UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D. C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2019

or

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

For the transition period from _______ to _______

Commission File Number 001-38848

STERIS plc

(Exact name of registrant as specified in its charter)

Ireland	**98-1455064**
(State or other jurisdiction of incorporation or organization)	**(IRS Employer Identification No.)**
70 Sir John Rogerson's Quay, Dublin 2, Ireland	**D02 R296**
(Address of principal executive offices)	**(Zip code)**

353 1 232 2000
(Registrant's telephone number, including area code)

SECURITIES REGISTERED PURSUANT TO SECTION 12(B) OF THE ACT:

Title of each class	Trading symbol(s)	Name of Exchange on Which Registered
Ordinary Shares, $0.001 par value	STE	New York Stock Exchange

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

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 o

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

Large Accelerated Filer	☒	Accelerated Filer	☐
Non-Accelerated Filer	☐	Smaller Reporting Company	☐
		Emerging Growth Company	☐

If an emerging growth company, indicate by 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. o

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

The number of ordinary shares outstanding as of November 1, 2019: 84,783,115

STERIS plc and Subsidiaries

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PART 1—FINANCIAL INFORMATION

As used in this Quarterly Report on Form 10-Q, STERIS plc and its consolidated subsidiaries together are called “STERIS,” the “Company,” “we,” “us,” or “our,” unless otherwise noted.

ITEM 1. FINANCIAL STATEMENTS

STERIS PLC AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
(in thousands)

	September 30, 2019	March 31, 2019
	(Unaudited)	
Assets		
Current assets:		
Cash and cash equivalents	**$ 225,536**	$ 220,633
Accounts receivable (net of allowances of $11,219 and $9,645 respectively)	**513,353**	564,830
Inventories, net	**236,837**	208,243
Prepaid expenses and other current assets	**56,228**	60,029
Total current assets	**1,031,954**	1,053,735
Property, plant, and equipment, net	**1,066,223**	1,031,582
Lease right-of-use assets, net	**115,925**	—
Goodwill	**2,319,062**	2,322,928
Intangibles, net	**576,379**	604,614
Other assets	**76,174**	60,212
Total assets	**$ 5,185,717**	$ 5,073,071
Liabilities and equity		
Current liabilities:		
Accounts payable	**$ 133,802**	$ 152,913
Accrued income taxes	**6,186**	15,460
Accrued payroll and other related liabilities	**97,277**	109,058
Lease obligations due within one year	**18,461**	—
Accrued expenses and other	**172,297**	187,765
Total current liabilities	**428,023**	465,196
Long-term indebtedness	**1,187,195**	1,183,227
Deferred income taxes, net	**152,748**	151,038
Long-term lease obligations	**97,910**	—
Other liabilities	**82,196**	87,812
Total liabilities	**$ 1,948,072**	$ 1,887,273
Commitments and contingencies (see Note 8)		
Ordinary shares, with $0.001 and $75.00 par value, respectively; 500,000 shares authorized; 84,797 and 84,517 ordinary shares issued and outstanding, respectively	**1,981,660**	1,998,564
Retained earnings	**1,472,725**	1,339,024
Accumulated other comprehensive loss	**(225,717)**	(159,778)
Total shareholders’ equity	**3,228,668**	3,177,810
Noncontrolling interests	**8,977**	7,988
Total equity	**3,237,645**	3,185,798
Total liabilities and equity	**$ 5,185,717**	$ 5,073,071

See notes to consolidated financial statements.

STERIS PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except per share amounts)
(Unaudited)

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Revenues:				
Product	$ 337,666	$ 314,659	$ 645,401	$ 593,449
Service	399,174	364,302	788,242	724,270
Total revenues	736,840	678,961	1,433,643	1,317,719
Cost of revenues:				
Product	183,600	172,107	344,559	318,709
Service	234,573	222,190	464,574	445,296
Total cost of revenues	418,173	394,297	809,133	764,005
Gross profit	318,667	284,664	624,510	553,714
Operating expenses:				
Selling, general, and administrative	175,959	162,312	354,740	320,718
Research and development	16,249	15,773	31,834	31,993
Restructuring expenses	(274)	—	1,115	—
Total operating expenses	191,934	178,085	387,689	352,711
Income from operations	126,733	106,579	236,821	201,003
Non-operating expenses, net:				
Interest expense	10,444	11,393	20,889	23,134
Interest income and miscellaneous expense	(1,018)	(73)	(785)	(441)
Total non-operating expenses, net	9,426	11,320	20,104	22,693
Income before income tax expense	117,307	95,259	216,717	178,310
Income tax expense	22,165	17,764	36,798	30,537
Net income	95,142	77,495	179,919	147,773
Less: Net income attributable to noncontrolling interests	373	38	560	325
Net income attributable to shareholders	$ 94,769	$ 77,457	$ 179,359	$ 147,448
Net income per share attributed to shareholders				
Basic	$ 1.12	$ 0.92	$ 2.12	$ 1.74
Diluted	$ 1.11	$ 0.91	$ 2.09	$ 1.72
Cash dividends declared per share ordinary outstanding	$ 0.37	$ 0.34	$ 0.71	$ 0.65

See notes to consolidated financial statements.

STERIS PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME
(in thousands)
(Unaudited)

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	**2018**	**2019**	**2018**
Net income	**$ 95,142**	$ 77,495	**$ 179,919**	$ 147,773
Less: Net income attributable to noncontrolling interests	**373**	38	**560**	325
Net income attributable to shareholders	**94,769**	77,457	**179,359**	147,448
Other comprehensive income (loss)				
Amortization of pension and postretirement benefit plans costs, (net of taxes of $171, $169, $341 and $338, respectively)	**(506)**	(413)	**(1,011)**	(823)
Change in cumulative currency translation adjustment	**(68,367)**	(5,271)	**(64,928)**	(135,672)
Total other comprehensive income (loss)	**(68,873)**	(5,684)	**(65,939)**	(136,495)
Comprehensive income (loss)	**$ 25,896**	$ 71,773	**$ 113,420**	$ 10,953

See notes to consolidated financial statements.

STERIS PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(Unaudited)

	Six Months Ended September 30,	
	2019	**2018**
Operating activities:		
Net income	**$ 179,919**	$ 147,773
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation, depletion, and amortization	**96,736**	92,971
Deferred income taxes	**(766)**	2,242
Share-based compensation expense	**13,276**	12,938
Loss (gain) on the disposal of property, plant, equipment, and intangibles, net	**45**	(385)
Loss on sale of businesses, net	**2,476**	663
Other items	**939**	(16,329)
Changes in operating assets and liabilities, net of effects of acquisitions:		
Accounts receivable, net	**54,547**	29,024
Inventories, net	**(26,328)**	(32,955)
Other current assets	**2,885**	4,689
Accounts payable	**(19,059)**	(7,385)
Accruals and other, net	**(44,670)**	(6,544)
Net cash provided by operating activities	**260,000**	226,702
Investing activities:		
Purchases of property, plant, equipment, and intangibles, net	**(98,168)**	(62,549)
Proceeds from the sale of property, plant, equipment and intangibles	**206**	5,547
Proceeds from the sale of businesses	**439**	(196)
Purchase of investments	**—**	(4,955)
Acquisition of businesses, net of cash acquired	**(87,935)**	—
Other	**—**	(6,003)
Net cash used in investing activities	**(185,458)**	(68,156)
Financing activities:		
Payments on long-term obligations	**—**	(85,000)
Proceeds (payments) under credit facilities, net	**13,240**	52,093
Deferred financing fees and debt issuance costs	**(1,206)**	(298)
Acquisition related deferred or contingent consideration	**(452)**	(685)
Repurchases of ordinary shares	**(37,866)**	(55,902)
Cash dividends paid to ordinary shareholders	**(60,220)**	(55,005)
Stock option and other equity transactions, net	**22,975**	4,936
Net cash used in financing activities	**(63,529)**	(139,861)
Effect of exchange rate changes on cash and cash equivalents	**(6,110)**	(10,298)
Increase in cash and cash equivalents	**4,903**	8,387
Cash and cash equivalents at beginning of period	**220,633**	201,534
Cash and cash equivalents at end of period	**$ 225,536**	$ 209,921

See notes to consolidated financial statements.

STERIS PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(in thousands, except per share amounts)
(Unaudited)

Three Months Ended September 30, 2019

	Ordinary Shares		Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Non-controlling Interest	Total Equity
	Number	Amount				
Balance at June 30, 2019	**84,754**	**$ 1,996,354**	**$ 1,397,390**	**$ (156,844)**	**$ 8,102**	**$ 3,245,002**
Comprehensive income:						
Net income	**—**	**—**	**94,769**	**—**	**373**	**95,142**
Other comprehensive income	**—**	**—**	**—**	**(68,873)**	**—**	**(68,873)**
Repurchases of ordinary shares	**(152)**	**(34,944)**	**11,963**	**—**	**—**	**(22,981)**
Equity compensation programs and other	**195**	**20,250**	**—**	**—**	**—**	**20,250**
Cash dividends – $0.37 per ordinary share	**—**	**—**	**(31,397)**	**—**	**—**	**(31,397)**
Other changes in noncontrolling interest	**—**	**—**	**—**	**—**	**502**	**502**
Balance at September 30, 2019	**84,797**	**$ 1,981,660**	**$ 1,472,725**	**$ (225,717)**	**$ 8,977**	**$ 3,237,645**

Six Months Ended September 30, 2019

	Ordinary Shares		Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Non-controlling Interest	Total Equity
	Number	Amount				
Balance at March 31, 2019	**84,517**	**$ 1,998,564**	**$ 1,339,024**	**$ (159,778)**	**$ 7,988**	**$ 3,185,798**
Comprehensive income:						
Net income	**—**	**—**	**179,359**	**—**	**560**	**179,919**
Other comprehensive income	**—**	**—**	**—**	**(65,939)**	**—**	**(65,939)**
Repurchases of ordinary shares	**(279)**	**(52,428)**	**14,562**	**—**	**—**	**(37,866)**
Equity compensation programs and other	**559**	**35,524**	**—**	**—**	**—**	**35,524**
Cash dividends – $0.71 per ordinary share	**—**	**—**	**(60,220)**	**—**	**—**	**(60,220)**
Other changes in noncontrolling interest	**—**	**—**	**—**	**—**	**429**	**429**
Balance at September 30, 2019	**84,797**	**$ 1,981,660**	**$ 1,472,725**	**$ (225,717)**	**$ 8,977**	**$ 3,237,645**

STERIS PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY (Continued)
(in thousands, except per share amounts)
(Unaudited)

Three Months Ended September 30, 2018

	Ordinary Shares		Preferred Shares		Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Non-controlling Interest	Total Equity
	Number	Amount	Number	Amount				
Balance at June 30, 2018	84,651	$ 2,027,004	100	$ 15	$ 1,181,517	$ (121,096)	$ 11,748	$ 3,099,188
Comprehensive income:								
Net income	—	—	—	—	77,457	—	38	77,495
Other comprehensive income	—	—	—	—	—	(5,684)	—	(5,684)
Repurchases of ordinary shares	(198)	(23,887)	—	—	1,828	—	—	(22,059)
Equity compensation programs and other	42	9,449	—	—	—	—	—	9,449
Cash dividends – $0.34 per ordinary share	—	—	—	—	(28,740)	—	—	(28,740)
Other changes in noncontrolling interest	—	—	—	—	—	—	(4,672)	(4,672)
Balance at September 30, 2018	84,495	$ 2,012,566	100	$ 15	$ 1,232,062	$ (126,780)	$ 7,114	$ 3,124,977

Six Months Ended September 30, 2018

	Ordinary Shares		Preferred Shares		Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Non-controlling Interest	Total Equity
	Number	Amount	Number	Amount				
Balance at March 31, 2018	84,747	$ 2,048,037	100	$ 15	$ 1,146,223	$ 11,685	$ 11,340	$ 3,217,300
Comprehensive income:								
Net income	—	—	—	—	147,448	—	325	147,773
Other comprehensive income	—	—	—	—	—	(136,495)	—	(136,495)
Repurchases of ordinary shares	(547)	(52,965)	—	—	(2,937)	—	—	(55,902)
Equity compensation programs and other	295	17,494	—	—	—	—	—	17,494
Cash dividends – $0.65 per ordinary share	—	—	—	—	(55,005)	—	—	(55,005)
Adoption of Accounting Standards (ASC 2014-09 and ASC 2017-07)	—	—	—	—	(3,667)	(1,970)	—	(5,637)
Other changes in noncontrolling interest	—	—	—	—	—	—	(4,551)	(4,551)
Balance at September 30, 2018	84,495	$ 2,012,566	100	$ 15	$ 1,232,062	$ (126,780)	$ 7,114	$ 3,124,977

STERIS PLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)
For the Three and Six Months Ended September 30, 2019 and 2018
(dollars in thousands, unless noted and except per share amounts)

1. Nature of Operations and Summary of Significant Accounting Policies

Nature of Operations

On March 28, 2019, STERIS plc, a public limited company organized under the laws of England and Wales ("STERIS UK"), completed a redomiciliation from the United Kingdom to Ireland (the "Redomiciliation"). The Redomiciliation was achieved through the insertion of a new Irish public limited holding company ("STERIS plc") on top of STERIS UK pursuant to a court-approved scheme of arrangement under English law (the "Scheme"). Following the Scheme effectiveness, STERIS UK was re-registered as a private limited company with the name STERIS Limited, and STERIS Emerald IE Limited, a company established in Ireland and a wholly-owned direct subsidiary of STERIS plc, was interposed as the direct parent company of STERIS UK.

STERIS is a leading provider of infection prevention and other procedural products and services. Our focus is primarily on healthcare, pharmaceutical and medical device Customers. We offer Customers a unique mix of innovative capital equipment products, such as sterilizers and washers, surgical tables, lights and equipment management systems and connectivity solutions such as operating room integration; consumable products such as detergents and gastrointestinal endoscopy accessories and other products; and services, including capital equipment installation and maintenance, contract sterilization and microbial reduction of medical devices, instrument and scope repair solutions, testing and validation services and instrument reprocessing.

Our fiscal year ends on March 31. References in this Quarterly Report to a particular "year" or "year-end" mean our fiscal year. The significant accounting policies applied in preparing the accompanying consolidated financial statements of the Company are summarized below:

Interim Financial Statements

We prepared the accompanying unaudited consolidated financial statements of the Company according to accounting principles generally accepted in the United States ("U.S. GAAP") for interim financial information and the instructions to the Quarterly Report on Form 10-Q and Rule 10-01 of Regulation S-X. This means that they do not include all of the information and footnotes required by U.S. GAAP for complete financial statements. Our unaudited interim consolidated financial statements contain all material adjustments (including normal recurring accruals and adjustments) management believes are necessary to fairly state our financial condition, results of operations, and cash flows for the periods presented.

These interim consolidated financial statements should be read together with the consolidated financial statements and related notes included in our Annual Report on Form 10-K for the year ended March 31, 2019 dated May 30, 2019. The Consolidated Balance Sheet at March 31, 2019 was derived from the audited consolidated financial statements at that date, but does not include all of the information and footnotes required by U.S. GAAP for complete financial statements.

Principles of Consolidation

We use the consolidation method to report our investment in our subsidiaries. Therefore, the accompanying consolidated financial statements include the accounts of the Company and its wholly-owned and majority-owned subsidiaries. We eliminate inter-company accounts and transactions when we consolidate these accounts. Investments in equity of unconsolidated affiliates, over which the Company has significant influence, but not control, over the financial and operating polices, are accounted for primarily using the equity method. These investments are immaterial to the Company's Consolidated Financial Statements.

