact of the COVID-19 pandemic, the expected benefits and other statements relating to our divestitures and acquisitions, the material weaknesses identified in our internal control over financial reporting, including the impact thereof and our remediation plan, our adoption of the newly issued accounting guidance, the levels of customer spending, general economic conditions, the sufficiency of financial resources to support future operations, and capital expenditures. Such statements are based on current expectations and involve risks, uncertainties and other factors which may cause the actual results, our performance or our achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Such factors include the Risk Factors which are set forth in our [Annual Report on Form 10-K for the fiscal year ended September 30, 2019, or the 2019 Annual Report on Form 10-K](#), and which are incorporated herein by reference, as updated and/or supplemented in subsequent filings with the U.S. Securities and Exchange Commission, or SEC. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof and are based on information currently and reasonably known to us. We do not undertake any obligation to release revisions to these forward-looking statements, which may be made to reflect events or circumstances that occur after the date of this Quarterly Report on Form 10-Q or to reflect the occurrence or effect of anticipated or unanticipated events. Precautionary statements made herein should be read as being applicable to all related forward-looking statements wherever they appear in this Quarterly Report on Form 10-Q. Any additional precautionary statements made in our 2019 Annual Report on Form 10-K should be read as being applicable to all related forward-looking statements whenever they appear in this Quarterly Report on Form 10-Q.

Unless the context indicates otherwise, references in this Quarterly Report on Form 10-Q to “we”, “us”, “our” and “the Company” refer to Brooks Automation, Inc. and its subsidiaries.

OVERVIEW

We are a leading provider of semiconductor manufacturing automation solutions and life science sample-based services and solutions worldwide. In the semiconductor manufacturing market, we have been a provider of precision robotics, integrated automation systems and services for more than 40 years. In the life sciences market, we apply our automation and cryogenics expertise to offer a full suite of sample-based services and products, including a full line of cold chain management solutions for handling and storing biological and chemical compound samples used in areas such as drug development, clinical research and advanced cell therapies. We are also a global provider of gene sequencing and gene synthesis services. We believe our leadership positions and our global support capability in each of these markets make us a valued business partner to the largest semiconductor capital equipment device makers, and pharmaceutical and life science research institutions in the world. In total, we employ approximately 3,000 full-time employees worldwide and have sales in more than 50 countries. We are headquartered in Chelmsford, Massachusetts and have operations in North America, Asia, and Europe.

In the semiconductor capital equipment market, equipment productivity and availability are critical factors for our customers, who typically operate equipment under demanding temperature and/or pressure environments. We are a leader in wafer handling automation and contamination controls solutions and services that are designed to improve throughput, yield, and cost of ownership of tools in semiconductor fabs. Our product offerings include vacuum and atmospheric robots, turnkey vacuum and atmospheric wafer handling systems, as well as wafer carrier cleaning and reticle storage systems. We also capture the complete life cycle of value through our global service network of expert application and field engineers who are located close to our customers. Our services include rapid refurbishment of robots to stringent specifications, upgrades to improve equipment productivity, and proactive monitoring and diagnostics for predictive risk management and improved up-time of the installed base. Although the demand for semiconductors and semiconductor manufacturing equipment is cyclical resulting in periodic expansions and contractions, we expect the semiconductor equipment market to remain one of our principal markets as we continue making investments to maintain and grow our semiconductor product and service offerings. A majority of our research and development spending advances our current product lines and drives innovations for new product offerings. We invest in research and development initiatives within the Brooks Semiconductor Solutions Group segment to maintain continued leadership position in the markets we serve. We launched our newest Vacuum Automation platform, MagnaTran LEAP™ for the rapidly emerging advanced technologies related to manufacturing 10 nanometer and below design rule semiconductor chips. MagnaTran LEAP™ is well positioned to deliver clean, accurate and fast wafer transport available for the fast-growing Deposition and Etch markets. In addition, we expect to continue to support and expand our technology and product offerings for the semiconductor market through acquisitions. In fiscal year 2018, we acquired Tec-Sem Group AG, or Tec-Sem, a Switzerland-based provider of semiconductor fabrication automation equipment with a focus on reticle management. The acquisition is expected to enhance our contamination controls solutions offerings.

In the life sciences sample management market, we utilize our core technology competencies and capabilities in automation and cryogenics to provide comprehensive bio-sample management solutions to a broad range of end markets within the life sciences industry. Our offerings include automated ultra-cold storage freezers, consumable sample storage containers, instruments which assist in the workflow of sample management, and both on-site and off-site full sample management services. We expect the life sciences sample management market to remain one of our principal markets for our product and service offerings and provide favorable opportunities for the growth of our overall business. Over the past several years, we have acquired and developed essential capabilities required to strategically address the sample management needs across multiple end markets within the life sciences industry. In October 2017, we acquired all of the outstanding capital stock of 4titude Limited, or 4titude, a U.K.-based manufacturer of scientific consumables for biological sample materials used in a variety of genomic and DNA analytical applications. The acquisition has expanded our existing offerings of consumables and instruments within the Brooks Life Sciences segment. In April 2018, we acquired BioSpeciMan Corporation, a Canadian provider of storage services for biological sample materials. The acquisition has expanded customer relationships and geographic reach within our growing sample management storage services business. On November 15, 2018, we acquired GENEWIZ Group, or GENEWIZ, a leading global genomics service provider headquartered in South Plainfield, New Jersey. GENEWIZ is a global leader in genomics services that enable research scientists to advance their discoveries within the pharmaceutical, academic, biotechnology, agriculture and other markets. GENEWIZ provides gene sequencing and synthesis services for more than 4,000 institutional customers worldwide supported by their global network of laboratories spanning the United States, China, Japan, Germany, France and the United Kingdom. This transaction has added a new and innovative platform which we expect to leverage, along with our core capabilities, to add even more value to samples under our care. Please refer to Note 4, “Acquisitions” to the Company's consolidated financial statements included in the 2019 Annual Report on Form 10-K for further information on these transactions. On February 11, 2020, we acquired RURO, Inc. or RURO, a laboratory software company based in Frederick, Maryland. The acquisition will enable us to offer enhanced onsite and off-site management of biological sample inventories as well as integration solutions to our customers. Since entering the life sciences industry, we have also strengthened and broadened our product portfolio and market reach by investing in internal product development and sales and marketing infrastructure. We expect to continue investing in research and development and making strategic acquisitions and other investments with the objective of expanding our offerings in the life sciences sample management market.

Business and Financial Performance

Three Months Ended March 31, 2020 Compared to Three Months Ended March 31, 2019

Results of Operations - Revenue for the three months ended March 31, 2020 increased 11% to \$220.2 million, as compared to the corresponding period of the prior fiscal year. Gross margin was 41.0% for the three months ended March 31, 2020, as compared to 40.6% for the corresponding period of the prior fiscal year, an increase in gross profit of \$9.8 million. Operating expenses were \$75.7 million during the three months ended March 31, 2020, as compared to \$66.8 million during the corresponding period of the prior fiscal year, an increase of \$8.9 million. Operating income was \$14.6 million during the second quarter of fiscal year 2020, as compared to \$13.7 million for the corresponding period of the prior fiscal year. Income from continuing operations was \$9.2 million for the second quarter of fiscal year 2020, as compared to a loss of \$2.8 million for the corresponding period of the prior fiscal year. The prior year fiscal period included a loss on extinguishment of debt of \$9.1 million.