Use of Estimates

We make certain estimates and assumptions when preparing financial statements according to U.S. GAAP that affect the reported amounts of assets and liabilities at the financial statement dates and the reported amounts of revenues and expenses during the periods presented. These estimates and assumptions involve judgments with respect to many factors that are difficult to predict and are beyond our control. Actual results could be materially different from these estimates. We revise the estimates and assumptions as new information becomes available. This means that operating results for the six month period ended September 30, 2019 are not necessarily indicative of results that may be expected for future quarters or for the full fiscal year ending March 31, 2020.

Revenue Recognition and Associated Liabilities

We adopted Accounting Standards Update ("ASU") 2014-09 “Revenue from Contracts with Customers” and the subsequently issued amendments on April 1, 2018 using the modified retrospective approach to contracts that were not completed as of April 1, 2018. Under this standard, certain capital equipment contracts are comprised of a single performance obligation, resulting in the deferral of the corresponding capital equipment revenue and cost of revenues until installation is complete. Previously, these capital equipment revenues and cost of revenues were recognized based upon shipping terms. We recorded a cumulative effect adjustment in the beginning of fiscal 2019 to Retained earnings of $5,637, based on the current terms and conditions for certain open capital equipment contracts as of March 31, 2018.

Revenue is recognized when obligations under the terms of the contract are satisfied and control of the promised products or services have transferred to the Customer. Revenues are measured at the amount of consideration that we expect to be paid in exchange for the products or services. Product revenue is recognized when control passes to the Customer, which is generally based on contract or shipping terms. Service revenue is recognized when the Customer benefits from the service, which occurs either upon completion of the service or as it is provided to the Customer. Our Customers include end users as well as dealers and distributors who market and sell our products. Our revenue is not contingent upon resale by the dealer or distributor, and we have no further obligations related to bringing about resale. Our standard return and restocking fee policies are applied to sales of products. Shipping and handling costs charged to Customers are included in Product revenues. The associated expenses are treated as fulfillment costs and are included in Cost of revenues. Revenues are reported net of sales and value-added taxes collected from Customers.

We have individual Customer contracts that offer discounted pricing. Dealers and distributors may be offered sales incentives in the form of rebates. We reduce revenue for discounts and estimated returns, rebates, and other similar allowances in the same period the related revenues are recorded. The reduction in revenue for these items is estimated based on historical experience and trend analysis to the extent that it is probable that a significant reversal of revenue will not occur. Estimated returns are recorded gross on the Consolidated Balance Sheets.

In transactions that contain multiple performance obligations, such as when products, maintenance services, and other services are combined, we recognize revenue as each product is delivered or service is provided to the Customer. We allocate the total arrangement consideration to each performance obligation based on its relative standalone selling price, which is the price for the product or service when it is sold separately.

Payment terms vary by the type and location of the Customer and the products or services offered. Generally, the time between when revenue is recognized and when payment is due is not significant. We do not evaluate whether the selling price contains a financing component for contracts that have a duration of less than one year.

We do not capitalize sales commissions as substantially all of our sales commission programs have an amortization period of one year or less.

Certain costs to fulfill a contract are capitalized and amortized over the term of the contract if they are recoverable, directly related to a contract and generate resources that we will use to fulfill the contract in the future. At September 30, 2019, assets related to costs to fulfill a contract were not material to our Consolidated Financial Statements.

Refer to Note 9, titled "Business Segment Information" for disaggregation of revenue.

Product Revenue

Product revenues consist of revenues generated from sales of consumables and capital equipment. These contracts are primarily based on a Customer’s purchase order and may include a Distributor, Dealer or Group Purchasing Organization (GPO) agreement. We recognize revenue for sales of product when control passes to the Customer, which generally occurs either when the products are shipped or when they are received by the Customer. Revenue related to certain capital equipment products is deferred until installation is complete as the capital equipment and installation are highly integrated and form a single performance obligation.

Service Revenue

Within our Healthcare Products and Life Sciences segments, service revenues consist of revenue generated from parts and labor associated with the maintenance, repair and installation of capital equipment. These contracts are primarily based on a Customer’s purchase order and may include a Distributor, Dealer, or GPO agreement. For maintenance, repair and installation of capital equipment, revenue is recognized upon completion of the service.

(dollars in thousands, except as noted)

We also offer preventive maintenance and separately priced extended warranty agreements to our Customers, which require us to maintain and repair our products over the duration of the contract. Generally, these contract terms are cancelable without penalty and range from one to five years. Amounts received under these Customer contracts are initially recorded as a service liability and are recognized as service revenue ratably over the contract term using a time-based input measure.

Within our Healthcare Specialty Services segment, revenues relate primarily to outsourced reprocessing services and instrument repairs. Contracts for outsourced reprocessing services are primarily based on an agreement with a Customer, ranging in length from several months to 15 years. Outsourced reprocessing services revenue is recognized ratably over the contract term using a time-based input measure, adjusted for volume and other performance metrics, to the extent that it is probable that a significant reversal of revenue will not occur. Contracts for instrument repairs are primarily based on a Customer’s purchase order, and the associated revenue is recognized upon completion of the repair.

Within our Applied Sterilization Technologies segment, service revenues include contract sterilization and laboratory services. Sales contracts for contract sterilization and laboratory services are primarily based on a Customer’s purchase order and associated Customer agreement and revenues are generally recognized upon completion of the service.

Contract Liabilities

Payments received from Customers are based on invoices or billing schedules as established in contracts with Customers. Deferred revenue is recorded when payment is received in advance of performance under the contract. Deferred revenue is recognized as revenue upon completion of the performance obligation, which generally occurs within one year. During the first six months of fiscal 2020, $42,923 of the March 31, 2019 deferred revenue balance was recorded as revenue. During the first six months of fiscal 2019, $20,235 of the March 31, 2018 deferred revenue balance was recorded as revenue.

Refer to Note 6, titled "Additional Consolidated Balance Sheet Information" for Deferred revenue balances.

Service Liabilities

Payments received in advance of performance for cancelable preventative maintenance and separately priced extended warranty contracts are recorded as service liabilities. Service liabilities are recognized as revenue as performance is rendered under the contract.

Refer to Note 6, titled "Additional Consolidated Balance Sheet Information" for Service liability balances.

Remaining Performance Obligations

Remaining performance obligations reflect only the performance obligations related to agreements for which we have a firm commitment from a Customer to purchase, and exclude variable consideration related to unsatisfied performance obligations. With regard to products, these remaining performance obligations include capital equipment and consumable orders which have not shipped. With regard to service, these remaining performance obligations primarily include installation, certification, and outsourced reprocessing services. As of September 30, 2019, the transaction price allocated to remaining performance obligations was approximately $922,000. We expect to recognize approximately 47% of the transaction price within one year and approximately 46% beyond one year. The remainder has yet to be scheduled for delivery.

Recently Issued Accounting Standards Impacting the Company

Recently Issued Accounting Standards Impacting the Company are presented in the following table:

Standard	Date of Issuance	Description	Date of Adoption	Effect on the financial statements or other significant matters
Standards that have recently been adopted				

ASU 2016-02, "Leases" (Topic 842)	February 2016	The standard will require lessees to record all leases, whether finance or operating, on the balance sheet. An asset will be recorded to represent the right to use the leased asset, and a liability will be recorded to represent the lease obligation. The standard is effective for annual periods beginning after December 15, 2018 and interim periods within that period. Early adoption is permitted.	First Quarter Fiscal 2020	We adopted this standard, and related amendments, effective April 1, 2019 using the modified retrospective transition method and have not restated prior periods. We elected to use the package of practical expedients permitted under the transition guidance, which allows the carry forward of historical lease classification of existing leases. We also elected the practical expedient related to land easements, allowing us to carry forward our accounting treatment for land easements on existing or expired agreements. We made an accounting policy election to not recognize lease assets or liabilities for leases with a term of 12 months or less and elected to not separate non-lease components from lease components to which they relate for all asset classes. We recorded lease right-of-use assets and lease liabilities for operating leases totaling $120,562. The adoption of the standard did not have a material impact to the Consolidated Statements of Income or Cash Flows. Additional information is disclosed in Note 8 under the heading "Leases".
ASU 2017-12 "Targeted Improvements to Accounting for Hedging Activities" (Topic 815)	August 2017	The standard provides targeted improvements to accounting for hedging activities by expanding an entity's ability to hedge non-financial and financial risk components and reduce complexity in fair value hedges of interest rate risk. The guidance eliminates the requirement to separately measure and report hedge ineffectiveness and generally requires the entire change in the fair value of a hedging instrument to be presented in the same income statement line as the hedged item. The guidance also eases certain documentation and assessment requirements and modifies the accounting for components excluded from the assessment of hedge effectiveness. The standard is effective for fiscal years, and interim periods within those years, beginning after December 15, 2018. Early adoption is permitted in any interim period after issuance of the standard.	First Quarter Fiscal 2020	We adopted this standard effective April 1, 2019 with no material impact to our Consolidated Balance Sheets. The impact to our Consolidated Statements of Income will depend on the value of future hedging activities.

STERIS PLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)
For the Three and Six Months Ended September 30, 2019 and 2018
(dollars in thousands, except as noted)

ASU 2018-02 "Income Statement - Reporting Comprehensive Income" (Topic 220)	February 2018	The standard allows a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act ("TCJA") and requires certain disclosures about stranded tax effects. The underlying guidance requiring that the effect of a change in tax laws or rates be included in income from continuing operations is not affected. This standard is effective for fiscal years beginning after December 15, 2018 and interim periods within those years. Early adoption is permitted.	First Quarter Fiscal 2020	We have elected not to reclassify the income tax effects of the TCJA from Accumulated Other Comprehensive Income ("AOCI") to retained earnings.Our policy is to release income tax effects from AOCI when individual units of account are sold or terminated.

Standards that have not yet been adopted				
ASU 2016-13, "Measurement of Credit Losses on Financial Instruments"	June 2016	The standard requires a financial asset (or group of financial assets) measured at amortized cost to be presented at the net amount expected to be collected. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis of the financial asset(s) to present the net carrying value at the amount expected to be collected on the financial asset. Credit losses relating to available-for-sale debt securities should be recorded through an allowance for credit losses. The standard is effective for annual periods beginning after December 15, 2019. Early adoption is permitted.	N/A	We are in the process of evaluating the impact that the standard will have on our consolidated financial statements.
ASU 2018-13 "Fair Value Measurement (Topic 820) Disclosure Framework- Changes to Disclosure Requirements for Fair Value Measurement”	August 2018	The standard modifies the disclosure requirements by adding, removing, and modifying certain required disclosures for fair value measurements for assets and liabilities disclosed within the fair value hierarchy. The standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019 and early adoption is permitted.	N/A	We do not expect this standard to have a material impact on our consolidated financial statements as it modifies disclosure requirements only.
ASU 2018-14 "Compensation-Retirement Benefits - Defined Benefit Plans- General Topic (715-20): Disclosure Framework- Changes to the Disclosure Requirements for Defined Benefit Plans"	August 2018	The standard modifies the disclosure requirements by adding, removing, and modifying certain required disclosures for employers that sponsor defined benefit pension or other post-retirement benefit plans. The standard also clarifies disclosure requirements for defined benefit pension plans relating to the projected benefit obligation and accumulated benefit obligation. The standard is effective for fiscal years ending after December 15, 2019 and early adoption is permitted.	N/A	We do not expect this standard to have a material impact on our consolidated financial statements as it modifies disclosure requirements only.

(dollars in thousands, except as noted)

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"	August 2018	The standard aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The standard is effective for fiscal years ending after December 15, 2019 and early adoption is permitted.	N/A	We do not expect this standard to have a material impact on our consolidated financial statements.

A detailed description of our significant and critical accounting policies, estimates, and assumptions is included in our consolidated financial statements included in our Annual Report on Form 10-K for the year ended March 31, 2019 dated May 30, 2019. Our significant and critical accounting policies, estimates, and assumptions have not changed materially from March 31, 2019.

(dollars in thousands, except as noted)

2. Restructuring

Fiscal 2019 Restructuring Plan. During the third quarter of fiscal 2019, we adopted and announced a targeted restructuring plan (the "Fiscal 2019 Restructuring Plan"), which included the closure of two manufacturing facilities, one in Brazil and one in England, as well as other actions including the rationalization of certain products. Fewer than 200 positions are being eliminated. The Company is relocating the production of certain impacted products to other existing manufacturing operations during fiscal 2020. These restructuring actions are designed to enhance profitability and improve efficiency.

Since inception of the Fiscal 2019 Restructuring Plan we have incurred pre-tax expenses totaling $43,651 related to these restructuring actions, of which $32,102 was recorded as restructuring expenses and $11,549 was recorded in cost of revenues, with a total of $31,116, $2,518, $668 and $7,798 related to the Healthcare Products, Healthcare Specialty Services, Life Sciences, and Applied Sterilization Technologies segments, respectively. Corporate related restructuring charges were $1,551. Additional restructuring expenses related to this plan are not expected to be material to our results of operations.

The following table summarizes our total pre-tax restructuring expenses for fiscal 2020:

Fiscal 2019 Restructuring Plan	Three months ended September 30, 2019	Six months ended September 30, 2019
Severance and other compensation related costs	**$ 1,012**	**$ 2,103**
(Gain) on disposal of asset	**(1,164)**	**(1,164)**
Lease termination costs and other	**(122)**	**176**
Product rationalization [(1)]	**910**	**1,828**
Total restructuring expenses	**$ 636**	**$ 2,943**

(1) Recorded in cost of revenues on the Consolidated Statements of Income.

Liabilities related to restructuring activities are recorded as current liabilities on the accompanying Consolidated Balance Sheets within “Accrued payroll and other related liabilities” and “Accrued expenses and other.” The following table summarizes our restructuring liability balances:

Fiscal 2019 Restructuring Plan	March 31, 2019		Provisions		Payments (1)		September 30, 2019
Severance and termination benefits	$ 4,102		$ 2,103		$ (2,751)		**$ 3,454**
Lease termination obligations and other	2,029		176		(902)		**1,303**
Total	$ 6,131	—	$ 2,279	—	$ (3,653)	—	**$ 4,757**

(1) Certain amounts reported include the impact of foreign currency movements relative to the U.S. dollar.

3. Inventories, Net

We use the last-in, first-out (“LIFO”) and first-in, first-out (“FIFO”) cost methods to value inventory. Inventory valued using the LIFO cost method is stated at the lower of cost or market. Inventory valued using the FIFO cost method is stated at the lower of cost or net realizable value. An actual valuation of inventory under the LIFO method is made only at the end of the fiscal year based on the inventory levels and costs at that time. Accordingly, interim LIFO calculations are based on management’s estimates of expected year-end inventory levels and are subject to the final fiscal year-end LIFO inventory valuation. Inventory costs include material, labor, and overhead. Inventories, net consisted of the following:

	September 30, 2019	March 31, 2019
Raw materials	**$ 87,884**	$ 83,009
Work in process	**34,273**	30,694
Finished goods	**153,153**	131,051
LIFO reserve	**(17,804)**	(16,757)
Reserve for excess and obsolete inventory	**(20,669)**	(19,754)
Inventories, net	**$ 236,837**	$ 208,243

(dollars in thousands, except as noted)

4. Property, Plant and Equipment

Information related to the major categories of our depreciable assets is as follows:

	September 30, 2019	March 31, 2019
Land and land improvements [1]	**$ 64,393**	$ 63,522
Buildings and leasehold improvements	**496,423**	480,359
Machinery and equipment	**669,247**	656,956
Information systems	**172,329**	169,711
Radioisotope	**510,602**	483,080
Construction in progress [1]	**150,379**	133,689
Total property, plant, and equipment	**2,063,373**	1,987,317
Less: accumulated depreciation and depletion	**(997,150)**	(955,735)
Property, plant, and equipment, net	**$ 1,066,223**	$ 1,031,582

[1] Land is not depreciated. Construction in progress is not depreciated until placed in service.

5. Debt

Indebtedness was as follows:

	September 30, 2019	March 31, 2019
Credit Agreement	**$ 314,336**	$ 301,846
Private Placement	**876,503**	884,967
Deferred financing costs	**(3,644)**	(3,619)
Other	**—**	33
Total long term debt	**$ 1,187,195**	$ 1,183,227

Additional information regarding our indebtedness is included in the notes to our consolidated financial statements included in our Annual Report on Form 10-K for the year ended March 31, 2019 dated May 30, 2019.

(dollars in thousands, except as noted)

6. Additional Consolidated Balance Sheet Information

Additional information related to our Consolidated Balance Sheets is as follows:

	September 30, 2019	March 31, 2019
Accrued payroll and other related liabilities:		
Compensation and related items	**$ 41,019**	$ 37,251
Accrued vacation/paid time off	**9,691**	10,191
Accrued bonuses	**30,462**	40,194
Accrued employee commissions	**12,386**	17,854
Other postretirement benefit obligations-current portion	**1,633**	1,633
Other employee benefit plans obligations-current portion	**2,086**	1,935
Total accrued payroll and other related liabilities	**$ 97,277**	$ 109,058
Accrued expenses and other:		
Deferred revenues	**$ 44,095**	$ 55,333
Service liabilities	**43,729**	42,101
Self-insured risk reserves-current portion	**7,775**	6,537
Accrued dealer commissions	**17,255**	15,283
Accrued warranty	**6,988**	7,194
Asset retirement obligation-current portion	**2,625**	2,656
Other	**49,830**	58,661
Total accrued expenses and other	**$ 172,297**	$ 187,765
Other liabilities:		
Self-insured risk reserves-long-term portion	**$ 14,445**	$ 14,445
Other postretirement benefit obligations-long-term portion	**9,399**	10,918
Defined benefit pension plans obligations-long-term portion	**15,224**	16,168
Other employee benefit plans obligations-long-term portion	**2,658**	4,711
Accrued long-term income taxes	**13,454**	13,515
Asset retirement obligation-long-term portion	**9,627**	9,730
Other	**17,389**	18,325
Total other liabilities	**$ 82,196**	$ 87,812

7. Income Tax Expense

The Tax Cuts and Jobs Act (the "TCJA") was enacted on December 22, 2017. The TCJA reduced the U.S. federal corporate income tax rate to 21.0%, required companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred and created new taxes on certain foreign sourced earnings. The Company applied the guidance in *Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cut and Jobs Act* when accounting for the enactment-date effects of the TCJA. We consider the tax expense recorded for the TCJA to be complete at this time. However, it is possible that additional legislation, regulations and/or guidance may be issued in the future that may result in additional adjustments to the tax expense recorded related to the TCJA. We will continue to monitor and assess the impact of any new developments.

The effective income tax rates for the three month periods ended September 30, 2019 and 2018 were 18.9% and 18.6%, respectively. The effective income tax rates for the six month periods ended September 30, 2019 and 2018 were 17.0% and 17.1%, respectively. The change in the fiscal 2020 rates compared to the prior year periods is primarily attributable to an increase in profits earned in higher tax jurisdictions, partially offset by discrete items.

Income tax expense is provided on an interim basis based upon our estimate of the annual effective income tax rate, adjusted each quarter for discrete items. In determining the estimated annual effective income tax rate, we analyze various factors, including projections of our annual earnings and taxing jurisdictions in which the earnings will be generated, the impact of state and local income taxes, our ability to use tax credits and net operating loss carry forwards, and available tax planning alternatives.

We operate in numerous taxing jurisdictions and are subject to regular examinations by various United States federal, state and local, as well as foreign jurisdictions. We are no longer subject to United States federal examinations for years before fiscal 2016 and, with limited exceptions, we are no longer subject to United States state and local, or non-United States, income tax examinations by tax authorities for years before fiscal 2014. We remain subject to tax authority audits in various jurisdictions wherever we do business.

In May 2019, we received two notices of proposed tax adjustment from the U.S. Internal Revenue Service (the “IRS”) regarding the deductibility of interest paid on certain intercompany debt. The notices relate to fiscal years 2016 and 2017. In September 2019, we received another notice of proposed adjustment for the same issue, for the 2018 fiscal year. The IRS adjustments would result in a cumulative tax liability of approximately $40,000. We are contesting the IRS’s assertions, and intend to pursue available remedies such as appeals and litigation, if necessary. We have not established reserves related to these notices. An unfavorable outcome is not expected to have a material adverse impact on our consolidated financial position but could be material to our consolidated results of operations and cash flows for any one period.

8. Commitments and Contingencies

We are, and will likely continue to be, involved in a number of legal proceedings, government investigations, and claims, which we believe generally arise in the course of our business, given our size, history, complexity, and the nature of our business, products, Customers, regulatory environment, and industries in which we participate. These legal proceedings, investigations and claims generally involve a variety of legal theories and allegations, including, without limitation, personal injury (e.g., slip and falls, burns, vehicle accidents), product liability or regulation (e.g., based on product operation or claimed malfunction, failure to warn, failure to meet specification, or failure to comply with regulatory requirements), product exposure (e.g., claimed exposure to chemicals, asbestos, contaminants, radiation), property damage (e.g., claimed damage due to leaking equipment, fire, vehicles, chemicals), commercial claims (e.g., breach of contract, economic loss, warranty, misrepresentation), financial (e.g., taxes, reporting), employment (e.g., wrongful termination, discrimination, benefits matters), and other claims for damage and relief.

We believe we have adequately reserved for our current litigation and claims that are probable and estimable, and further believe that the ultimate outcome of these pending lawsuits and claims will not have a material adverse effect on our consolidated financial position or results of operations taken as a whole. Due to their inherent uncertainty, however, there can be no assurance of the ultimate outcome or effect of current or future litigation, investigations, claims or other proceedings (including without limitation the matters discussed below). For certain types of claims, we presently maintain insurance coverage for personal injury and property damage and other liability coverages in amounts and with deductibles that we believe are prudent, but there can be no assurance that these coverages will be applicable or adequate to cover adverse outcomes of claims or legal proceedings against us.

On May 31, 2012, our Albert Browne Limited subsidiary received a warning letter from the FDA regarding chemical indicators manufactured in the United Kingdom. These devices are intended for the monitoring of certain sterilization and other processes. The FDA warning letter states that the agency has concerns regarding operational business processes. We do not believe that the FDA's concerns are related to product performance, or that they result from Customer complaints. We have reviewed our processes with the agency and finalized our remediation measures, and are awaiting FDA reinspection. We do not currently believe that the impact of this event will have a material adverse effect on our financial results.

Civil, criminal, regulatory or other proceedings involving our products or services could possibly result in judgments, settlements or administrative or judicial decrees requiring us, among other actions, to pay damages or fines or effect recalls, or be subject to other governmental, Customer or other third party claims or remedies, which could materially effect our business, performance, prospects, value, financial condition, and results of operations.

For additional information regarding these matters, see the following portions of our Annual Report on Form 10-K for the year ended March 31, 2019 dated May 30, 2019: Item 1 titled, "Business - Information with respect to our Business in General - Government Regulation", the "Risk Factors" in Item 1A thereof titled, "Product related regulations and claims", and the "Risk Factors", in Part II Item 1A of hereof.

From time to time, STERIS is also involved in legal proceedings as a plaintiff involving contract, patent protection, and other claims asserted by us. Gains, if any, from these proceedings are recognized when they are realized.

(dollars in thousands, except as noted)

We are subject to taxation from United States federal, state and local, and non-U.S. jurisdictions. Tax positions are settled primarily through the completion of audits within each individual jurisdiction or the closing of statutes of limitation. Changes in applicable tax law or other events may also require us to revise past estimates. We describe income taxes further in Note 7 to our consolidated financial statements titled, “Income Tax Expense” in this Quarterly Report on Form 10-Q.

Leases

We lease manufacturing, warehouse and office space, service facilities, vehicles, equipment and communication systems. Certain leases contain options that provide us with the ability to extend the lease term. Such options are included in the lease term when it is reasonably certain that the option will be exercised. We made an accounting policy election to not recognize lease assets or lease liabilities for leases with a lease term of twelve months or less.

We determine if an agreement contains a lease and classify our leases as operating or finance at the lease commencement date. Finance leases are generally those leases for which we will pay substantially all the underlying asset’s fair value or will use the asset for all or a major part of its economic life, including circumstances in which we will ultimately own the asset. Lease assets arising from finance leases are included in property, plant and equipment, net and the liabilities are included in other liabilities. For finance leases, we recognize interest expense using the effective interest method and we recognize amortization expense on the lease asset over the shorter of the lease term or the useful life of the asset. Our finance leases are not material as of September 30, 2019 and for the six-month period then ended.

Operating lease assets and liabilities are recognized at the commencement date of the lease based on the present value of lease payments over the lease term. Lease assets represent the right to use an underlying asset for the lease term and lease liabilities represent the obligation to make lease payments arising from the lease. As most leases do not provide an implicit interest rate, we estimate an incremental borrowing rate to determine the present value of lease payments. Our estimated incremental borrowing rate reflects a secured rate based on recent debt issuances, our estimated credit rating, lease term, as well as publicly available data for instruments with similar characteristics. For operating leases, we recognize lease cost on a straight-line basis over the term of the lease. When accounting for leases, we combine payments for leased assets, related services and other components of a lease.

The components of operating lease expense are as follows:

	Three months ended September 30, 2019	Six months ended September 30, 2019
Fixed operating lease expense	**$ 6,766**	**$ 13,814**
Variable operating lease expense	**1,246**	**2,260**
Total operating lease expense	**$ 8,012**	**$ 16,074**

Supplemental cash flow information related to operating leases are as follows:

	Six months ended September 30, 2019
Cash paid for amounts included in the measurement of operating lease liabilities	**$ 6,877**
Right-of-use assets obtained in exchange for operating lease obligations	**$ 13,123**

(dollars in thousands, except as noted)

Maturities of lease liabilities at September 30, 2019 are as follows:

	September 30, 2019
Remainder of 2020:	**$ 12,480**
2021	**20,499**
2022	**16,102**
2023	**13,434**
2024	**11,428**
2025 and thereafter	**79,570**
Total operating lease payments	**153,513**
Less imputed interest	**37,142**
Total operating lease liabilities	**$ 116,371**

Supplemental information related to operating leases are as follows:

	September 30, 2019
Weighted-average remaining lease term of operating leases	**11.8 years**
Weighted-average discount rate of operating leases	**4.6%**

Prior to the adoption of ASU 2016-02, " Leases" (Topic 842) future minimum annual rentals payable under noncancelable operating lease agreements in excess of one year as of March 31, 2019 were as follows:

	March 31, 2019
2020	$ 24,008
2021	18,567
2022	13,917
2023	11,929
2024 and thereafter	93,939
Total minimum lease payments	$ 162,360

In the preceding table, the future minimum annual rentals payable under noncancelable leases denominated in foreign currencies have been calculated using March 31, 2019 foreign currency exchange rates.

9. Business Segment Information

We operate and report our financial information in four reportable business segments: Healthcare Products, Healthcare Specialty Services, Life Sciences, and Applied Sterilization Technologies. Non-allocated operating costs that support the entire Company and items not indicative of operating trends are excluded from segment operating income.

Our Healthcare Products segment offers infection prevention and procedural solutions for healthcare providers worldwide, including consumable products, equipment maintenance and installation services, and capital equipment.

Our Healthcare Specialty Services segment provides a range of specialty services for healthcare providers including hospital sterilization services, and instrument and scope repairs.

Our Life Sciences segment offers consumable products, equipment maintenance, specialty services and capital equipment for pharmaceutical manufacturers and research facilities.

Our Applied Sterilization Technologies segment offers contract sterilization, testing and validation services for medical device and pharmaceutical Customers and others.

We disclose a measure of segment income that is consistent with the way management operates and views the business. The accounting policies for reportable segments are the same as those for the consolidated Company.

For the three and six months ended September 30, 2019, revenues from a single Customer did not represent ten percent or more of any reportable segment's revenues. Additional information regarding our segments is included in our consolidated financial statements included in our Annual Report on Form 10-K for the year ended March 31, 2019, dated May 30, 2019.

(dollars in thousands, except as noted)

Financial information for each of our segments is presented in the following table:

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Revenues:				
Healthcare Products	**$ 350,281**	$ 321,505	**$ 660,068**	$ 613,515
Healthcare Specialty Services	**135,002**	124,554	**270,947**	246,803
Life Sciences	**98,650**	97,165	**195,435**	182,120
Applied Sterilization Technologies	**152,907**	135,737	**307,193**	275,281
Total revenues	**$ 736,840**	$ 678,961	**$ 1,433,643**	$ 1,317,719
Operating income (loss):				
Healthcare Products	**$ 86,963**	$ 72,468	**$ 160,661**	$ 134,190
Healthcare Specialty Services	**16,072**	15,461	**32,889**	28,415
Life Sciences	**32,315**	33,266	**65,354**	63,131
Applied Sterilization Technologies	**65,386**	53,468	**133,421**	109,619
Corporate	**(50,956)**	(46,985)	**(106,353)**	(93,027)
Total operating income before adjustments	**$ 149,780**	$ 127,678	**$ 285,972**	$ 242,328
Less: Adjustments				
Amortization of acquired intangible assets [1]	**$ 18,952**	$ 16,956	**$ 35,901**	$ 35,013
Acquisition and integration related charges [2]	**1,947**	2,707	**3,864**	4,378
Redomiciliation and tax restructuring costs [3]	**1,016**	600	**2,786**	887
(Gain) on fair value adjustment of acquisition related contingent consideration [1]	**—**	—	**—**	(842)
Net loss on divestiture of businesses [1]	**50**	221	**2,476**	663
Amortization of property "step up" to fair value [1]	**446**	615	**1,181**	1,226
Restructuring charges [4]	**636**	—	**2,943**	—
Total operating income	**$ 126,733**	$ 106,579	**$ 236,821**	$ 201,003

[1] For more information regarding our recent acquisitions and divestitures see Note 17 titled, "Business Acquisitions and Divestitures", as well as our Annual Report on Form 10-K for the year ended March 31, 2019, dated May 30, 2019.
[2] Acquisition and integration related charges include transaction costs and integration expenses associated with acquisitions.
[3] Costs incurred in connection with the Redomiciliation.
[4] For more information regarding our restructuring activities see Note 2 titled, "Restructuring".

Additional information regarding our fiscal 2020 and fiscal 2019 revenue is disclosed in the following tables:

(dollars in thousands, except as noted)

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Healthcare Products:				
Capital equipment	**$ 147,037**	$ 133,410	**$ 262,233**	240,906
Consumables	**108,392**	101,680	**217,174**	202,094
Service	**94,852**	86,415	**180,661**	170,515
Total Healthcare Products Revenues	**$ 350,281**	$ 321,505	**$ 660,068**	$ 613,515
Total Healthcare Specialty Services Revenues	**$ 135,002**	$ 124,554	**$ 270,947**	$ 246,803
Life Sciences:				
Capital equipment	**$ 26,462**	$ 29,812	**$ 53,231**	$ 48,926
Consumables	**42,540**	38,466	**86,569**	78,687
Service	**29,648**	28,887	**55,635**	54,507
Total Life Sciences Revenues	**$ 98,650**	$ 97,165	**$ 195,435**	$ 182,120
Applied Sterilization Technologies Service Revenues	**$ 152,907**	$ 135,737	**$ 307,193**	$ 275,281
Total Revenues	**$ 736,840**	$ 678,961	**$ 1,433,643**	$ 1,317,719

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Revenues:				
Ireland	**$ 15,171**	$ 14,098	**$ 30,279**	$ 26,658
United States	**538,101**	481,233	**1,049,253**	928,773
Other locations	**183,568**	183,630	**354,111**	362,288
Total Revenues	**$ 736,840**	$ 678,961	**$ 1,433,643**	$ 1,317,719

10. Shares and Preferred Shares

Ordinary shares

In connection with the Redomiciliation, STERIS UK shareholders received STERIS plc shares pursuant to a scheme of arrangement under UK law. Each STERIS UK ordinary shareholder received one ordinary share, par value $75.00, of STERIS plc for each STERIS UK ordinary share held, which STERIS UK shares were canceled. On May 3, 2019, the par value of STERIS plc shares issued pursuit to the scheme of arrangement was reduced to $0.001 per share.