Six Months Ended March 31, 2020 Compared to Six Months Ended March 31, 2019

Results of Operations - Revenue for the six months ended March 31, 2020 increased by 14% to \$430.7 million, as compared to the corresponding period of the prior fiscal year. Gross margin was 40.7% for the six months ended March 31, 2020, as compared to 40.4% for the corresponding period of the prior fiscal year, an increase in gross profit of \$22.7 million. Operating expenses were \$150.0 million during the six months ended March 31, 2020, as compared to \$133.6 million during the corresponding period of the prior fiscal year, an increase of \$16.4 million. Operating income was \$25.2 million during the six months ended March 31, 2020, as compared to \$19.0 million for the corresponding period of the prior fiscal year. Income from continuing operations was \$22.4 million for the six months ended March 31, 2020, as compared to \$3.4 million for the corresponding period of the prior fiscal year. The prior year fiscal period included a loss on extinguishment of debt of \$9.1 million.

March 31, 2020 Compared to September 30, 2019

Cash Flows and Liquidity - Cash, cash equivalents, restricted cash and marketable securities were \$248.5 million at March 31, 2020, as compared to \$342.1 million at September 30, 2019. The decrease in cash and cash equivalents and marketable securities of \$93.6 million from September 30, 2019 was primarily attributable to cash outflows from operating activities of \$40.1 million. Cash outflows from operating activities was comprised of \$91.5 million of cash taxes paid for the gain on the sale of the semiconductor cryogenics business and \$3.5 million of cash used for operating activities, partially offset by \$54.9 million of earnings, comprised of \$22.2 million of net income and \$32.8 million of adjustments to net income for non-cash items. Also contributing to the decrease in cash, cash equivalents, restricted cash and marketable securities were cash outflows for capital expenditures of \$21.2 million, \$15.7 million for acquisitions and dividend payments of \$14.7 million.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our unaudited consolidated financial statements are prepared in accordance with Generally Accepted Accounting Principles, or GAAP. The preparation of the interim consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue, intangible assets, goodwill, inventories, income taxes, and stock-based compensation. We base our estimates on historical experience and various other assumptions that are believed to be reasonable under the circumstances. We evaluate current and anticipated worldwide economic conditions, both in general and specifically in relation to the semiconductor and life science industries, that serve as a basis for making judgments about the carrying values of assets and liabilities that are not readily determinable based on information from other sources. Actual results may differ from these estimates under different assumptions or conditions that could have a material impact on our financial condition and results of operations.

For further information with regard to our significant accounting policies and estimates, please refer to Note 2, "Summary of Significant Accounting Policies" in the Notes to the unaudited consolidated financial statements included

in Item 1 "Consolidated Financial Statements" of this Quarterly Report on Form 10-Q and in the Notes to our audited consolidated financial statements included in Part II, Item 8 "Financial Statements and Supplementary Data" in our 2019 Annual Report on Form 10-K.

Recently Issued Accounting Pronouncements

For a summary of recently issued accounting pronouncements applicable to our unaudited consolidated financial statements, please refer to Note 2, "Summary of Significant Accounting Policies" in the Notes to the unaudited consolidated financial statements included in Item 1 "Consolidated Financial Statements" of this Quarterly Report on Form 10-Q.

RESULTS OF OPERATIONS

Three and Six Months Ended March 31, 2020 Compared to Three and Six Months Ended March 31, 2019

Revenue

We reported revenue of \$220.2 million for the three months ended March 31, 2020, compared to \$198.4 million for the corresponding period of the prior fiscal year, an increase of \$21.8 million, or 11%. We reported revenue of \$430.7 million for the six months ended March 31, 2020, compared to \$377.8 million for the corresponding period of the prior fiscal year, an increase of \$53.0 million, or 14%. We estimate that the impact of the COVID-19 pandemic on our revenue for the three and six months ended March 31, 2020, was a net reduction of revenue of approximately \$8 million.

Our Brooks Semiconductor Solutions Group segment reported revenue of \$124.9 million for the three months ended March 31, 2020, compared to \$112.9 million for the corresponding period of the prior fiscal year, an increase of \$12.0 million, or 11%. For the six months ended March 31, 2020, our Brooks Semiconductor Solutions Group segment reported revenue of \$243.7 million, compared to \$225.6 million for the corresponding period of the prior fiscal year, an increase of \$18.2 million, or 8%. During the three months ended March 31, 2020 as compared to the corresponding period of the prior fiscal year, we reported an increase in contamination control solutions revenue of \$15.4 million, robots revenue of \$6.6 million and services of \$0.3 million, partially offset by a decrease in automation systems revenue of \$10.3 million. During the six months ended March 31, 2020 as compared to the corresponding period of the prior fiscal year, we reported an increase in contamination control solutions revenue of \$31.8 million and robots of \$9.2 million, partially offset by decreases in automation systems revenue of \$22.3 million and service revenue of \$0.5 million. We estimate the impact of the COVID-19 pandemic on our revenue for the three and six months ended March 31, 2020, was a net reduction of revenue of approximately \$5 million, primarily due to temporary supply chain constraints for our automation systems and robots product lines. The semiconductor markets are cyclical and may fluctuate significantly from quarter to quarter. Demand for our Brooks Semiconductor Solutions Group products and services is affected by these cycles and a prolonged effect of the COVID-19 pandemic could negatively impact demand for our products and services in this segment.

Our Brooks Life Sciences segment reported revenue of \$95.3 million for the three months ended March 31, 2020 compared to \$85.5 million for the corresponding period of the prior fiscal year. The increase of \$9.8 million, or 11%, was composed \$8.1 million from GENEWIZ sequencing and gene synthesis services and \$1.7 million from Sample Management, which was primarily driven by higher B3 cryo systems and sample management services, partially offset by lower revenue from automated systems. For the six months ended March 31, 2020, our Brooks Life Sciences segment reported revenue of \$187.0 million, compared to \$152.2 million for the corresponding period of the prior fiscal year. The increase of \$34.8 million, or 23%, was composed of \$20.4 million from acquisitions, and \$14.4 million from internal growth, principally in GENEWIZ sequencing and gene synthesis services, B3 cryo systems, consumables and instruments and sample management services. We estimate the impact of the COVID-19 pandemic on our revenue for the three and six months ended March 31, 2020, was a net reduction of approximately \$3 million.

The impact of the COVID-19 pandemic on our revenue is primarily attributable to a slow-down in the marketplace, reflecting the absence of a portion of the workforces within our customers. This slow-down in the second fiscal quarter of 2020 was first present in the China market and began surfacing in the rest of the world in the latter part of March

2020. Partially offsetting these declines, we have experienced an increase in demand for genomic services and sample management consumables and storage services, in support of numerous activities including research and development in the areas of virus detection and vaccines.