We calculate basic earnings per share based upon the weighted average number of shares outstanding. We calculate diluted earnings per share based upon the weighted average number of shares outstanding plus the dilutive effect of share equivalents calculated using the treasury stock method.

The following is a summary of shares and share equivalents outstanding used in the calculations of basic and diluted earnings per share:

	Three Months Ended September 30,		Six Months Ended September 30,	
Denominator (shares in thousands):	2019	2018	2019	2018
Weighted average shares outstanding—basic	**84,795**	84,537	**84,716**	84,611
Dilutive effect of share equivalents	**900**	940	**914**	882
Weighted average shares outstanding and share equivalents—diluted	**85,695**	85,477	**85,630**	85,493

Options to purchase the following number of shares were outstanding but excluded from the computation of diluted earnings per share because the combined exercise prices, unamortized fair values, and assumed tax benefits upon exercise were greater than the average market price for the shares during the periods, so including these options would be anti-dilutive:

	Three Months Ended September 30,		Six Months Ended September 30,	
(shares in thousands)	2019	2018	2019	2018
Number of share options	**341**	418	**231**	279

Additional Authorized Shares

The Company has an additional authorized share capital of 50,000,000 preferred shares of $0.001 par value each, plus 25,000 deferred ordinary shares of €1.00 par value each, in order to satisfy minimum statutory capital requirements for all Irish public limited companies.

11. Repurchases of Ordinary Shares

On August 9, 2016, STERIS UK announced that its Board of Directors had authorized the purchase of up to $300,000 (net of taxes, fees and commissions) of our ordinary shares. As a result of the Redomiciliation, that share repurchase authorization terminated.

On May 7, 2019, our Board of Directors authorized the continuation of the share repurchase program resulting in a share repurchase authorization of $78,979 (net of taxes, fees and commissions).

On July 30, 2019, our Board of Directors approved an increase in the May 7, 2019 authorization of an additional amount of $300,000 (net of taxes, fees and commissions). As of September 30, 2019, there was approximately $348,979 (net of taxes, fees and commissions) of remaining availability under the authorization.

Under the authorizations, the Company may repurchase its shares from time to time through open market purchases, including 10b5-1 plans. Any repurchase program may be activated, suspended or discontinued at any time.

During the first six months of fiscal 2020, we repurchased 205,059 of our ordinary shares for the aggregate amount of $30,000 (net of fees and commissions) pursuant to this authorization. During the first six months of fiscal 2019, we repurchased 445,700 of our ordinary shares for the aggregate amount of $47,082 (net of fees and commissions) pursuant to the 2016 authorization.

During the first six months of fiscal 2020, we obtained 73,914 of our ordinary shares in the aggregate amount of $7,955 in connection with share based compensation award programs. During the first six months of fiscal 2019, we obtained 100,647 of our ordinary shares in the aggregate amount of $7,799 in connection with share based compensation award programs.

(dollars in thousands, except as noted)

12. Share-Based Compensation

We maintain a long-term incentive plan that makes available shares for grants, at the discretion of the Board of Directors or Compensation Committee of the Board of Directors, to officers, directors, and key employees in the form of stock options, restricted shares, restricted share units, stock appreciation rights and share grants. We satisfy share award incentives through the issuance of new ordinary shares.

Stock options provide the right to purchase our shares at the market price on the date of grant, or for options granted to employees in fiscal 2019 and thereafter, 110% of the market price on the date of grant, subject to the terms of the plan and agreements. Generally, one-fourth of the stock options granted to employees become exercisable for each full year of employment following the grant date. Stock options granted generally expire 10 years after the grant date, or in some cases earlier if the option holder is no longer employed by us. Restricted shares and restricted share units generally cliff vest after a four year period or vest in tranches of one-fourth of the number granted for each year of employment after the grant date. As of September 30, 2019, 3,907,136 ordinary shares remained available for grant under the long-term incentive plan.

The fair value of stock option awards was estimated at their grant date using the Black-Scholes-Merton option pricing model. This model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable, characteristics that are not present in our option grants. If the model permitted consideration of the unique characteristics of employee stock options, the resulting estimate of the fair value of the stock options could be different. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service periods in our Consolidated Statements of Income. The expense is classified as cost of goods sold or selling, general and administrative expenses in a manner consistent with the employee’s compensation and benefits.

The following weighted-average assumptions were used for options granted during the first six months of fiscal 2020 and 2019:

	Fiscal 2020	Fiscal 2019
Risk-free interest rate	**2.26%**	2.63%
Expected life of options	**6.2 years**	6.2 years
Expected dividend yield of stock	**1.22%**	1.47%
Expected volatility of stock	**20.27%**	19.92%

The risk-free interest rate is based upon the U.S. Treasury yield curve. The expected life of options is reflective of historical experience, vesting schedules and contractual terms. The expected dividend yield of stock represents our best estimate of the expected future dividend yield. The expected volatility of stock is derived by referring to our historical stock prices over a time frame similar to that of the expected life of the grant. An estimated forfeiture rate of 2.77% and 2.37% was applied in fiscal 2020 and 2019, respectively. This rate is calculated based upon historical activity and represents an estimate of the granted options not expected to vest. If actual forfeitures differ from this calculated rate, we may be required to make additional adjustments to compensation expense in future periods. The assumptions used above are reviewed at the time of each significant option grant, or at least annually.

A summary of share option activity is as follows:

	Number of Options	Weighted Average Exercise Price Per Share	Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at March 31, 2019	2,104,685	$ 72.82		
Granted	345,138	147.22		
Exercised	(404,266)	55.29		
Forfeited	(667)	72.57		
Outstanding at September 30, 2019	**2,044,890**	**$ 88.84**	**7.1 years**	**$ 114,734**
Exercisable at September 30, 2019	**1,129,161**	**$ 67.86**	**5.9 years**	**$ 86,615**

We estimate that 887,943 of the non-vested stock options outstanding at September 30, 2019 will ultimately vest.

(dollars in thousands, except as noted)

The aggregate intrinsic value in the table above represents the total pre-tax difference between the $144.49 closing price of our ordinary shares on September 30, 2019 over the exercise prices of the stock options, multiplied by the number of options outstanding or outstanding and exercisable, as applicable. The aggregate intrinsic value is not recorded for financial accounting purposes and the value changes daily based on the daily changes in the fair market value of ordinary shares.

The total intrinsic value of stock options exercised during the first six months of fiscal 2020 and fiscal 2019 was $35,886 and $7,216, respectively. Net cash proceeds from the exercise of stock options were $22,371 and $4,857 for the first six months of fiscal 2020 and fiscal 2019, respectively.

The weighted average grant date fair value of stock option grants was $23.52 and $18.05 for the first six months of fiscal 2020 and fiscal 2019, respectively.

Stock appreciation rights (“SARS”) carry generally the same terms and vesting requirements as stock options except that they are settled in cash upon exercise and therefore, are classified as liabilities. The fair value of the outstanding SARS as of September 30, 2019 and 2018 was $587 and $762, respectively.

A summary of the non-vested restricted share and share unit activity is presented below:

	Number of Restricted Shares	Number of Restricted Share Units	Weighted-Average Grant Date Fair Value
Non-vested at March 31, 2019	676,373	33,219	$ 80.86
Granted	147,821	12,800	135.39
Vested	(174,862)	(14,006)	75.16
Forfeited	(11,368)	(554)	87.08
Non-vested at September 30, 2019	**637,964**	**31,459**	**$ 95.46**

Restricted shares granted are valued based on the closing stock price at the grant date. The value of restricted shares and units that vested during the first six months of fiscal 2020 at the time of grant was $14,196.

As of September 30, 2019, there was a total of $53,306 in unrecognized compensation cost related to non-vested share-based compensation granted under our share-based compensation plan. We expect to recognize the cost over a weighted average period of 2.3 years.

13. Financial and Other Guarantees

We generally offer a limited parts and labor warranty on capital equipment. The specific terms and conditions of those warranties vary depending on the product sold and the countries where we conduct business. We record a liability for the estimated cost of product warranties at the time product revenues are recognized. The amounts we expect to incur on behalf of our Customers for the future estimated cost of these warranties are recorded as a current liability on the accompanying Consolidated Balance Sheets. Factors that affect the amount of our warranty liability include the number and type of installed units, historical and anticipated rates of product failures, and material and service costs per claim. We periodically assess the adequacy of our recorded warranty liabilities and adjust the amounts as necessary.

Changes in our warranty liability during the first six months of fiscal 2020 were as follows:

	Warranties
Balance, March 31, 2019	$ 7,194
Warranties issued during the period	5,755
Settlements made during the period	(5,961)
Balance, September 30, 2019	**$ 6,988**

14. Derivatives and Hedging

From time to time, we enter into forward contracts to hedge potential foreign currency gains and losses that arise from transactions denominated in foreign currencies, including inter-company transactions. We may also enter into commodity swap contracts to hedge price changes in nickel that impact raw materials included in our cost of revenues. During the second quarter of fiscal 2020, we also held forward foreign currency contracts to hedge a portion of our expected non-U.S. dollar denominated earnings against our reporting currency, the U.S. dollar. These foreign currency exchange contracts will mature during fiscal 2020. We did not elect hedge accounting for these forward foreign currency contracts; however, we may seek to apply hedge accounting in future scenarios. We do not use derivative financial instruments for speculative purposes.

(dollars in thousands, except as noted)

None of these contracts are designated as hedging instruments and do not receive hedge accounting treatment; therefore, changes in their fair value are not deferred but are recognized immediately in the Consolidated Statements of Income. At September 30, 2019, we held foreign currency forward contracts to buy 66.6 million Mexican pesos and 17.7 million Canadian dollars; and to sell 7.2 million euros. At September 30, 2019 we held commodity swap contracts to buy 354.2 thousand pounds of nickel.

	Asset Derivatives		Liability Derivatives	
Balance sheet location	Fair Value at September 30, 2019	Fair Value at March 31, 2019	Fair Value at September 30, 2019	Fair Value at March 31, 2019
Prepaid & Other	**$ 1,259**	$ 552	**$ —**	**$ —**
Accrued expenses and other	$ —	$ —	**$ 38**	$ 278

The following table presents the impact of derivative instruments and their location within the Consolidated Statements of Income:

		Amount of gain (loss) recognized in income			
	Location of gain (loss) recognized in income	Three Months Ended September 30,		Six Months Ended September 30,	
		2019	2018	2019	2018
Foreign currency forward contracts	Selling, general and administrative	**$ 299**	$ 746	**$ 705**	$ 388
Commodity swap contracts	Cost of revenues	**$ 796**	$ (395)	**$ 669**	$ (31)

Additionally, we hold our debt in multiple currencies to fund our operations and investments in certain subsidiaries. We designate portions of foreign currency denominated intercompany loans as hedges of portions of net investments in foreign operations. Net debt designated as non-derivative net investment hedging instruments totaled $45,810 at September 30, 2019. These hedges are designed to be fully effective and any associated gain or loss is recognized in Accumulated Other Comprehensive Income and will be reclassified to income in the same period when a gain or loss related to the net investment in the foreign operation is included in income.

(dollars in thousands, except as noted)

15. Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or that would be paid to transfer a liability in an orderly transaction between market participants at the measurement date. We estimate the fair value of financial assets and liabilities using available market information and generally accepted valuation methodologies. The inputs used to measure fair value are classified into three tiers. These tiers include Level 1, defined as observable inputs such as quoted prices in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs in which little or no market data exists, therefore requiring the entity to develop its own assumptions.

The following table shows the fair value of our financial assets and liabilities at September 30, 2019 and March 31, 2019:

			Fair Value Measurements					
	Carrying Value		Quoted Prices in Active Markets for Identical Assets		Significant Other Observable Inputs		Significant Unobservable Inputs	
			Level 1		Level 2		Level 3	
	September 30,	March 31,	September 30,	March 31,	September 30,	March 31,	September 30,	March 31,
Assets:								
Cash and cash equivalents	**$ 225,536**	$ 220,633	**$ 225,536**	$ 220,633	**$ —**	$ —	**$ —**	$ —
Forward and swap contracts (1)	**1,259**	552	**—**	—	**1,259**	552	**—**	—
Equity investments(2)	**11,030**	13,873	**11,030**	13,873 —	**—**	— —	**—**	—
Other investments	**2,478**	2,545	**2,478**	2,545	**—**	—	**—**	—
Liabilities:								
Forward and swap contracts (1)	**$ 38**	$ 278	**$ —**	$ —	**$ 38**	$ 278	**$ —**	$ —
Deferred compensation plans (2)	**1,626**	1,564	**1,626**	1,564	**—**	—	**—**	—
Long term debt (3)	**1,187,195**	1,183,227	**—**	—	**1,221,720**	1,200,558	**—**	—
Contingent consideration obligations (4)	**6,032**	5,950	**—**	—	**—**	—	**6,032**	5,950

(1) The fair values of forward and swap contracts are based on period-end forward rates and reflect the value of the amount that we would pay or receive for the contracts involving the same notional amounts and maturity dates.

(2) We maintain a frozen domestic non-qualified deferred compensation plan covering certain employees, which allows for the deferral of payment of previously earned compensation for an employee-specified term or until retirement or termination. Amounts deferred can be allocated to various hypothetical investment options (compensation deferrals have been frozen under the plan). We hold investments to satisfy the future obligations of the plan. Employees who made deferrals are entitled to receive distributions of their hypothetical account balances (amounts deferred, together with earnings (losses)). We also hold an investment in the common stock of Servizi Italia, S.p.A, a leading provider of integrated linen washing and outsourced sterile processing services to hospital Customers. Changes in the fair value of these investments are recorded in the "Interest income and miscellaneous expense line" of the Consolidated Statement of Income. During the second quarter and first half of fiscal 2020, we recorded losses of $721 and $2,479, respectively, related to these investments. During the second quarter and first half of fiscal 2019, we recorded losses of $1,132 and $2,510, respectively, related to these investments.

(3) We estimate the fair value of our long-term debt using discounted cash flow analyses, based on our current incremental borrowing rates for similar types of borrowing arrangements.

(4) Contingent consideration obligations arise from business acquisitions. The fair values are based on discounted cash flow analyses reflecting the possible achievement of specified performance measures or events and captures the contractual nature of the contingencies, commercial risk, and the time value of money. Contingent consideration obligations are classified in the consolidated balance sheets as accrued expense (short-term) and other liabilities (long-term), as appropriate based on the contractual payment dates.

(dollars in thousands, except as noted)

The changes in Level 3 assets and liabilities measured at fair value on a recurring basis at September 30, 2019 are summarized as follows:

	Contingent Consideration
Balance at March 31, 2019	$ 5,950
Additions	33
Currency translation adjustments	49
Balance at September 30, 2019	**$ 6,032**

(dollars in thousands, except as noted)

16. Reclassifications Out of Accumulated Other Comprehensive Income (Loss)

Amounts in Accumulated Other Comprehensive Income (Loss) are presented net of the related tax. Currency Translation is not adjusted for income taxes. Changes in our Accumulated Other Comprehensive Income (Loss) balances, net of tax, for the three months ended September 30, 2019 and 2018 were as follows:

	Defined Benefit Plans [1]		Currency Translation [2]		Total Accumulated Other Comprehensive Income (Loss)	
	Three Months	Six Months	Three Months	Six Months	Three Months	Six Months
Beginning Balance	$ (4,709)	$ (4,204)	$ (152,135)	$ (155,574)	$ (156,844)	$ (159,778)
Other Comprehensive (Loss) Income before reclassifications	**189**	**379**	**(68,367)**	**(64,928)**	**(68,178)**	**(64,549)**
Amounts reclassified from Accumulated Other Comprehensive (Loss) Income	**(695)**	**(1,390)**	**—**	**—**	**(695)**	**(1,390)**
Net current-period Other Comprehensive (Loss) Income	**(506)**	**(1,011)**	**(68,367)**	**(64,928)**	**(68,873)**	**(65,939)**
Balance at September 30, 2019	**$ (5,215)**	**$ (5,215)**	**$ (220,502)**	**$ (220,502)**	**$ (225,717)**	**$ (225,717)**

[1] The amortization (gain) of defined benefit pension items is reported in the Interest income and miscellaneous expense line of our Consolidated Statements of Income.
[2] The effective portion of gain or loss on net debt designated as non-derivative net investment hedging instruments is recognized in Accumulated Other Comprehensive Income and is reclassified to income in the same period when a gain or loss related to the net investment is included in income.

	Gain (Loss) on Available for Sale Securities		Defined Benefit Plans [2]		Currency Translation (3)		Total Accumulated Other Comprehensive Income (Loss)	
	Three Months	Six Months	Three Months	Six Months	Three Months	Six Months	Three Months	Six Months
Beginning Balance	$ —	$ 1,970	$ (7,152)	$ (6,742)	$ (113,944)	$ 16,457	$ (121,096)	$ 11,685
Other Comprehensive Income (Loss) before reclassifications	—	—	150	303	(5,271)	(135,672)	(5,121)	(135,369)
Amounts reclassified from Accumulated Other Comprehensive (Loss)	—	—	(563)	(1,126)	—	—	(563)	(1,126)
Net current-period Other Comprehensive (Loss)	—	—	(413)	(823)	(5,271)	(135,672)	(5,684)	(136,495)
Cumulative adjustment to Retained Earnings [1]	—	(1,970)	—	—	—	—	—	(1,970)
Balance at September 30, 2018	$ —	$ —	$ (7,565)	$ (7,565)	$ (119,215)	$ (119,215)	$ (126,780)	$ (126,780)

[1] As a result of the adoption of ASC 2016-01, we recorded a cumulative effect adjustment to our opening fiscal 2019 retained earnings balance that increased retained earnings and decreased accumulated other comprehensive income. Refer to our Annual Report filed on Form 10-K for the year ended March 31, 2019, for more information.
[2] Amortization (gain) of defined benefit pension items is reported in the Interest income and miscellaneous expense line of our Consolidated Statements of Income.
[3] The effective portion of gain or loss on net debt designated as non-derivative net investment hedging instruments is recognized in Accumulated Other Comprehensive Income and is reclassified to income in the same period when a gain or loss related to the net investment is included in income.

17. Business Acquisitions and Divestitures

During the first six months of fiscal 2020, we completed several tuck-in acquisitions which continued to expand our product and service offerings in the Healthcare Products, Healthcare Specialty Services and Applied Sterilization Technologies segments. The aggregate purchase price associated with these transactions was approximately $88,829, net of cash acquired and including deferred consideration of $894. Acquisition related costs are reported in the selling, general, and administrative expense line of the Consolidated Statements of Income and amounts are not material.

The purchase price for the acquisitions was financed with both cash on hand and with credit facility borrowings. Purchase price allocations are finalized within a measurement period not to exceed one year from closing. Any provisional adjustments recorded were not material.

During the first quarter of fiscal 2020, we sold the operations of our Healthcare Specialty Services business that were located in China. We recorded proceeds of $439, net of cash divested, and recognized a pre-tax loss on the sale of $2,330 in the selling, general and administrative expense line of the Consolidated Statements of Income. The business generated annual revenues of approximately $5,000.

18. Loans Receivable

In connection with an equity investment of $4,955, we agreed to provide a credit facility of up to approximately $10,000 for a term of up to seven years ending in 2025. The loan carries an interest rate of 4% compounded daily and payable annually. Outstanding borrowings under the agreement totaled $7,543 at September 30, 2019 and $7,465 at March 31, 2019.

In connection with the fiscal 2017 divestiture of Synergy Health Netherlands Linen Management Services, we entered into a loan agreement to provide financing of up to €15,000 for a term of up to 15 years. The loan carries an interest rate of 4% for the first four years and 12% thereafter. Outstanding borrowings under the agreement totaled $8,271 (or €7,550) at September 30, 2019 and $8,494 (or €7,550) at March 31, 2019.

Amounts for loan receivables as noted above are recorded in the "Other assets" line of our Consolidated balance sheets. Interest income is not material.

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of STERIS plc

Results of Review of Interim Financial Statements

We have reviewed the accompanying consolidated balance sheet of STERIS plc and subsidiaries (the Company) as of September 30, 2019, the related consolidated statements of income, comprehensive income and shareholders’ equity for the three- and six- month periods ended September 30, 2019 and 2018 and the consolidated statements of cash flows for the six-month periods ended September 30, 2019 and 2018, and the related notes (collectively referred to as the “consolidated interim financial statements”). Based on our reviews, we are not aware of any material modifications that should be made to the consolidated interim financial statements for them to be in conformity with U.S. generally accepted accounting principles.

We have previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheet of the Company as of March 31, 2019, the related consolidated statements of income, comprehensive income, shareholders' equity and cash flows for the year then ended, and the related notes and schedule (not presented herein); and in our report dated May 30, 2019, we expressed an unqualified audit opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying consolidated balance sheet as of March 31, 2019, is fairly stated, in all material respects, in relation to the consolidated balance sheet from which it has been derived.

Basis for Review Results

These financial statements are the responsibility of the Company's management. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the SEC and the PCAOB. We conducted our review in accordance with the standards of the PCAOB. A review of interim financial statements consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the PCAOB, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

/s/ Ernst & Young LLP

Cleveland, Ohio
November 7, 2019

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Introduction

In Management's Discussion and Analysis of Financial Condition and Results of Operations (the "MD&A"), we explain the general financial condition and the results of operations for STERIS including:

- what factors affect our business;
- what our earnings and costs were in each period presented;
- why those earnings and costs were different from prior periods;
- where our earnings came from;
- how this affects our overall financial condition;
- what our expenditures for capital projects were; and
- where cash will come from to fund future debt principal repayments, growth outside of core operations, repurchases of shares, cash dividends and future working capital needs.

As you read the MD&A, it may be helpful to refer to information in our consolidated financial statements, which present the results of our operations for the second quarter and first half of fiscal 2020 and fiscal 2019. It may also be helpful to read the MD&A in our Annual Report on Form 10-K for the year ended March 31, 2019, dated May 30, 2019. In the MD&A, we analyze and explain the period-over-period changes in the specific line items in the Consolidated Statements of Income. Our analysis may be important to you in making decisions about your investments in STERIS.

Financial Measures

In the following sections of the MD&A, we may, at times, refer to financial measures that are not required to be presented in the consolidated financial statements under U.S. GAAP. We sometimes use the following financial measures in the context of this report: backlog; debt-to-total capital; and days sales outstanding. We define these financial measures as follows:

- Backlog – We define backlog as the amount of unfilled capital equipment purchase orders at a point in time. We use this figure as a measure to assist in the projection of short-term financial results and inventory requirements.
- Debt-to-total capital – We define debt-to-total capital as total debt divided by the sum of total debt and shareholders' equity. We use this figure as a financial liquidity measure to gauge our ability to borrow and fund growth.
- Days sales outstanding ("DSO") – We define DSO as the average collection period for accounts receivable. It is calculated as net accounts receivable divided by the trailing four quarters' revenues, multiplied by 365 days. We use this figure to help gauge the quality of accounts receivable and expected time to collect.

We, at times, may also refer to financial measures which are considered to be "non-GAAP financial measures" under SEC rules. We have presented these financial measures because we believe that meaningful analysis of our financial performance is enhanced by an understanding of certain additional factors underlying that performance. These financial measures should not be considered an alternative to measures required by accounting principles generally accepted in the United States. Our calculations of these measures may differ from calculations of similar measures used by other companies and you should be careful when comparing these financial measures to those of other companies. Additional information regarding these financial measures, including reconciliations of each non- GAAP financial measure, is available in the subsection of MD&A titled, "Non-GAAP Financial Measures."

Revenues – Defined

As required by Regulation S-X, we separately present revenues generated as either product revenues or service revenues on our Consolidated Statements of Income for each period presented. When we discuss revenues, we may, at times, refer to revenues summarized differently than the Regulation S-X requirements. The terminology, definitions, and applications of terms that we use to describe revenues may be different from terms used by other companies. We use the following terms to describe revenues:

- Revenues – Our revenues are presented net of sales returns and allowances.
- Product Revenues – We define product revenues as revenues generated from sales of consumable and capital equipment products.
- Service Revenues – We define service revenues as revenues generated from parts and labor associated with the maintenance, repair, and installation of our capital equipment. Service revenues also include hospital sterilization services, instrument and scope repairs, as well as revenues generated from contract sterilization and laboratory services offered through our Applied Sterilization Technologies segment.

- Capital Equipment Revenues – We define capital equipment revenues as revenues generated from sales of capital equipment, which includes: steam and gas sterilizers, low temperature liquid chemical sterilant processing systems, pure steam/water systems, surgical lights and tables, and integrated OR.
- Consumable Revenues – We define consumable revenues as revenues generated from sales of the consumable family of products, which includes dedicated consumables including V-PRO, SYSTEM 1 and 1E consumables, gastrointestinal endoscopy accessories, sterility assurance products, barrier protection solutions, cleaning consumables, and surgical instruments.
- Recurring Revenues – We define recurring revenues as revenues generated from sales of consumable products and service revenues.

General Company Overview and Executive Summary

STERIS is a leading provider of infection prevention and other procedural products and services. Our MISSION IS TO HELP OUR CUSTOMERS CREATE A HEALTHIER AND SAFER WORLD by providing innovative healthcare and life science product and service solutions around the globe. We offer Customers a unique mix of innovative capital equipment products, such as sterilizers and washers, surgical tables, lights and equipment management systems and connectivity solutions such as operating room integration; consumable products such as detergents and gastrointestinal endoscopy accessories and other products; and services, including capital equipment installation and maintenance, contract sterilization and microbial reduction of medical devices, instrument and scope repair solutions, testing and validation services and instrument reprocessing.

On March 28, 2019, STERIS plc, a public limited company organized under the laws of England and Wales (“STERIS UK”), completed a redomiciliation from the United Kingdom to Ireland (the “Redomiciliation”). The Redomiciliation was achieved through the insertion of a new Irish public limited holding company (“STERIS plc”) on top of STERIS UK pursuant to a court-approved scheme of arrangement under English law (the “Scheme”). Following the Scheme effectiveness, STERIS UK was re-registered as a private limited company with the name STERIS Limited, and STERIS Emerald IE Limited, a company established in Ireland and a wholly-owned direct subsidiary of STERIS plc, was interposed as the direct parent company of STERIS UK.

We operate and report our financial information in four reportable business segments: Healthcare Products, Healthcare Specialty Services, Life Sciences, and Applied Sterilization Technologies. We describe our business segments in Note 9 to our consolidated financial statements, titled "Business Segment Information."

The bulk of our revenues are derived from the healthcare and pharmaceutical industries. Much of the growth in these industries is driven by the aging of the population throughout the world, as an increasing number of individuals are entering their prime healthcare consumption years, and is dependent upon advancement in healthcare delivery, acceptance of new technologies, government policies, and general economic conditions. The pharmaceutical industry has been impacted by increased regulatory scrutiny of cleaning and validation processes, mandating that manufacturers improve their processes. Within healthcare, there is increased concern regarding the level of hospital acquired infections around the world; increased demand for medical procedures, including preventive screenings such as endoscopies and colonoscopies; and a desire by our Customers to operate more efficiently, all which are driving increased demand for many of our products and services.

During the first half of fiscal 2020, we completed several tuck-in acquisitions which continued to expand our product and service offerings in the Healthcare Products, Healthcare Specialty Services and Applied Sterilization Technologies segments.

During the first quarter of fiscal 2020, we sold the operations of our Healthcare Specialty Services business that were located in China. We recorded proceeds of $0.4 million, net of cash divested, and recognized a pre-tax loss on the sale of $2.3 million in the selling, general and administrative expense line of the Consolidated Statements of Income. The business generated annual revenues of approximately $5.0 million.

Fiscal 2019 Restructuring Plan. During the third quarter of fiscal year 2019, we adopted and announced a targeted restructuring plan (the “Fiscal 2019 Restructuring Plan”), which included the closure of two manufacturing facilities, one in Brazil and one in England, as well as other actions including, the rationalization of certain products. Fewer than 200 positions are being eliminated. The Company is relocating the production of certain impacted products to other existing manufacturing operations during fiscal 2020. These restructuring actions are designed to enhance profitability and improve efficiency. For additional information on restructuring see the subsection titled "Restructuring Expenses", located in the Results of Operations section of this MD&A, or Note 2 of our Consolidated Financial Statements, titled "Restructuring".

Highlights. Revenues increased 8.5%, to $736.8 million for the three months ended September 30, 2019, as compared to $679.0 million for the same period in the prior year. Revenues increased 8.8%, to $1,433.6 million for the six months ended September 30, 2019, as compared to $1,317.7 million for the same period in the prior year. These increases primarily reflect organic growth in all business segments, which was partially offset by unfavorable fluctuations in currencies.

Gross profit percentage for the second quarter of fiscal 2020 was 43.2% compared to the gross profit percentage for the second quarter of fiscal 2019 of 41.9%. The favorable impacts of improved productivity, pricing, fluctuations in currencies, and other adjustments were slightly offset by the unfavorable impact of the Fiscal 2019 Restructuring Plan. Gross profit percentage for the first half of fiscal 2020 was 43.6% compared to the gross profit percentage for the first half of fiscal 2019 of 42.0%. The favorable impacts of improved productivity, pricing and fluctuations in currencies, were slightly offset by the unfavorable impact of the Fiscal 2019 Restructuring Plan and other adjustments.

Operating income for the second quarter of fiscal 2020 was $126.7 million, compared to $106.6 million for second quarter of fiscal 2019. Operating income during the first half of fiscal 2020 was $236.8 million, compared to $201.0 million for the first half of fiscal 2019. These increases are primarily attributable to increased revenue volumes and the higher gross margin attainment in the fiscal 2020 periods.

Cash flows from operations were $260.0 million and free cash flow was $162.0 million in the first half of fiscal 2020 compared to cash flows from operations of $226.7 million and free cash flow of $169.7 million for first half of fiscal 2019 (see the subsection below titled "Non-GAAP Financial Measures" for additional information and related reconciliation of cash flows from operations to free cash flow). The decrease in free cash flow in the fiscal 2020 period was primarily due to higher capital expenditures, as anticipated.

Our debt-to-total capital ratio was 26.9% at September 30, 2019 and 27.1% at March 31, 2019. During the first half of fiscal 2020, we declared and paid quarterly cash dividends of $0.71 per ordinary share.

Additional information regarding our financial performance during the second quarter and first half of fiscal 2020 is included in the subsection below titled “Results of Operations.”

NON-GAAP FINANCIAL MEASURES

We, at times, refer to financial measures which are considered to be “non-GAAP financial measures” under SEC rules. We, at times, also refer to our results of operations excluding certain transactions or amounts that are non-recurring or are not indicative of future results, in order to provide meaningful comparisons between the periods presented.

These non-GAAP financial measures are not intended to be, and should not be, considered separately from or as an alternative to the most directly comparable GAAP financial measures.

These non-GAAP financial measures are presented with the intent of providing greater transparency to supplemental financial information used by management and the Board of Directors in their financial analysis and operational decision-making. These amounts are disclosed so that the reader has the same financial data that management uses with the belief that it will assist investors and other readers in making comparisons to our historical operating results and analyzing the underlying performance of our operations for the periods presented.