Revenue generated outside the United States was \$135.1 million, or 61% of total revenue, for the three months ended March 31, 2020, compared to \$115.7 million, or 58% of total revenue, for the corresponding period of the prior fiscal year. Revenue generated outside the United States was \$265.9 million, or 62% of total revenue, for the six months ended March 31, 2020, compared to \$227.0 million, or 60% of total revenue, for the corresponding period of the prior fiscal year. We had one customer that accounted for more than 10% of our consolidated revenue for the three and six months ended March 31, 2020. We had no customers that accounted for more than 10% of our consolidated revenue for each of the three and six months ended March 31, 2019.

Operating Income

We reported operating income of \$14.6 million for the three months ended March 31, 2020, compared to \$13.7 million for the three months ended March 31, 2019. The increase of 7% is driven by higher revenue and gross profit, partially offset by an increase in both research and development expenses and selling, general and administrative expenses compared to the three months ended March 31, 2019. Drivers of the increases to research and development and selling, general and administrative expenses are described below. During the six months ended March 31, 2020, we reported operating income of \$25.2 million, compared to \$19.0 million for the corresponding period of the prior fiscal year. We estimate that the impact of the COVID-19 pandemic on operating income was a net reduction of approximately \$3 million.

Operating income for our Brooks Semiconductor Solutions Group segment was \$16.0 million for the three months ended March 31, 2020, compared to \$18.0 million for the corresponding period of the prior fiscal year. Operating income for the three months ended March 31, 2020 included \$0.7 million of charges for amortization related to completed technology, as compared to \$0.9 million incurred during the corresponding period of the prior fiscal year. Adjusted operating income for our Brooks Semiconductor Solutions Group segment, which excludes the charges mentioned above, was \$16.7 million for the three months ended March 31, 2020, compared to \$18.9 million for the corresponding period of the prior fiscal year. Operating income for our Brooks Semiconductor Solutions Group segment was \$30.3 million for the six months ended March 31, 2020 compared to \$34.1 million for the corresponding period of prior fiscal year. Operating income for the six months ended March 31, 2020 included \$1.5 million of charges for amortization related to completed technology, as compared to \$1.9 million incurred during the corresponding period of the prior fiscal year. The six months ended March 31, 2019 also includes inventory step-up charges of \$0.2 million. Adjusted operating income for our Brooks Semiconductor Solutions Group segment, which excludes the charges mentioned above, was \$31.7 million for the six months ended March 31, 2020, compared to \$36.2 million for the corresponding period of the prior fiscal year. Please refer to Note 15. "Segment Information".

Operating income for our Brooks Life Sciences segment was \$6.1 million for the three months ended March 31, 2020, compared to \$3.1 million for the corresponding period of the prior fiscal year. Operating income for our Brooks Life Sciences segment includes charges for amortization related to completed technology of \$2.0 million and \$1.9 million for the three months ended March 31, 2020 and 2019, respectively. Adjusted operating income for our Brooks Life Sciences segment, which excludes the charges mentioned above, was \$8.1 million for the three months ended March 31, 2020, compared to \$5.0 million for the corresponding period of the prior fiscal year. During the six months ended March 31, 2020, operating income for our Brooks Life Sciences segment was \$10.1 million, compared to \$4.7 million for the corresponding period of the prior fiscal year. Operating income for our Brooks Life Sciences segment includes charges for amortization related to completed technology of \$4.0 million and \$2.9 million for the six months ended March 31, 2020 and 2019, respectively. Adjusted operating income for our Brooks Life Sciences segment, which excludes the charges mentioned above, was \$14.1 million for the six months ended March 31, 2020, compared to \$7.7 million the corresponding period of the prior fiscal year. Please refer to Note 15, "Segment Information".

Gross Margin

We reported gross margins of 41.0% for the three months ended March 31, 2020, compared to 40.6% for the corresponding period of the prior fiscal year. Gross margin increased in the Brooks Life Sciences segment by 3.3 percentage points partially offset by declines in the Brooks Semiconductor Solutions Group segment by 1.8 percentage points in the second quarter of fiscal year 2020, compared to the corresponding period of the prior fiscal year. Cost of revenue for the three months ended March 31, 2020, included \$2.7 million of charges related to amortization of completed technology, as compared to \$2.8 million during the corresponding period of the prior fiscal year. Excluding the amortization of completed technology, margins expanded 0.2 percentage points during the three months ended March 31, 2020, as compared to the corresponding period of the prior fiscal year. During the six months ended March 31, 2020, we reported gross margins of 40.7%, compared to 40.4% for the corresponding period of the prior fiscal year. Gross margin increased in the Brooks Life Sciences segment by 3.1 percentage points partially offset by declines in the Brooks Semiconductor Solutions Group segment by 1.8 percentage points in the six months ended March 31, 2020, compared to the corresponding period of the prior fiscal year. Cost of revenue for the six months ended March 31, 2020, included \$5.4 million of charges related to amortization of completed technology, as compared to \$4.8 million during the corresponding period of the prior fiscal year. The results for the six months ended March 31, 2019 included \$0.2 million of charges related to the inventory step-up in purchase accounting. Excluding the amortization of completed technology and inventory step-up charges, margins expanded 0.2 percentage points during the six months ended March 31, 2020, as compared to the corresponding period of the prior fiscal year.

Our Brooks Semiconductor Solutions Group segment reported gross margins of 38.9% for the three months ended March 31, 2020, as compared to 40.7% for the corresponding period of the prior fiscal year. Cost of revenue for the three months ended March 31, 2020 included \$0.7 million of charges for amortization related to completed technology, as compared to \$0.9 million incurred during the corresponding period of the prior fiscal year. Excluding the impact of the amortization of completed technology, gross margins declined 2.0 percentage points during the three months ended March 31, 2020, as compared to the corresponding period of the prior fiscal year. During the six months ended March 31, 2020, our Brooks Semiconductor Solutions Group segment reported gross margins of 39.0%, as compared to 40.7% for the corresponding period of the prior fiscal year. For both periods reported, the decrease in gross margin percentage is driven by the mix of product sales, partially offset by product cost reductions. Cost of revenue for the six months ended March 31, 2020 included \$1.5 million of charges for amortization related to completed technology, as compared to \$1.9 million incurred during the corresponding period of the prior fiscal year. The results for the six months ended March 31, 2019 also included \$0.2 million of charges related to the inventory step-up in purchase accounting. There were no such changes in the corresponding fiscal 2020 period. Excluding the impact of the amortization of completed technology and the charges related to the inventory step-up, gross margins declined 2.1 percentage points during the six months ended March 31, 2020, as compared to the corresponding period of the prior fiscal year.