We believe that the presentation of these non-GAAP financial measures, when considered along with our GAAP financial measures and the reconciliation to the corresponding GAAP financial measures, provide the reader with a more complete understanding of the factors and trends affecting our business than could be obtained absent this disclosure. It is important for the reader to note that the non-GAAP financial measure used may be calculated differently from, and therefore may not be comparable to, a similarly titled measure used by other companies.

We define free cash flow as net cash provided by operating activities as presented in the Consolidated Statements of Cash Flows less purchases of property, plant, equipment, and intangibles plus proceeds from the sale of property, plant, equipment, and intangibles, which are also presented within investing activities in the Consolidated Statements of Cash Flows. We use this as a measure to gauge our ability to pay cash dividends, fund growth outside of core operations, fund future debt principal repayments, and repurchase shares.

The following table summarizes the calculation of our free cash flow for the six months ended September 30, 2019 and 2018:

(dollars in thousands)	Six Months Ended September 30, 2019	2018
Net cash provided by operating activities	**$ 260,000**	$ 226,702
Purchases of property, plant, equipment and intangibles, net	**(98,168)**	(62,549)
Proceeds from the sale of property, plant, equipment and intangibles	**206**	5,547
Free cash flow	**$ 162,038**	$ 169,700

Results of Operations

In the following subsections, we discuss our earnings and the factors affecting them for the second quarter and first half of fiscal 2020 compared with the same fiscal 2019 periods. We begin with a general overview of our operating results and then separately discuss earnings for our operating segments.

Revenues. The following tables compare our revenues for the three and six months ended September 30, 2019 to the revenues for the three and six months ended September 30, 2018:

(dollars in thousands)	Three Months Ended September 30, 2019	2018	Change	Percent Change
Total revenues	**$ 736,840**	$ 678,961	$ 57,879	8.5 %
Revenues by type:				
Service revenues	**399,174**	364,302	34,872	9.6 %
Consumable revenues	**158,573**	147,172	11,401	7.7 %
Capital equipment revenues	**179,093**	167,487	11,606	6.9 %
Revenues by geography:				
Ireland revenues	**15,171**	14,098	1,073	7.6 %
United States revenues	**538,101**	481,233	56,868	11.8 %
Other foreign revenues	**183,568**	183,630	(62)	— %

Revenues increased 8.5%, to $736.8 million for the three months ended September 30, 2019, as compared to $679.0 million for the same period in the prior year. This increase reflects organic growth in all business segments, which was partially offset by unfavorable fluctuations in currencies.

Service revenues increased 9.6% for the three months ended September 30, 2019, as compared to the same period in fiscal 2019, reflecting growth in all business segments. Consumable revenues increased by 7.7% for the three months ended September 30, 2019, as compared to the same period in fiscal 2019, reflecting growth in the Healthcare Product and Life Sciences segments. Capital equipment revenues increased 6.9%, for the three months ended September 30, 2019, as compared to the same period in fiscal 2019, reflecting growth in the Healthcare Products segment.

Ireland revenues increased 7.6% to $15.2 million for the three months ended September 30, 2019, as compared to $14.1 million for the same period in the prior year, reflecting growth in service and consumable revenues.

United States revenues increased 11.8%, to $538.1 million for the three months ended September 30, 2019, as compared to $481.2 million for the same period in the prior year, reflecting growth in service, capital equipment and consumable revenues.

Revenues from other foreign locations were essentially flat at $183.6 million for the three months ended September 30, 2019 and 2018. Growth within Canada and the Europe, Middle East & Africa ("EMEA") and Latin American regions was offset by the impact of actions taken in conjunction with the 2019 Restructuring Plan and the divestiture of our Healthcare Specialty Services business in China.

(dollars in thousands)	Six Months Ended September 30, 2019	2018	Change	Percent Change
Total revenues	**$ 1,433,643**	$ 1,317,719	$ 115,924	8.8 %
Revenues by type:				
Service revenues	**788,242**	724,270	63,972	8.8 %
Consumable revenues	**318,684**	294,743	23,941	8.1 %
Capital equipment revenues	**326,717**	298,706	28,011	9.4 %
Revenues by geography:				
Ireland revenues	**30,279**	26,658	3,621	13.6 %
United States revenues	**1,049,253**	928,773	120,480	13.0 %
Other foreign revenues	**354,111**	362,288	(8,177)	(2.3)%

Revenues increased 8.8%, to $1,433.6 million for the six months ended September 30, 2019, as compared to $1,317.7 million for the same period in the prior year. This increase reflects organic growth in all business segments, which was partially offset by unfavorable fluctuations in currencies.

Service revenues increased 8.8% for the six months ended September 30, 2019, as compared to the same period in fiscal 2019, reflecting growth in all business segments. Consumable revenues increased by 8.1% for the six months of fiscal 2020 compared to the same period in the prior year, reflecting growth in the Healthcare Product and Life Sciences segments. Capital equipment revenues increased 9.4%, for the six months of fiscal 2020 compared to to the same period in the prior year, reflecting growth in the Healthcare Products and Life Science segments.

Ireland revenues increased 13.6% to $30.3 million for the six months ended September 30, 2019, as compared to $26.7 million for the same period in the prior year, reflecting growth in service and consumable revenues.

United States revenues increased 13.0%, to $1,049.3 million for the six months ended September 30, 2019, as compared to $928.8 million for the same period in the prior year, reflecting growth in capital equipment, service and consumable revenues.

Revenues from other foreign locations decreased 2.3%, to $354.1 million for the six months ended September 30, 2019, as compared to $362.3 million for the same period in the prior year. Revenue declines within the EMEA and Asia Pacific regions, primarily due to actions taken in conjunction with the 2019 Restructuring Plan and the divestiture of our Healthcare Specialty Services business in China, were partially offset by growth within Canada and the Latin American region.

Gross Profit. The following table compares our gross profit for the three and six months ended September 30, 2019 to the three and six months ended September 30, 2018:

(dollars in thousands)	Three Months Ended September 30, 2019	2018	Change	Percent Change
Gross profit:				
Product	**$ 154,066**	$ 142,552	$ 11,514	8.1%
Service	**164,601**	142,112	22,489	15.8%
Total gross profit	**$ 318,667**	$ 284,664	$ 34,003	11.9%
Gross profit percentage:				
Product	**45.6%**	45.3%		
Service	**41.2%**	39.0%		
Total gross profit percentage	**43.2%**	41.9%		

(dollars in thousands)	Six Months Ended September 30, 2019	2018	Change	Percent Change
Gross profit:				
Product	**$ 300,842**	$ 274,740	$ 26,102	9.5%
Service	**323,668**	278,974	44,694	16.0%
Total gross profit	**$ 624,510**	$ 553,714	$ 70,796	12.8%
Gross profit percentage:				
Product	**46.6%**	46.3%		
Service	**41.1%**	38.5%		
Total gross profit percentage	**43.6%**	42.0%		

Our gross profit is affected by the volume, pricing, and mix of sales of our products and services, as well as the costs associated with the products and services that are sold.

Gross profit percentage for the second quarter of fiscal 2020 was 43.2% compared to the gross profit percentage for the second quarter of fiscal 2019 of 41.9%. The favorable impacts of improved productivity (70 basis points), pricing (50 basis points), fluctuations in currencies (10 basis points) and other adjustments (10 basis points), were slightly offset by the unfavorable impact of the Fiscal 2019 Restructuring Plan (10 basis points). Gross profit percentage for the first half of fiscal 2020 was 43.6% compared to the gross profit percentage for the first half of fiscal 2019 of 42.0%. The favorable impacts of improved productivity (110 basis points), pricing (60 basis points), and fluctuations in currencies (20 basis points), were slightly offset by the unfavorable impact of the Fiscal 2019 Restructuring Plan (10 basis points) and other adjustments (20 basis points).

Operating Expenses. The following table compares our operating expenses for the three and six months ended September 30, 2019 to the three and six months ended September 30, 2018:

(dollars in thousands)	Three Months Ended September 30, 2019	2018	Change	Percent Change
Operating expenses:				
Selling, general, and administrative	**$ 175,959**	$ 162,312	$ 13,647	8.4%
Research and development	**16,249**	15,773	476	3.0%
Restructuring expenses	**(274)**	—	(274)	NM
Total operating expenses	**$ 191,934**	$ 178,085	$ 13,849	7.8%

(dollars in thousands)	Six Months Ended September 30, 2019	2018	Change	Percent Change
Operating expenses:				
Selling, general, and administrative	**$ 354,740**	$ 320,718	$ 34,022	10.6 %
Research and development	**31,834**	31,993	(159)	(0.5)%
Restructuring expenses	**1,115**	—	1,115	NM
Total operating expenses	**$ 387,689**	$ 352,711	$ 34,978	9.9 %

NM - Not meaningful.

Selling, General, and Administrative Expenses. Significant components of total selling, general, and administrative expenses ("SG&A") are compensation and benefit costs, fees for professional services, travel and entertainment, facilities costs, and other general and administrative expenses. SG&A increased 8.4% and 10.6% in the second quarter and first half of fiscal 2020, respectively over the same prior year periods. These increases were primarily due to higher employee compensation expense in fiscal 2020 as strong performance drove higher bonus estimates and commission costs.

Research and Development. Research and development expenses increased 3.0% and decreased 0.5% in the second quarter and first half of fiscal 2020, respectively over the same prior year periods. Research and development expenses are influenced by the number and timing of in-process projects and labor hours and other costs associated with these projects. Our research and development initiatives continue to emphasize new product development, product improvements, and the development of new technological platform innovations. During fiscal 2020, our investments in research and development continued to be focused on, but were not limited to, enhancing capabilities of sterile processing combination technologies, procedural products and accessories, and devices and support accessories used in gastrointestinal endoscopy procedures.

Fiscal 2019 Restructuring Plan**.** During the third quarter of fiscal 2019, we adopted and announced a targeted restructuring plan (the "Fiscal 2019 Restructuring Plan"), which included the closure of two manufacturing facilities, one in Brazil and one in England, as well as other actions including the rationalization of certain products. Fewer than 200 positions are being eliminated. The Company is relocating the production of certain impacted products to other existing manufacturing operations during fiscal 2020. These restructuring actions are designed to enhance profitability and improve efficiency.

Since inception of the Fiscal 2019 Restructuring Plan we have incurred pre-tax expenses totaling $43.7 million related to these restructuring actions, of which $32.1 million was recorded as restructuring expenses and $11.5 million was recorded in cost of revenues, with a total of $31.1 million, $2.5 million, $0.7 million and $7.8 million related to the Healthcare Products, Healthcare Specialty Services, Life Sciences, and Applied Sterilization Technologies segments, respectively. Corporate related restructuring charges were $1.6 million. Additional restructuring expenses related to this plan are not expected to be material to our results of operations.

The following table summarizes our total pre-tax restructuring expenses for fiscal 2020:

Fiscal 2019 Restructuring Plan (dollars in thousands)	**Three months ended September 30, 2019**	**Six months ended September 30, 2019**
Severance and other compensation related costs	**$ 1,012**	**$ 2,103**
(Gain) on disposal of asset	**(1,164)**	**(1,164)**
Lease termination costs and other	**(122)**	**176**
Product rationalization [(1)]	**910**	**1,828**
Total restructuring expenses	**$ 636**	**$ 2,943**

(1) Recorded in cost of revenues on the Consolidated Statements of Income.

Non-Operating Expenses, Net. Non-operating expenses, net consists of interest expense on debt, offset by interest earned on cash, cash equivalents, and short-term investment balances, and other miscellaneous income. The following table compares our net non-operating expenses for the three and six months ended September 30, 2019 and 2018:

(dollars in thousands)	Three Months Ended September 30, 2019	2018	Change
Non-operating expenses, net:			
Interest expense	**$ 10,444**	$ 11,393	$ (949)
Interest income and miscellaneous expense	**(1,018)**	(73)	(945)
Non-operating expenses, net	**$ 9,426**	$ 11,320	$ (1,894)

(dollars in thousands)	Six Months Ended September 30, 2019	2018	Change
Non-operating expenses, net:			
Interest expense	**$ 20,889**	$ 23,134	$ (2,245)
Interest income and miscellaneous expense	**(785)**	(441)	(344)
Non-operating expenses, net	**$ 20,104**	$ 22,693	$ (2,589)

Interest expense decreased $0.9 million during the second quarter of fiscal 2020 as compared to the second quarter of fiscal 2019. Interest expense decreased $2.2 million during the first half of fiscal 2020 as compared to the first half of fiscal 2019. These decreases are primarily due to lower outstanding debt levels in the fiscal 2020 periods as compared to the same prior year periods. Interest income and miscellaneous expense is not material.

Income Tax Expense. The following table compares our income tax expense and effective income tax rates for the three and six months ended September 30, 2019 and September 30, 2018:

(dollars in thousands)	Three Months Ended September 30, 2019	2018	Change	Percent Change
Income tax expense	**$ 22,165**	$ 17,764	$ 4,401	24.8%
Effective income tax rate	**18.9%**	18.6%		

(dollars in thousands)	Six Months Ended September 30, 2019	2018	Change	Percent Change
Income tax expense	**$ 36,798**	$ 30,537	$ 6,261	20.5%
Effective income tax rate	**17.0%**	17.1%		

We record income tax expense during interim periods based on our estimate of the annual effective income tax rate, adjusted each quarter for discrete items. We analyze various factors to determine the estimated annual effective income tax rate, including projections of our annual earnings and taxing jurisdictions in which the earnings will be generated, the impact of state and local income taxes, our ability to use tax credits and net operating loss carryforwards, and available tax planning alternatives.

The effective income tax rates for the three month periods ended September 30, 2019 and 2018 were 18.9% and 18.6%, respectively. The effective income tax rates for the six month periods ended September 30, 2019 and 2018 were 17.0% and 17.1%, respectively. The change in the fiscal 2020 rates compared to the prior year periods is primarily attributable to an increase in profits earned in higher tax jurisdictions, partially offset by discrete items.

Business Segment Results of Operations. We operate and report in four reportable business segments: Healthcare Products, Healthcare Specialty Services, Life Sciences, and Applied Sterilization Technologies. Non-allocated operating costs that support the entire Company and items not indicative of operating trends are excluded from segment operating income.

Our Healthcare Products segment offers infection prevention and procedural solutions for healthcare providers worldwide, including consumable products, equipment maintenance and installation services, and capital equipment.

Our Healthcare Specialty Services segment provides a range of specialty services for healthcare providers including hospital sterilization services, and instrument and scope repairs.

Our Life Sciences segment offers consumable products, equipment maintenance, specialty services and capital equipment for pharmaceutical manufacturers and research facilities.

Our Applied Sterilization Technologies segment offers contract sterilization, testing and validation services for medical device and pharmaceutical Customers and others.

We disclose a measure of segment income that is consistent with the way management operates and views the business. The accounting policies for reportable segments are the same as those for the consolidated Company.

Additional information regarding our segments is included in our consolidated financial statements included in our Annual Report on Form 10-K for the year ended March 31, 2019, dated May 30, 2019.