Our Brooks Life Sciences segment reported gross margins of 43.7% for the three months ended March 31, 2020, as compared to 40.4% for the corresponding period of the prior fiscal year. The increase during the 2020 period was due to improved performance in our large automated stores production and installations. Cost of revenue for the three months ended March 31, 2020 included \$2.0 million of charges for amortization related to completed technology, as compared to \$1.9 million incurred during the corresponding period of the prior fiscal year. Excluding the impact of the amortization of completed technology, margins expanded 3.3 percentage points during the three months ended March 31, 2020, as compared to the corresponding period of the prior fiscal year. During the six months ended March 31, 2020, our Brooks Life Sciences segment reported gross margins of 43.0%, as compared to 39.9% for the corresponding period of the prior fiscal year. The increase during this period was due to a higher margin revenue mix from GENEWIZ as well as improvements in margin performance in our automated stores. Cost of revenue for the six months ended March 31, 2020 included \$4.0 million of charges for amortization related to completed technology, as compared to \$2.9 million incurred during the corresponding period of the prior fiscal year. Excluding the impact of the amortization of completed technology, margins expanded 3.3 percentage points during the six months ended March 31, 2020, as compared to the corresponding period of the prior fiscal year.

Research and Development

Research and development expenses were \$15.3 million and \$29.7 million, respectively, during the three and six months ended March 31, 2020, as compared to \$14.1 million and \$27.2 million, respectively, during the corresponding periods of the prior fiscal year. The increase of \$1.2 million during the second quarter of fiscal year 2020 as compared to

the corresponding period of fiscal year 2019 reflects higher expense of \$1.3 million within the Brooks Semiconductor Solutions Group segment, partially offset by a \$0.1 million decrease within the Brooks Life Sciences segment. The increase of \$2.5 million during the six months ended March 31, 2020 as compared to the corresponding period of fiscal year 2019 reflects higher expense of \$2.3 million within the Brooks Semiconductor Solutions Group segment and a \$0.2 million increase within the Brooks Life Sciences segment.

Research and development expenses in our Brooks Semiconductor Solutions Group segment were \$10.8 million and \$21.0 million, respectively, during the three and six months ended March 31, 2020, as compared to \$9.5 million and \$18.7 million, respectively, during the corresponding periods of the prior fiscal year. Higher research and development expenses during the second quarter of fiscal 2020 over the corresponding prior period were primarily attributable to increased employee related costs of \$0.9 million, outside services of \$0.4 million and project spending of \$0.2 million, partially offset by lower facilities related costs. Higher research and development expenses during the six months ended March 31, 2020 over the corresponding prior period were primarily attributable to increased employee related costs of \$1.4 million, outside services of \$0.7 million and project spending of \$0.3 million, partially offset by lower facilities costs.

Research and development expenses in our Brooks Life Sciences segment were \$4.5 million and \$8.8 million, respectively, during the three and six months ended March 31, 2020, as compared to \$4.6 million and \$8.6 million, respectively, during the corresponding periods of the prior fiscal year. The decrease in research and development costs for the three months ended March 31, 2020 compared to the prior year period was due to lower employee related costs. The six months ended March 31, 2020 included an incremental \$1.1 million of costs related to GENEWIZ which was acquired in November of 2018 and an additional \$0.2 million of costs related to RURO, which was acquired in February 2020. These increases were partially offset by lower employee related costs of \$0.9 million, project spending of \$0.2 million and outside services of \$0.2 million.

Selling, General and Administrative

Selling, general and administrative expenses were \$59.8 million and \$119.2 million, respectively, during the three and six months ended March 31, 2020, as compared to \$52.4 million and \$105.9 million, respectively, during the corresponding periods of the prior fiscal year. During the three months ended March 31, 2020, the increase of \$7.4 million was due to increased expenses of \$4.3 million within the Brooks Life Sciences segment and increased expenses of \$3.3 million within the Brooks Semiconductor Solutions Group segment, partially offset by a reduction in corporate related expenses of \$0.2 million. During the six months ended March 31, 2020, the increase of \$13.2 million was due to increased expenses of \$14.1 million within the Brooks Life Sciences segment and increased expenses of \$4.6 million within the Brooks Semiconductor Solutions Group segment, partially offset by a reduction in corporate related expenses of \$5.5 million. The reduction in corporate related expenses was primarily attributed to decreased merger and acquisition costs of \$5.9 million which are not allocated to our segments, partially offset by audit and legal costs which increased \$4.2 million compared to the prior year.

Selling, general, and administrative expenses in our Brooks Semiconductor Solutions Group segment were \$21.8 million and \$43.7 million, respectively, for the three and six months ended March 31, 2020, as compared to \$18.5 million and \$39.1 million, respectively, for the corresponding periods of the prior fiscal year. The increase of \$3.3 million during the three months ended March 31, 2020 over the corresponding prior period is primarily related to higher corporate allocated costs. The increase of \$4.6 million during the six months ended March 31, 2020 over the corresponding prior period is primarily related to higher corporate allocated costs.

Selling, general, and administrative expenses in our Brooks Life Sciences segment were \$31.0 million and \$61.4 million, respectively, for the three and six months ended March 31, 2020, compared to \$26.8 million and \$47.4 million, respectively, for the corresponding periods of the prior fiscal year. For both the three and six months ended March 31, 2020, the increase was primarily related to GENEWIZ, which was acquired in November of 2018 and added an incremental \$5.1 million of expense both periods as compared to the same periods in the prior year, as well as, higher corporate allocated costs.

Restructuring Charges

We recorded restructuring charges of \$0.6 million and \$1.2 million, respectively, during the three and six months ended March 31, 2020, as compared to \$0.4 million during each of the corresponding periods in the prior year. Restructuring charges for the three months ended March 31, 2020 consisted of \$0.3 million related to corporate restructuring actions and \$0.3 million in the Brooks Life Sciences segment related to the action initiated in the fourth quarter of fiscal year 2019 to eliminate costs within the segment's Sample Management business. Cost savings realized during the three months ended March 31, 2020 included nominal amount related to the corporate actions and \$0.6 million related to the actions in the Brooks Life Sciences segment. Restructuring charges for the six months ended March 31, 2020 consisted of \$0.6 million related to corporate restructuring actions and \$0.6 million in the Brooks Life Sciences segment related to the action initiated in the fourth quarter of fiscal year 2019 to eliminate costs within the segment's Sample Management business. Cost savings realized during the six months ended March 31, 2020 related to these actions were the \$0.9 million in Brooks Life Sciences segment.

Non-Operating Income (Expenses)

Interest income - During the three and six months ended March 31, 2020, we recorded interest income of \$0.1 million and \$0.8 million, respectively, as compared to \$0.3 million and \$0.7 million, respectively, during the corresponding periods of the prior fiscal year.

Interest expense - During the three and six months ended March 31, 2020, we recorded interest expense of \$0.7 million and \$1.5 million, respectively, as compared to \$8.0 million and \$13.3 million, respectively, during corresponding periods of the prior fiscal year. The decrease in interest expense in the current periods compared to the three and six months ended March 31, 2019 is due to carrying less debt in the current period. We extinguished \$495.3 million of debt during the fourth quarter of fiscal year 2019.

Loss on extinguishment of debt - During the three and six months ended March 31, 2019, we recorded a loss on extinguishment of debt of \$9.1 million in connection with the syndication of the \$350.0 million term loan secured during the first quarter of fiscal 2019. The syndication to a new group of lenders during the second quarter of fiscal 2019 met the criteria of a debt extinguishment and therefore the amortization of the deferred financing costs associated with the origination of the loan was accelerated and recorded as a loss on extinguishment of debt on our statement of operations.

Other expenses, net - During the three and six months ended March 31, 2020, we recorded other expenses, net of \$1.4 million and \$1.8 million, respectively, compared to \$0.8 million during each of the corresponding periods of the prior fiscal year. The increase in other expenses, net for both the three and six months ended March 31, 2020, as compared to the corresponding prior year periods is related to foreign currency exchange losses.

Income Tax Provision

We recorded an income tax provision of \$3.4 million and \$0.4 million, respectively, during the three and six months ended March 31, 2020. The tax expense for the three months ended March 31, 2020 was primarily driven by the provision on earnings from operations during the period. During the quarter ended March 31, 2020, we recorded a \$0.3 million discrete stock compensation windfall benefit for tax deductions that exceeded the associated compensation expense in the period. The tax provision for the six months ended March 31, 2020 was primarily driven by the provision on earnings from operations during the period, which was offset by a \$6.1 million discrete stock compensation windfall benefit for tax deductions that exceeded the associated compensation expense in the period. During the six months ended March 31, 2020, we also recorded a discrete benefit of \$0.5 million from a reduction of deferred tax liabilities related to the extension of a tax rate incentive in China.

We recorded an income tax benefit of \$1.0 million and \$6.9 million, respectively, during the three and six months ended March 31, 2019. The tax benefit for the three months ended March 31, 2019 was driven by U.S. losses during the period and includes a \$0.4 million benefit from stock compensation windfalls. Partially offsetting these benefits was a discrete expense related to interest accruing on uncertain tax positions. The tax benefit for the six months ended March 31, 2019 was primarily driven by discrete benefits related to stock compensation windfalls of \$4.1 million for tax

deductions that exceeded the associated compensation expense, \$1.4 million of tax benefits related to the remeasurement of net U.S. deferred tax assets due to state tax rate changes, and a \$1.1 million transition tax reduction. These discrete benefits were slightly increased by the tax benefit recorded on losses during the six month period.

Discontinued Operations

On July 1, 2019, we completed the sale of the semiconductor cryogenics business which we include as a discontinued operation. We generated net loss from discontinued operations of \$0.1 million and \$0.2 million, respectively, for the three and six months ended March 31, 2020 related to our semiconductor cryogenics business. We generated revenue and net income from discontinued operations of \$35.7 million and \$6.3 million, respectively, for the three months ended March 31, 2019 related to our semiconductor cryogenics business. We generated revenue and net income from discontinued operations of \$75.0 million and \$14.4 million, respectively, for the six months ended March 31, 2019 related to our semiconductor cryogenics business. The net income includes income from the Ulvac Cryogenics, Inc. joint venture during the fiscal 2019 periods. The income from discontinued operations only includes direct operating expenses incurred that (1) are clearly identifiable as costs being disposed of upon completion of the sale and (2) will not be continued by the Company on an ongoing basis. Indirect expenses which supported the semiconductor cryogenics business, and which will remain as part of the continuing operations, are not reflected in income from discontinued operations.

LIQUIDITY AND CAPITAL RESOURCES

A considerable portion of our revenue is dependent on the demand for semiconductor capital equipment which historically has experienced periodic downturns. We believe that we have adequate resources to satisfy our working capital, financing activities, debt service and capital expenditure requirements for the next twelve months. The cyclical nature of our served markets and uncertainty in the current global economic environment, including the uncertainty related to the COVID-19 pandemic, make it difficult for us to predict longer-term liquidity requirements with sufficient certainty. We may be unable to obtain any required additional financing on terms favorable to us, if at all. If adequate funds are not available to us on acceptable terms or otherwise, we may be unable to successfully develop or enhance products and services, respond to competitive pressure or take advantage of acquisition opportunities, any of which could have a material adverse effect on our business, financial condition and operating results.

The discussion of our cash flows and liquidity that follows does not include the impact of the disposition of the semiconductor cryogenics business and is stated on a total company consolidated basis.

Overview of Cash Flows and Liquidity

Our cash, cash equivalents and marketable securities as of March 31, 2020 and September 30, 2019 consist of the following (in thousands):

	<u>March 31, 2020</u>	<u>September 30, 2019</u>
Cash and cash equivalents	\$ 242,274	\$ 301,642
Restricted cash	3,529	3,529
Short-term marketable securities	162	34,124
Long-term marketable securities	2,555	2,845
	<u>\$ 248,520</u>	<u>\$ 342,140</u>

Our cash is held in numerous locations throughout the world. As of March 31, 2020, we had cash and cash equivalents of \$242.3 million, of which \$189.6 million was held outside of the United States. If these funds are needed for our U.S. operations, we would need to repatriate these funds. As a result of recent changes in U.S. tax legislation, any repatriation in the future would likely not result in further U.S. federal income tax. Our intent is to permanently reinvest these funds outside of the United States and our current operating plans do not demonstrate a need to repatriate these funds for our U.S. operations. As of March 31, 2020, and September 30, 2019, we had marketable securities of \$2.7

million and \$37.0 million, respectively. Our marketable securities are generally readily convertible to cash without an adverse impact.

Six Months Ended March 31, 2020 Compared to Six Months Ended March 31, 2019

Overview

Cash, cash equivalents, restricted cash and marketable securities were \$248.5 million at March 31, 2020, as compared to \$342.1 million at September 30, 2019. The decrease of \$93.6 million from September 30, 2019 was primarily attributable to cash outflows generated from operating activities of \$40.1 million. Cash outflows from operating activities was comprised of \$91.5 million of cash taxes paid for the gain on the sale of the semiconductor cryogenics business and \$3.5 million of cash used for operating activities, partially offset by \$54.9 million of earnings, comprised of \$22.2 million of net income and \$32.8 million of adjustments to net income for non-cash items. Also contributing to the decrease in cash, cash equivalents, restricted cash and marketable securities were cash outflows for capital expenditures of \$21.2 million, \$15.7 million for acquisitions and dividend payments of \$14.7 million.

Operating Activities

Cash flows from operating activities can fluctuate significantly from period to period as earnings, working capital needs and the timing of payments for income taxes, restructuring activities and other operating charges impact reported cash flows.

Cash used in operating activities was \$40.1 million during the six months ended March 31, 2020, comprised primarily of \$91.5 million of cash taxes paid for the gain on the sale of the semiconductor cryogenics business and a use of cash of \$3.5 million related to changes in our operating assets and liabilities partially offset by \$54.9 million of earnings, comprised of \$22.2 million of net income, and \$32.8 million adjustments to net income for non-cash items. The changes in operating assets and liabilities that resulted in a use of cash consisted primarily of an increase in inventory levels. These uses of cash were partially offset by an increase in accrued expenses and other liabilities and increased accounts payable. Cash provided by operating activities was \$22.2 million during the six months ended March 31, 2019, comprised primarily of earnings of \$48.0 million, including net income of \$17.8 million and the impact of non-cash related charges of \$30.2 million. Partially offsetting these items were the uses of cash of \$25.8 million related to the changes in our operating assets and liabilities.