The following table compares business segment revenues, segment operating income and total operating income for the three and six months ended September 30, 2019 and 2018:

(dollars in thousands)	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	**2018**	**2019**	**2018**
Revenues:				
Healthcare Products	**$ 350,281**	$ 321,505	**$ 660,068**	$ 613,515
Healthcare Specialty Services	**135,002**	124,554	**270,947**	246,803
Life Sciences	**98,650**	97,165	**195,435**	182,120
Applied Sterilization Technologies	**152,907**	135,737	**307,193**	275,281
Total revenues	**$ 736,840**	$ 678,961	**$ 1,433,643**	$ 1,317,719
Operating income (loss):				
Healthcare Products	**$ 86,963**	$ 72,468	**$ 160,661**	$ 134,190
Healthcare Specialty Services	**16,072**	15,461	**32,889**	28,415
Life Sciences	**32,315**	33,266	**65,354**	63,131
Applied Sterilization Technologies	**65,386**	53,468	**133,421**	109,619
Corporate	**(50,956)**	(46,985)	**(106,353)**	(93,027)
Total operating income before adjustments	**$ 149,780**	$ 127,678	**$ 285,972**	$ 242,328
Less: Adjustments				
Amortization of acquired intangible assets [1]	**$ 18,952**	$ 16,956	**$ 35,901**	$ 35,013
Acquisition and integration related charges [2]	**1,947**	2,707	**3,864**	4,378
Redomiciliation and tax restructuring costs [3]	**1,016**	600	**2,786**	887
(Gain) on fair value adjustment of acquisition related contingent consideration [1]	**—**	—	**—**	(842)
Net loss on divestiture of businesses [1]	**50**	221	**2,476**	663
Amortization of property "step up" to fair value [1]	**446**	615	**1,181**	1,226
Restructuring charges [4]	**636**	—	**2,943**	—
Total operating income	**$ 126,733**	$ 106,579	**$ 236,821**	$ 201,003

(1) For more information regarding our recent acquisitions and divestitures see Note 17 titled, "Business Acquisitions and Divestitures", as well as our Annual Report on Form 10-K for the year ended March 31, 2019, dated May 30, 2019.
(2) Acquisition and integration related charges include transaction costs and integration expenses associated with acquisitions.
(3) Costs incurred in connection with the Redomiciliation.
(4) For more information regarding our restructuring activities see Note 2 titled, "Restructuring".

Healthcare Product revenues increased 9.0% to $350.3 million for the three months ended September 30, 2019, as compared to $321.5 million in the same prior year period. This increase reflects growth in consumable, capital equipment and service revenues of 6.6%, 10.2% and 9.8%, respectively. Healthcare Product revenues increased 7.6% to $660.1 million for the six months ended September 30, 2019, as compared to $613.5 million in the same prior year period. This increase reflects growth in consumable, capital equipment and service revenues of 7.5%, 8.9% and 6.0%, respectively. The fiscal 2020 increases also reflect organic growth, which was partially offset by unfavorable fluctuations in currencies. At September 30, 2019, the Healthcare Products segment's backlog amounted to $199.3 million, representing a slight decrease of 2.0% , as compared to the backlog of $203.2 million at September 30, 2018.

Healthcare Specialty Services revenues increased 8.4% to $135.0 million for the three months ended September 30, 2019, as compared to $124.6 million in the same prior year period. Healthcare Specialty Services revenues increased 9.8% to $270.9 million for the six months ended September 30, 2019, as compared to $246.8 million in the same prior year period. These increases reflect organic growth, which was partially offset by unfavorable fluctuations in currencies.

Life Sciences revenues increased 1.5% to $98.7 million for the three months ended September 30, 2019, as compared to $97.2 million for the same prior year period. This increase reflects growth in consumable and service revenues of 10.6% and 2.6%, respectively. Capital equipment revenue declined 11.2%, reflecting continued variability due to timing of Customer orders and shipments. Life Sciences revenues increased 7.3% to $195.4 million for the six months ended September 30, 2019, as compared to $182.1 million for the same prior year period. This increase reflects growth in capital equipment, consumable and service revenues of 8.8%, 10.0% and 2.1%, respectively. The fiscal 2020 increases also reflect organic growth, which was partially offset by unfavorable fluctuations in currencies. At September 30, 2019, the Life Sciences segment's backlog amounted to $69.7 million, representing an increase of 13.4%, as compared to the backlog of $61.5 million at September 30, 2018.

Applied Sterilization Technologies segment revenues increased 12.6% to $152.9 million for the three months ended September 30, 2019, as compared to $135.7 million for the same prior year period. Applied Sterilization Technologies segment revenues increased 11.6% to $307.2 million for the six months ended September 30, 2019, as compared to $275.3 million for the same prior year period. The fiscal 2020 increases reflect organic growth primarily attributable to increased demand from medical device Customers, which was partially offset by unfavorable fluctuations in currencies.

The Healthcare Products segment's operating income increased 20.0% to $87.0 million for the three months ended September 30, 2019, as compared to $72.5 million in the same prior year period. The Healthcare Products segment's operating income increased 19.7% to $160.7 million for the six months ended September 30, 2019, as compared to $134.2 million in the same prior year period. The segment's operating margins were 24.8% and 22.5% for the second quarter fiscal 2020 and 2019, respectively. The segment's operating margins were 24.3% and 21.9% for the first half of fiscal 2020 and 2019, respectively. The increases in the fiscal 2020 periods were primarily due to increased volumes and favorable product mix.

The Healthcare Specialty Services segment's operating income increased 4.0% to $16.1 million for the three months ended September 30, 2019, as compared to $15.5 million in the same prior year period. The Healthcare Specialty Services segment's operating income increased 15.7% to $32.9 million for the six months ended September 30, 2019 as compared to $28.4 million in the same prior year period. The segment's operating margins were 11.9% and 12.4% for the second quarter fiscal 2020 and 2019, respectively. The segment's operating margins were 12.1% and 11.5% for the first half of fiscal 2020 and 2019, respectively. The increases in the fiscal 2020 periods were primarily due to increased volumes and improved productivity, somewhat offset by investments being made to add capacity in anticipation of continuing demand.

The Life Sciences segment's operating income decreased 2.9% to $32.3 million for the three months ended September 30, 2019, as compared to $33.3 million in the same prior year period, primarily due to unfavorable product mix. The Life Sciences segment's operating income increased 3.5% to $65.4 million for the six months ended September 30, 2019, as compared to $63.1 million in the same prior year period, primarily driven by increased volumes. The segment's operating margins were 32.8% and 34.2% for the second quarter fiscal 2020 and 2019, respectively. The segment's operating margins were 33.4% and 34.7% for the first half of fiscal 2020 and 2019, respectively. The decline in operating margins in the fiscal 2020 periods were primarily due to unfavorable product mix.

The Applied Sterilization Technologies segment's operating income increased 22.3% to $65.4 million for the three months ended September 30, 2019, as compared to $53.5 million during the same prior year period. The Applied Sterilization Technologies segment's operating income increased 21.7% to $133.4 million for the six months ended September 30, 2019, as compared to $109.6 million during the same prior year period. The segment's operating margins were 42.8% and 39.4% for the second quarter fiscal 2020 and 2019, respectively. The segment's operating margins were 43.4% and 39.8% for the first half of fiscal 2020 and 2019, respectively. The increases in the fiscal 2020 periods were primarily due to increased volumes.

Liquidity and Capital Resources

The following table summarizes significant components of our cash flows for the six months ended September 30, 2019 and 2018:

	Six Months Ended September 30,	
(dollars in thousands)	**2019**	**2018**
Net cash provided by operating activities	**$ 260,000**	$ 226,702
Net cash (used in) investing activities	**$ (185,458)**	$ (68,156)
Net cash (used in) provided by financing activities	**$ (63,529)**	$ (139,861)
Debt-to-total capital ratio	**26.9%**	28.9%
Free cash flow	**$ 162,038**	$ 169,700

Net Cash Provided by Operating Activities – The net cash provided by our operating activities was $260.0 million for the first six months of fiscal 2020 and $226.7 million for the first six months of fiscal 2019. The fiscal 2020 increase in cash flows from operations was primarily due to the higher net income attainment in the fiscal 2020 period, as compared to the same fiscal 2019 period.

Net Cash Used In Investing Activities – The net cash used in investing activities totaled $185.5 million for the first six months of fiscal 2020 and $68.2 million for the first six months of fiscal 2019. The following discussion summarizes the significant changes in our investing cash flows for the first six months of fiscal 2020 and fiscal 2019:

- Purchases of property, plant, equipment, and intangibles, net – Capital expenditures were $98.2 million for the first six months of fiscal 2020 and $62.5 million during the same prior year period. The increase relates primarily to our previously announced expansion projects in the Applied Sterilization Technologies and Healthcare Specialty Services segments.

- Proceeds from the sale of property, plant, equipment and intangibles– Proceeds from the sale of property, plant, equipment and intangibles were $5.5 million during the first six months of fiscal 2019, the majority of which was from the sale of a Healthcare Products facility located in the U.K. and the sale of certain assets related to the termination of a service agreement. Proceeds from the sale of property, plant and equipment were not material for the first six months of fiscal 2020.

- Acquisitions of businesses, net of cash acquired – During the first six months of fiscal 2020, we used $87.9 million million for the purchase of businesses. For more information on our acquisitions, refer to our Note 17 to our consolidated financial statements, "Business Acquisitions and Divestitures".

- Purchases of Investments – During the first six months of fiscal 2019, we completed an equity investment for approximately $5.0 million.

- Other – During the first six months of fiscal 2019, we provided $6.0 million under borrowing agreements. For more information on these loan agreements, refer to our Note 18 to our consolidated financial statements, "Loans Receivable".

Net Cash Used In Financing Activities – The net cash used in financing activities amounted to $63.5 million for the first six months of fiscal 2020 compared with net cash used in financing activities of $139.9 million for the first six months of fiscal 2019. The following discussion summarizes the significant changes in our financing cash flows for the first six months of fiscal 2020 and fiscal 2019:

- Payments on long-term obligations – Payments on long-term obligations totaled $85.0 million in the first six months of fiscal 2019.

- Proceeds (payments) under credit facility, net – Net proceeds under credit facilities totaled $13.2 million in the first six months of fiscal 2020 compared to $52.1 million in the first six months of fiscal 2019.

- Repurchases of ordinary shares – During the first six months of fiscal 2020, we purchased of 204,414 of our ordinary shares in the aggregate amount of $29.9 million. During the first six months of fiscal 2020, we obtained 73,914 of our ordinary shares in connection with share-based compensation award programs in the aggregate amount of $8.0 million. During the first six months of fiscal 2019, we purchased of 454,000 of our ordinary shares in the aggregate amount of $48.1 million. During the first six months of fiscal 2019, we obtained 100,647 of our ordinary shares in connection with share-based compensation award programs in the aggregate amount of $7.8 million.

- Cash dividends paid to ordinary shareholders – During the first six months of fiscal 2020, we paid total cash dividends of $60.2 million, or $0.71 per outstanding share. During the first six months of fiscal 2019, we paid total cash dividends of $55.0 million, or $0.65 per outstanding share.

- Stock option and other equity transactions, net – We generally receive cash for issuing shares under our stock option programs. During the first six months of fiscal 2020 and fiscal 2019, we received cash proceeds totaling $22.4 million and $4.9 million, respectively, under these programs.

Cash Flow Measures. Free cash flow was $162.0 million in the first six months of fiscal 2020 compared to $169.7 million in the first six months of fiscal 2019 (see the subsection above titled "Non-GAAP Financial Measures" for additional information and related reconciliation of cash flows from operations to free cash flow). The decrease in free cash flow in the fiscal 2020 period was primarily due to higher capital expenditures, as anticipated. Our debt-to-total capital ratio was 26.9% at September 30, 2019 and 28.9% at September 30, 2018.

Sources of Credit and Contractual and Commercial Commitments. Information related to our sources of credit and contractual and commercial commitments is included in our Annual Report on Form 10-K for the year ended March 31, 2019, dated May 30, 2019. Our commercial commitments were approximately $77.2 million at September 30, 2019, reflecting a net increase of $3.4 million in surety bonds and other commercial commitments from March 31, 2019. We had $314.3 million of outstanding borrowings under the Credit Agreement as of September 30, 2019. We had $6.3 million of letters of credit outstanding under the Credit Agreement at September 30, 2019.

Cash Requirements. We intend to use our existing cash and cash equivalent balances and cash generated from operations for short-term and long-term capital expenditures and our other liquidity needs. Our capital requirements depend on many uncertain factors, including our rate of sales growth, our Customers' acceptance of our products and services, the costs of obtaining adequate manufacturing capacities, the timing and extent of our research and development projects, changes in our operating expenses and other factors. To the extent that existing and anticipated sources of cash are not sufficient to fund our future activities, we may need to raise additional funds through additional borrowings or the sale of equity securities. There can be no assurance that our existing financing arrangements will provide us with sufficient funds or that we will be able to obtain any additional funds on terms favorable to us or at all.

Critical Accounting Policies, Estimates, and Assumptions

Information related to our critical accounting policies, estimates, and assumptions is included in our Annual Report on Form 10-K for the year ended March 31, 2019, dated May 30, 2019. Our critical accounting policies, estimates, and assumptions have not changed materially from March 31, 2019.

Contingencies

We are, and will likely continue to be, involved in a number of legal proceedings, government investigations, and claims, which we believe generally arise in the course of our business, given our size, history, complexity, and the nature of our business, products, Customers, regulatory environment, and industries in which we participate. These legal proceedings, investigations and claims generally involve a variety of legal theories and allegations, including, without limitation, personal injury (e.g., slip and falls, burns, vehicle accidents), product liability or regulation (e.g., based on product operation or claimed malfunction, failure to warn, failure to meet specification, or failure to comply with regulatory requirements), product exposure (e.g., claimed exposure to chemicals, asbestos, contaminants, radiation), property damage (e.g., claimed damage due to leaking equipment, fire, vehicles, chemicals), commercial claims (e.g., breach of contract, economic loss, warranty, misrepresentation), financial (e.g., taxes, reporting), employment (e.g., wrongful termination, discrimination, benefits matters), and other claims for damage and relief.

We record a liability for such contingencies to the extent we conclude that their occurrence is both probable and estimable. We consider many factors in making these assessments, including the professional judgment of experienced members of management and our legal counsel. We have made estimates as to the likelihood of unfavorable outcomes and the amounts of such potential losses. In our opinion, the ultimate outcome of these proceedings and claims is not anticipated to have a material adverse affect on our consolidated financial position, results of operations, or cash flows. However, the ultimate outcome of proceedings, government investigations, and claims is unpredictable and actual results could be materially different from our estimates. We record expected recoveries under applicable insurance contracts when we are assured of recovery. Refer to Note 8 of our consolidated financial statements titled, "Commitments and Contingencies" for additional information and to Item 1A of Part II titled, "Risk factors".

We are subject to taxation from United States federal, state and local, and non-U.S. jurisdictions. Tax positions are settled primarily through the completion of audits within each individual tax jurisdiction or the closing of a statute of limitation. Changes in applicable tax law or other events may also require us to revise past estimates. The IRS routinely conducts audits of our federal income tax returns.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements, that have or are reasonably likely to have, a material current or future impact on our financial condition, changes in financial condition, revenues, expenses, results of operations, liquidity, capital expenditures or capital.