Investing Activities

Cash flows used in investing activities consist primarily of cash used for acquisitions, capital expenditures and purchases of marketable securities as well as cash proceeds generated from sales and maturities of marketable securities. Cash used in investing activities was \$4.0 million during the six months ended March 31, 2020. Cash used in investing activities during the six months ended March 31, 2020 included cash outflows for capital expenditures of \$21.2 million, \$15.7 million for the acquisition of RURO, and \$10.8 million for the purchases of marketable securities. These outflows were partially offset by cash inflows from the maturities and sales of marketable securities of \$44.7 million. Cash used in investing activities of \$402.2 million during the six months ended March 31, 2019 included cash outflow of \$442.7 million for the acquisition of GENEWIZ, \$9.7 million of capital expenditures, and \$1.3 million for the purchases of marketable securities, partially offset by cash inflows from the proceeds of sales and maturities of marketable securities of \$51.5 million.

Financing Activities

Cash outflows for financing activities was \$13.5 million during the six months ended March 31, 2020. Cash outflows for financing activities during the six months ended March 31, 2020 included cash outflows for cash dividend payments of \$14.7 million. Cash provided by financing activities was \$320.0 million during the six months ended March 31, 2019. Cash provided by financing activities during the six months ended March 31, 2019 included net cash inflows of \$334.1 million primarily related to net proceeds from the incremental term loan secured in November 2018 and the syndication of the incremental term loan in February 2019, partially offset by cash dividend payments of \$14.4 million.

China Facility

In April 2019, we committed to construct a facility in Suzhou China, to consolidate the Suzhou operations of the GENEWIZ business and provide an infrastructure to support future growth. The facility will be constructed in two phases. We expect to incur \$50.0 to \$55.0 million of capital expenditures related to this facility over the next five years, of which up to \$15.0 million is expected to be incurred during 2020. We have incurred \$3.0M of capital expenditures to date related to the construction of the facility, which includes \$1.0 million and \$2.3 million for the three and six months ended March 31, 2020.

Capital Resources

Term Loans

On October 4, 2017, we entered into a \$200.0 million term loan with Morgan Stanley Senior Funding, Inc., JPMorgan Chase Bank, N.A. and Wells Fargo Securities, LLC pursuant to the terms of a credit agreement with the lenders. The term loan was issued at \$197.6 million, or 98.8% of its par value, resulting in a discount of \$2.4 million, or 1.2%, which represented loan origination fees paid at the closing. The loan principal amount may be increased by an aggregate amount equal to \$75.0 million plus any voluntary repayments of the term loan plus any additional amount such that our secured leverage ratio is less than 3.00 to 1.00.

The term loan matures and becomes fully payable on October 4, 2024. Installment principal payments equal to 0.25% of the initial principal amount of the term loan are payable on the last day of each quarter, with any remaining principal amount becoming due and payable on the maturity date. Subject to certain conditions stated in the credit agreement, we may redeem the term loan at any time at our option without a significant premium or penalty, except for a repricing transaction, as defined in the credit agreement. We are required to redeem the term loan at the principal amount then outstanding upon the occurrence of certain events, as set forth in the credit agreement.

On November 15, 2018, we entered into an incremental amendment to the credit agreement under which we obtained an incremental term loan in an aggregate principal amount of \$350.0 million, issued at \$340.5 million. The proceeds of the incremental term loan were used to pay a portion of the purchase price for our acquisition of GENEWIZ. On February 15, 2019, we entered into the second amendment to the credit agreement and syndicated the incremental term loan to a group of new lenders. The syndicated incremental term loan was issued at \$345.2 million. Except as provided for in the amendments, the incremental term loan was subject to the same terms and conditions of the initial term loan.

On July 1, 2019, in connection with the completion of the sale of our semiconductor cryogenics business, we used \$348.3 million of the cash proceeds from the transaction to extinguish the outstanding balance at July 1, 2019 of the incremental term loan and \$147.0 million of the cash proceeds from the transaction to extinguish a portion of the outstanding balance at July 1, 2019 of the term loan. The total amount of debt extinguished on July 1, 2019 was \$495.3 million.

The credit agreement, as amended, contains certain customary representations and warranties, covenants and events of default. As of March 31, 2020, we were in compliance with all covenants and conditions under the credit agreement, as amended.

In connection with our acquisition of GENEWIZ in November 2018, we assumed three five-year term loans and two one-year term loans. At March 31, 2020, we had an aggregate outstanding principal balance of \$1.3 million under the three five-year term loans. The two one-year short term loans matured and were repaid in full as of September 30, 2019.

At March 31, 2020, the aggregate outstanding principal balance of all of the outstanding term loans was \$50.8 million, excluding unamortized deferred financing costs of \$0.5 million. Borrowings under the term loans bear variable interest rates. As a result, we may experience exposure to interest rate risk due to the potential volatility associated with the variable interest rates on the term loans. If rates increase, we may be subject to higher costs of servicing the loans

which could reduce our profitability and cash flows. During the six months ended March 31, 2020, the weighted average stated interest rate on the term loans was 4.5%. During the six months ended March 31, 2020, we incurred aggregate interest expense of \$1.2 million on the term loans, including \$0.1 million of deferred financing costs amortization. Our debt service requirements are expected to be funded through our existing sources of liquidity and operating cash flows.

Line of Credit

Facility

We maintain a revolving line of credit under a credit agreement with Wells Fargo Bank, N.A. and JPMorgan Chase Bank, N.A. that provides for revolving credit facility of up to \$75.0 million, subject to borrowing base availability, as defined in the credit agreement. The line of credit matures on October 4, 2022. The proceeds from the line of credit are available for permitted acquisitions and general corporate purposes.

As of March 31, 2020, we had approximately \$44.7 million available for borrowing under the line of credit. There were no amounts outstanding pursuant to the line of credit as of March 31, 2020. The amount of funds available for borrowing under the credit agreement may fluctuate each period based on our borrowing base availability. The credit agreement contains certain customary representations and warranties, a financial covenant, affirmative and negative covenants, as well as events of default. We were in compliance with the credit agreement as of March 31, 2020. Although we believe we will be able to generate sufficient cash in the United States and foreign jurisdictions to fund future operating costs, we secured the revolving line of credit as an additional assurance for maintaining liquidity in the United States during potentially severe downturns of the cyclical semiconductor market, and for strategic investments or acquisitions.

Dividends

On April 29, 2020, the Company's Board of Directors declared a cash dividend of \$0.10 per share payable on June 26, 2020 to common stockholders of record as of June 5, 2020. Dividends are declared at the discretion of our Board of Directors and depend on actual cash flow from operations, our financial condition, debt service and capital requirements, and any other factors our Board of Directors may consider relevant. We intend to pay quarterly cash dividends in the future; however, the amount and timing of these dividends may be impacted by the cyclical nature of certain markets we serve or the impact of the COVID-19 pandemic. We may reduce, delay or cancel a quarterly cash dividend based on the severity of a cyclical downturn or if the effects of the COVID-19 pandemic are prolonged.

Share Repurchase Program

On September 29, 2015, our Board of Directors approved a share repurchase program for up to \$50.0 million worth of our common stock. The timing and amount of any shares repurchased will be based on market and business conditions, legal requirements and other factors and repurchases may be commenced or suspended at any time at our discretion. There were no shares repurchased under this program during the six months ended March 31, 2020 and there have been no shares repurchased under this program since its inception.

Contractual Obligations and Requirements

At March 31, 2020, the Company had non-cancellable commitments of \$127.3 million, including purchase orders for inventory of \$89 million, information technology related commitments of \$21.7 million, China facility commitments of \$16.6 million and no other commitments.

At March 31, 2020, we had approximately \$1.2 million of letters of credit outstanding related primarily to customer advances and other performance obligations. These arrangements guarantee the refund of advance payments received from our customers in the event that the product is not delivered or warranty obligations are not fulfilled in accordance with the contract terms. These obligations could be called by the beneficiaries at any time before the expiration date of the particular letter of credit if we fail to meet certain contractual requirements. None of these obligations were called

during the six months ended March 31, 2020, and we currently do not anticipate any of these obligations to be called in the near future.

Off-Balance Sheet Arrangements

As of March 31, 2020, we did not have any off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of SEC Regulation S-K.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to a variety of market risks, including fluctuations in foreign currency exchange rates and changes in interest rates affecting interest payments on our term loan and investment return on our cash, cash equivalents and marketable securities.

Interest Rate Exposure

Our term loans bear variable interest rates which subject us to interest rate risk. Our primary interest rate risk exposure results from changes in the short-term LIBOR rate, the federal funds effective rate and the prime rate. During the six months ended March 31, 2020, the weighted average stated interest rate on the term loans was 4.5%. At March 31, 2020, the outstanding term loans principal balance was \$50.8 million, net of unamortized deferred financing costs of \$0.5 million. During the six months ended March 31, 2020, we incurred cash interest expense of \$1.2 million on the term loans. A hypothetical 100 basis point change in interest rates would result in a \$0.3 million change in interest expense incurred during the six months ended March 31, 2020.

Our cash and cash equivalents consist principally of money market securities that are short-term in nature. At March 31, 2020, our total short-term and long-term investments were \$2.7 million, consisting mostly of highly rated corporate debt securities and other debt securities. At March 31, 2020, we had no securities in an unrealized loss position. A hypothetical 100 basis point change in interest rates would result in an insignificant increase in interest income earned during the six months ended March 31, 2020.

Currency Rate Exposure

We have transactions and balances denominated in currencies other than the U.S. dollar. Most of these transactions or balances are denominated in Euros, British Pounds and a variety of Asian currencies. Sales in currencies other than the U.S. dollar were approximately 39% and 37% of our total sales, respectively, during the six months ended March 31, 2020 and 2019. These sales were made primarily by our foreign subsidiaries, which have cost structures that substantially align with the currency of sale.

In the normal course of our business, we have liquid assets denominated in non-functional currencies which include cash, short-term advances between our legal entities and accounts receivable which are subject to foreign currency exposure. Such balances were approximately \$148.6 million and \$117.7 million, respectively, at March 31, 2020 and September 30, 2019, and related to the Euro, British Pound and a variety of Asian currencies. We mitigate the impact of potential currency translation losses on these short-term intercompany advances by the timely settlement of each transaction, generally within 30 days. We also utilize forward contracts to mitigate our exposures to currency movement. We incurred foreign currency losses of \$2.7 million and \$0.6 million, respectively, during the six months ended March 31, 2020 and 2019, which related to the currency fluctuation on these balances between the time the transaction occurred and the ultimate settlement of the transaction. A hypothetical 10% change in foreign exchange rates at March 31, 2020 and 2019 would result in an approximate change of \$3.8 million and \$2.8 million, respectively, in our net income during the six months ended March 31, 2020 and 2019.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our chief executive officer and chief financial officer, we conducted an evaluation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) promulgated under the Exchange Act. Disclosure controls and procedures are designed to ensure that information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to management, including the chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure. Based upon this evaluation, our chief executive officer and our chief financial officer concluded that because of the material weakness identified in our internal control over financial reporting discussed below, our disclosure controls and procedures were not effective as of March 31, 2020 the end of the period covered by this Quarterly Report on Form 10-Q.

Previously Identified Material Weaknesses in Internal Control Over Financial Reporting

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis.

We previously disclosed in our Annual Report on Form 10-K for the fiscal year ended September 30, 2019, the following control deficiencies, that constitute material weaknesses in our internal control over financial reporting:

- We did not maintain effective controls related to the accuracy of revenue recorded at a business unit within our Brooks Life Sciences segment. Specifically, we did not maintain effective controls to verify the accuracy of the price and quantity data for customer transactions entered into the business unit's billing system, and to verify that the invoices generated from the billing system were based on the appropriate amounts. These control deficiencies resulted in immaterial misstatements and subsequent immaterial adjustments to revenue and related accounts and disclosures in the interim and annual consolidated financial statements for the years ended September 30, 2019, 2018, and 2017.
- We did not design and maintain effective controls related to the occurrence and cutoff of revenue on products shipped to customers from contract manufacturers for a business unit within our Brooks Semiconductor Solutions Group segment. Specifically, we did not design and maintain effective controls to verify that revenue from product shipments from contract manufacturers in this business unit were evaluated for proper revenue recognition at the point of transfer of control. Management determined that this control deficiency resulted in an immaterial audit adjustment related to the revenue, cost of sales and the corresponding balance sheet accounts of our consolidated financial statements for the fiscal year ended September 30, 2019.

Remediation of Prior Material Weakness

To address the material weakness related to the business unit within our Brooks Semiconductor Solutions Group segment noted above, during the quarter ended December 31, 2019, we designed and implemented a new control to verify that product shipments from contract manufacturers are reviewed for proper revenue recognition at the point of transfer of control. We also initiated employee training with respect to these procedures. Based upon the actions taken, as well as the testing and evaluation of the design and operating effectiveness of the new control, we have concluded the material weakness relating to the occurrence and cutoff of revenue on products shipped from contract manufacturers has been remediated as of March 31, 2020.

Remediation Efforts and Status of Remaining Material Weakness

We are committed and are taking steps necessary to remediate the control deficiencies that constituted the material weakness described above related to the Brooks Life Sciences segment by implementing changes to our internal control over financial reporting. Management has been implementing and continues to implement measures to ensure that the control deficiencies contributing to the material weaknesses are remediated, such that these controls are designed and operating effectively. The remediation actions include: (i) leveraging the implementation a new billing system and enterprise resource planning system (ERP) which will reduce the complexity of the billing process, (ii) improving the oversight of the accuracy of invoice processing and (iii) improving process documentation and training related to the billing and oversight process.

We implemented a new billing system and enterprise resource planning system (ERP) during the quarter ended December 31, 2019, for the business unit within our Brooks Life Sciences segment noted above. During the quarter ended March 31, 2020, we designed and implemented new and enhanced controls to verify the accuracy of price and quantity data for customer transactions and enhancing our documentation related to the business unit's billing procedures and controls, which will support the business unit's ability to train employees and execute the controls effectively. We are in the process of testing the effectiveness of these controls.

We believe the measures described above will facilitate the remediation of the control deficiencies we have identified and strengthen our internal control over financial reporting. We are committed to continuing to improve our internal control processes and will continue to review, optimize and enhance our financial reporting controls and procedures. As we continue to evaluate and work to improve our internal control over financial reporting, we may take additional measures to address control deficiencies, or we may modify, or, in appropriate circumstances, not complete, certain of the remediation measures described above. This material weakness will not be considered remediated until the applicable controls operate for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively.

Changes in Internal Control Over Financial Reporting

Except for the remediation efforts discussed above under "Remediation Efforts and Status of Remaining Material Weaknesses", there were no changes in internal control over financial reporting during the fiscal second quarter ended March 31, 2020, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. *Legal Proceedings*

We are subject to various legal proceedings, both asserted and unasserted, that arise in the ordinary course of business. We cannot predict the ultimate outcome of such legal proceedings or in certain instances provide reasonable ranges of potential losses. However, as of the date of this Quarterly Report on Form 10-Q, we believe that none of these claims will have a material adverse effect on our consolidated financial condition or results of operations. In the event of unexpected subsequent developments and given the inherent unpredictability of these legal proceedings, there can be no assurance that our assessment of any claim will reflect the ultimate outcome and an adverse outcome in certain matters could, from time-to-time, have a material adverse effect on our consolidated financial condition or results of operations in particular quarterly or annual periods.

Item 1A. *Risk Factors*

You should carefully review and consider the information regarding certain factors that could materially affect our business, consolidated financial condition or results of operations set forth under Item 1A. Risk Factors in our 2019 Annual Report on Form 10-K and our Quarterly Report on Form 10-Q for the quarter ended December 31, 2019. There have been no material changes from the risk factors disclosed in our 2019 Annual Report on Form 10-K, other than the addition of the risk factor set forth below.

Our financial condition and results of operations could be adversely affected by the recent coronavirus pandemic or other outbreak of a contagious disease.

Any outbreak of a contagious disease, or other adverse public health developments, could have a material and adverse effect on our business operations. In December 2019, a novel strain of coronavirus, causing a disease referred to as COVID-19, was first identified in Wuhan, Hubei Province, China, resulting in shutdowns of manufacturing and commerce in the months that have followed. Since then, COVID-19 has spread worldwide, including in the United States, and has resulted in authorities implementing numerous measures to try to contain the disease, such as travel bans and restrictions, quarantines, shelter-in-place orders and shutdowns. The spread of COVID-19 has caused us to modify our business practices (including curtailing employee travel, mandatory work-from-home policies and cancellation of physical participation in meetings, events and conferences), and we may take further actions as required by government authorities or that we determine are in the best interests of our employees, customers, partners and suppliers. There is no certainty that such measures will be sufficient to mitigate the risks posed by the disease, and our ability to perform critical functions could be harmed.

As a result of the COVID-19 pandemic and the measures designed to contain its spread, our suppliers may not have the materials, capacity, or capability to supply our components according to our schedule and specifications. Further, there may be logistics issues, including our ability and our supply chain's ability to maintain production and transportation demands that may cause further delays. If our suppliers' operations are curtailed, we may need to seek alternate sources of supply, which may be more expensive. Alternate sources may not be available or may result in delays in shipments to us from our supply chain and subsequently to our customers. In addition, the COVID-19 pandemic and the measures designed to stop the spread of the virus may have similar effects on our customers. The current pandemic may also give rise to force majeure contractual protections being asserted by customers and/or suppliers that we maintain contracts with, potentially relieving contractual obligations these parties have to us. In any case, any disruption of our suppliers' or customers' businesses would likely negatively impact our sales and operating results.

While the disruptions and restrictions on the ability to travel, quarantines and other measures taken as a result of the COVID-19 pandemic are expected to be temporary, the duration of any of these measures, and related financial impact, cannot be estimated at this time. Should these measures continue for an extended period of time, the impact on our supply chain and customers could have a material adverse effect on our results of operations and cash flows. Further, while the potential impact and duration of the COVID-19 pandemic on the global economy and our business in particular may be difficult to assess or predict, the COVID-19 pandemic has resulted in, and may continue to result in, significant disruption of global financial markets, resulting in an economic downturn that may affect demand for our

products and services, reduce our ability to access capital or our customers' ability to pay us for past or future purchases, impact our operating results, and have a negative impact on our liquidity and stock price. In addition, a recession or an additional financial market correction resulting from the spread of COVID-19 could decrease overall technology manufacturing spending, adversely affecting demand for our products and services, in particular in the Brooks Semiconductor Solutions Group segment, our business and the value of our common stock. The global pandemic of COVID-19 continues to rapidly evolve, and we will continue to monitor the COVID-19 situation closely. Although the magnitude of the impact of the pandemic on our business and operations remains uncertain, the continued spread of COVID-19 or the occurrence of other outbreaks of contagious diseases could adversely impact our business, financial condition, operating results and cash flows.

Item 6. Exhibits

The following exhibits are included herein:

Exhibit No.	Description
31.01	Certification of the Company's Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.02	Certification of the Company's Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32	Certification of the Company's Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following material from the Company's Quarterly Report on Form 10-Q, for the quarter ended March 31, 2020, formatted in iXBRL (Inline eXtensible Business Reporting Language): (i) the unaudited Consolidated Balance Sheets; (ii) the unaudited Consolidated Statements of Operations; (iii) the unaudited Consolidated Statements of Comprehensive Income; (iv) the unaudited Consolidated Statements of Cash Flows; and (v) the Notes to the unaudited Consolidated Financial Statements. The instance document does not appear in the Interactive Data File because XBRL tags are embedded in the iXBRL document.
104	Cover Page Interactive Data File (formatted as iXBRL and contained in Exhibit 101).

SIGNATURES

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

BROOKS AUTOMATION, INC.

Date: May 1, 2020

/s/ Lindon G. Robertson

Lindon G. Robertson
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

Date: May 1, 2020

/s/ David Pietrantoni

David Pietrantoni
Vice President-Finance and Corporate Controller
(Principal Accounting Officer)

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Stephen S. Schwartz, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Brooks Automation, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in 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 officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ STEPHEN S. SCHWARTZ

Stephen S. Schwartz
Chief Executive Officer

Date: May 1, 2020

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Lindon G. Robertson, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Brooks Automation, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in 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 officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ LINDON G. ROBERTSON

Lindon G. Robertson
Executive Vice President and Chief Financial Officer

Date: May 1, 2020

CERTIFICATION**Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)**

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code), the undersigned officer of Brooks Automation, Inc., a Delaware corporation (the "Company"), does hereby certify, to the best of such officer's knowledge and belief, that:

(1) The Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in this Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 1, 2020

/s/ STEPHEN S. SCHWARTZ

Stephen S. Schwartz
Director and Chief Executive Officer
(Principal Executive Officer)

Dated: May 1, 2020

/s/ LINDON G. ROBERTSON

Lindon G. Robertson
Executive Vice President and
Chief Financial Officer
(Principal Financial Officer)

A signed original of this written statement required by Section 906 has been provided to Brooks Automation, Inc. and will be retained by Brooks Automation, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.