Forward-Looking Statements

This quarterly report may contain statements concerning certain trends, expectations, forecasts, estimates, or other forward-looking information affecting or relating to STERIS or its industry, products or activities that are intended to qualify for the protections afforded "forward-looking statements" under the Private Securities Litigation Reform Act of 1995 and other laws and regulations. Forward-looking statements speak only as to the date the statement is made and may be identified by the use of forward-looking terms such as "may," "will," "expects," “believes,” “anticipates,” “plans,” “estimates,” “projects,” “targets,” “forecasts,” “outlook,” “impact,” “potential,” “confidence,” “improve,” “optimistic,” “deliver,” “orders,” “backlog,” “comfortable,” “trend”, and “seeks,” or the negative of such terms or other variations on such terms or comparable terminology. Many important factors could cause actual results to differ materially from those in the forward-looking statements including, without limitation, disruption of production or supplies, changes in market conditions, political events, pending or future claims or litigation, competitive factors, technology advances, actions of regulatory agencies, and changes in laws, government regulations, labeling or product approvals or the application or interpretation thereof. Other risk factors are described in STERIS’s other securities filings, including Item 1A of our Annual Report on Form 10-K for the year ended March 31, 2019. Many of these important factors are outside of STERIS’s control. No assurances can be provided as to any result or the timing of any outcome regarding matters described in STERIS’s securities filings or otherwise with respect to any regulatory action, administrative proceedings, government investigations, litigation, warning letters, cost reductions, business strategies, earnings or revenue trends or future financial results. References to products are summaries only and should not be considered the specific terms of the product clearance or literature. Unless legally required, STERIS does not undertake to update or revise any forward-looking statements even if events make clear that any projected results, express or implied, will not be realized. Other potential risks and uncertainties that could cause actual results to differ materially from those in the forward-looking statements include, without limitation, (a) STERIS's ability to achieve the expected benefits regarding the accounting and tax treatments of the Redomiciliation transaction, (b) operating costs, Customer loss and business disruption (including, without limitation, difficulties in maintaining relationships with employees, Customers, clients or suppliers) being greater than expected following the Redomiciliation, (c) STERIS’s ability to meet expectations regarding the accounting and tax treatment of the Tax Cuts and Jobs Act (“TCJA”) or the possibility that anticipated benefits resulting from the TCJA will be less than estimated, (d) changes in tax laws or interpretations that could increase our consolidated tax liabilities, including changes in tax laws that would result in STERIS being treated as a domestic corporation for United States federal tax purposes, (e) the potential for increased pressure on pricing or costs that leads to erosion of profit margins, (f) the possibility that market demand will not develop for new technologies, products or applications or services, or business initiatives will take longer, cost more or produce lower benefits than anticipated, (g) the possibility that application of or compliance with laws, court rulings, certifications, regulations, regulatory actions, including without limitation any of the same relating to FDA, EPA or other regulatory authorities, government investigations, the outcome of any pending or threatened FDA, EPA or other regulatory warning notices, actions, requests, inspections or submissions, or other requirements or standards may delay, limit or prevent new product or service introductions, affect the production, supply and/or marketing of existing products or services or otherwise affect STERIS’s performance, results, prospects or value, (h) the potential of international unrest, economic downturn or effects of currencies, tax assessments, tariffs and/or other trade barriers, adjustments or anticipated rates, raw material costs or availability, benefit or retirement plan costs, or other regulatory compliance costs, (i) the possibility of reduced demand, or reductions in the rate of growth in demand, for STERIS’s products and services, (j) the possibility of delays in receipt of orders, order cancellations, or delays in the manufacture or shipment of ordered products or in the provision of services, (k) the possibility that anticipated growth, cost savings, new product acceptance, performance or approvals, or other results may not be achieved, or that transition, labor, competition, timing, execution, regulatory, governmental, or other issues or risks associated with STERIS’s businesses, industry or initiatives including, without limitation, those matters described in our Annual Report on Form 10-K for the year ended March 31, 2019, and other securities filings, may adversely impact STERIS’s performance, results, prospects or value, (l) the impact on STERIS and its operations, or tax liabilities, of Brexit or the exit of other member countries from the EU, and the Company’s ability to respond to such impacts, (m) the impact on STERIS and its operations of any legislation, regulations or orders, including but not limited to any new trade or tax legislation, regulations or orders, that may be implemented by the U.S. administration or Congress, or of any responses thereto, (n) the possibility that anticipated financial results or benefits of recent acquisitions, or of STERIS’s restructuring efforts, or of recent divestitures, or of the targeted restructuring plan will not be realized or will be other than anticipated, and (o) the effects of contractions in credit availability, as well as the ability of STERIS’s Customers and suppliers to adequately access the credit markets when needed.

Availability of Securities and Exchange Commission Filings

We make available free of charge on or through our website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to these reports as soon as reasonably practicable after we file such material with, or furnish such material to, the Securities Exchange Commission ("SEC.") You may access these documents on the Investor Relations page of our website at *http://www.steris-ir.com*. The information on our website and the SEC's website is not incorporated by reference into this report.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

In the ordinary course of business, we are subject to interest rate, currency, and commodity risks. Information related to these risks and our management of these exposures is included in Part II, Item 7A, "Quantitative and Qualitative Disclosures about Market Risk," in our Annual Report on Form 10-K for the year ended March 31, 2019, dated May 30, 2019. Our exposures to market risks have not changed materially since March 31, 2019.

Fluctuations in currency rates could affect our revenues, cost of revenues and income from operations and could result in currency exchange gains and losses. During the second quarter of fiscal 2020, we entered into forward currency contracts in order to hedge a portion of our expected non-U.S. dollar denominated earnings against our reporting currency, the U.S. dollar. These currency exchange contracts will mature during fiscal 2020. We have executed forward currency contracts to hedge a portion of results denominated in euros, Mexican pesos and Canadian dollars. We did not elect hedge accounting for these forward currency contracts; however, we may seek to apply hedge accounting in future scenarios. As a result, we may experience volatility due to (i) the timing mismatch of unrealized hedge gains or losses versus recognition of the underlying hedged earnings, and (ii) the impact of unrealized and realized hedge gains or losses being reported in selling, general and administrative expenses, whereas the offsetting economic gains and losses of the underlying hedged earnings are reported in the various line items of our Consolidated Statements of Income.

ITEM 4. CONTROLS AND PROCEDURES

Under the supervision of and with the participation of our management, including the Principal Executive Officer ("PEO") and Principal Financial Officer ("PFO"), we evaluated the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) promulgated under the Securities Exchange Act of 1934, as of the end of the period covered by this Quarterly Report. Based on that evaluation, including the assessment and input of our management, the PEO and PFO concluded that, as of the end of the period covered by this Quarterly Report, our disclosure controls and procedures were effective.

There were no changes in our internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Securities Exchange Act of 1934, that occurred during the quarter ended September 30, 2019 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

Information regarding our legal proceedings is included in this Form 10-Q in Note 8 to our consolidated financial statements titled, "Commitments and Contingencies", Item 7 of Part II, titled “Management's Discussion and Analysis of Financial Conditions and Results of Operations," of our Annual Report on Form 10-K for the year ended March 31, 2019, dated May 30, 2019, and in Item 1A of Part II of this Form 10-Q.

ITEM 1A. RISK FACTORS

For a complete discussion of the Company's risk factors, you should carefully review the risk factors included in Item 1A. of Part I of our Annual Report on Form 10-K for the fiscal year ended March 31, 2019.

Other than the additional risk factor set forth below, there have been no material changes to the risk factors set forth in Item 1A. “Risk Factors” in the Company’s Annual Report on Form 10-K for the year ended March 31, 2019 dated May 30, 2019.

Legal, Regulatory and Tax Risks

Our operations are subject to regulations and permitting, which may be changed or amended by the relevant authorities, and which may limit or eliminate our current operations or increase the complexity, burden, or expense of compliance.

Our Applied Sterilization Technologies (“AST”) segment is a technology-neutral contract sterilization service that offers our Customers a wide range of sterilization modalities through a worldwide network of over 50 contract sterilization and laboratory facilities. One of the modalities offered by our AST operations is Ethylene Oxide (“EO”) sterilization. In the United States, several regulators, including the U.S. Environmental Protection Agency (“EPA”), U.S. Food and Drug Administration (“FDA”), and agencies at the state and local level, play a role in regulating the use of EO sterilization. In 2016, the EPA changed the cancer risk basis for EO and determined that EO is carcinogenic to humans. Recent announcements of the temporary or permanent closure of EO sterilization facilities operated by other parties have been associated with state and/or local regulatory or other legal action related to EO emissions at those facilities. Our AST operations have taken and will continue to take measures to comply with all applicable emissions regulations and to significantly reduce emissions. However, no assurance can be given that legislative or regulatory action will not be taken, or that litigation will not be initiated, that may significantly increase the costs of conducting our EO contract sterilization operations or curtail or eliminate the use of EO in our contract sterilization operations. A significant reduction in our EO contract sterilization activities may have a material adverse effect on our financial condition and results of operations.

Additionally, for many medical devices, EO sterilization may be the only current method of sterilization that effectively sterilizes and does not damage the device during the sterilization process. In the event of regulatory, legislative, or legal action that curtails or eliminates EO sterilization, there could be a shortage of medical devices and consequently a decline in surgical procedures. A decline in surgical procedures could result in a decline in demand for the products and services provided by our Healthcare Products and Healthcare Specialty Services businesses, which may have a material adverse effect on our financial condition and results of operations.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

On August 9, 2016, STERIS UK announced that its Board of Directors had authorized the purchase of up to $300 million (net of taxes, fees and commissions) of ordinary shares. As a result of the Redomiciliation, this authorization terminated.

On May 7, 2019, our Board of Directors authorized the continuation of the foregoing share repurchase program by STERIS plc, resulting in a share repurchase authorization of $79.0 million (net of taxes, fees and commissions). On July 30, 2019, our Board of Directors approved an increase in the May 7, 2019 authorization of an additional amount of $300.0 million (net of taxes, fees and commissions).

As of September 30, 2019, there was approximately $349.0 million (net of taxes, fees and commissions) of remaining availability under the authorizations.

Under the authorizations, shares may be repurchased from time to time through open market transactions, including 10b5-1 plans. Any repurchase program may be activated, suspended or discontinued at any time.

During the first six months of fiscal 2020, we repurchased 205,059 of our ordinary shares pursuant to this authorization. During the first six months of fiscal 2020, we obtained 73,914 of our ordinary shares in connection with share based compensation award programs.

The following table summarizes the ordinary shares repurchase activity during the second quarter of fiscal 2020 under our ordinary share repurchase program:

	(a) Total Number of Shares Purchased	(b) Average Price Paid Per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans	(d) Maximum Dollar Value of Shares that May Yet Be Purchased Under the Plans at Period End (in thousands)
July 1-31	66,334	$ 148.65	66,334	$ 360,506
August 1-31	22,080	148.39	22,080	357,230
September 1-30	56,645	$ 145.65	56,645	$ 348,979
Total	145,059 [1]	147.44 [1]	145,059	348,979

[1] Does not include 10 shares purchased during the quarter at an average price of $150.16 per share by the STERIS Corporation 401(k) Plan on behalf of an executive officer of the Company who may be deemed to be an affiliated purchaser.

ITEM 6. EXHIBITS

Exhibits required by Item 601 of Regulation S-K

Exhibit Number	Exhibit Description
3.1	STERIS plc Amended Memorandum and Articles of Association (filed as Exhibit 3.1 to STERIS plc Form 10-K for the fiscal year ended March 31, 2019 (Commission File No. 001-38848), and incorporated herein by reference.
10.1	Description of STERIS plc Non-Employee Director Compensation Program
10.2	Form of STERIS plc Restricted Stock Agreement for Employees
10.3	Form of STERIS plc Nonqualified Stock Option Agreement for Employees
15.1	Letter Re: Unaudited Interim Financial Information.
31.1	Certification of the Principal Executive Officer Pursuant to Exchange Act Rule 13a-14(a)/15d-14(a).
31.2	Certification of the Principal Financial Officer Pursuant to Exchange Act Rule 13a-14(a)/15d-14(a).
32.1	Certification of the Principal Executive Officer and Principal Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.SCH	Schema Document.
101.CAL	Calculation Linkbase Document.
101.DEF	Definition Linkbase Document.
101.LAB	Labels Linkbase Document.
101.PRE	Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

SIGNATURE

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.

STERIS plc

/s/ KAREN L. BURTON

Karen L. Burton
Vice President, Controller and Chief Accounting Officer
November 7, 2019

EXHIBIT 10.1

Description of STERIS plc Non-Employee Director Compensation Program

Summarized below is the Director compensation program for STERIS plc ("STERIS") non-employee Directors for the term of office beginning July 30, 2019 and subsequent terms.

An annual retainer of $415,000 is payable to the Chairman of the Board and an annual retainer of $290,000 is payable to each other non-employee Director. The retainer fees are payable in full at the beginning of each Director's term. Retainer fees are fully vested immediately, regardless of the form in which paid.

For the term of office beginning July 30, 2019, $280,000 of the retainer fee is payable as follows to all Directors: $80,000 in cash, $100,000 in stock options and $100,000 in career restricted stock units ("CRSUs"). Each Director was given the option to elect to receive all or a part of the cash or option portions of the foregoing fee in STERIS shares or CRSUs and was given the option to elect to receive all or part of the CRSU portion of the foregoing fee in STERIS shares.

The remaining $10,000 of the retainer fee for the term of office beginning in 2019 is payable to each of the Directors, other than the Chairman, as follows: $2,000 in cash, $4,000 in options and $4,000 in CRSUs. The remaining $135,000 of the retainer fee for the Chairman for the term of office beginning in 2019 is payable as follows: $43,000 cash, $46,000 CRSUs, and $46,000 options.

For the term of office beginning in 2020, the retainer fees will be as follows: $82,000 in cash ($123,000 for the Chairman), $104,000 in stock options ($146,000 for the Chairman) and $104,000 in CRSUs ("CRSUs") ($146,000 for the Chairman). Each Director will be given the option to elect to receive all or a part of the cash or option portions of the fee in STERIS shares or CRSUs and to elect to receive all or part of the CRSU portion of the fee in STERIS shares.

Notwithstanding the foregoing, the available forms of payment for Directors who have not satisfied the Company's Non-Employee Director Stock Ownership Guidelines are limited until such time as those Guidelines have been satisfied. A Director who has not met the Guidelines will receive a retainer fee of $82,000 in cash, with the remaining portion of such Director's retainer fee payable in CRSUs. The Director also may elect to receive additional CRSUs in lieu of all or part of the cash portion of the fee.

Permitted elections for incumbent Directors are required to be made on or before the December 31 that immediately precedes the beginning of the term for which the compensation will be paid.

The number of CRSUs or STERIS shares a Director is entitled to receive is determined based upon the dollar amount of the retainer fees elected to be received in CRSUs or STERIS shares, and the NYSE STERIS per share closing price on the effective date of grant. The number of options a Director is entitled to receive is determined based upon the same factors and a Black-Scholes calculation, and the option price is the NYSE per share closing price on the effective date of grant.

A Director's CRSU's will be settled in STERIS ordinary shares six months after the cessation of the Director's Board service. Directors will be paid cash dividend equivalents on their CRSUs as dividends are paid on STERIS ordinary shares.

Annual Committee Chair fees are payable in the following amounts, with payments to be made at the beginning of each term: $25,000 for the Audit Committee Chair, $20,000 for the Compensation and Organization Development Committee Chair and $15,000 for the other standing Committee Chairs. Meeting fees are payable at a rate of $1,000 per meeting for Board meetings and assigned Committee meetings attended in excess of 20 during the annual term.

The STERIS Director compensation program for non-employee Directors may be modified by the Board of Directors.

EXHIBIT 10.2

**FORM OF STERIS PLC RESTRICTED STOCK
AGREEMENT FOR EMPLOYEES**

**STERIS plc
RESTRICTED STOCK AGREEMENT FOR EMPLOYEES – __________, 20__**

This Agreement (“Agreement”) is between STERIS plc (“STERIS” or Company) and < first_name> <middle_name> < last_name> (“Grantee”), with respect to the grant of shares of STERIS restricted stock to Grantee pursuant to the STERIS plc 2006 Long-Term Equity Incentive Plan, as Assumed, Amended and Restated Effective March 28, 2019, and as further amended from time to time (the “Plan”). All terms used herein with initial capital letters and not otherwise defined herein that are defined in the Plan shall have the meanings assigned to them in the Plan.

1. *Grant of Restricted Shares*. STERIS hereby grants to Grantee, as of the date (“Date of Grant”) set forth above and in the Acknowledgment and Acceptance Form accompanying this Agreement (“Acknowledgment”),<shares_awarded> Ordinary Shares of STERIS restricted stock, par value $.001 per share, as previously disclosed to Grantee and as reflected in the records of STERIS as granted as of the Date of Grant (“Restricted Shares”), upon and subject to the terms of this Agreement and the Plan. The Restricted Shares covered by this Agreement shall be issued to the Grantee effective upon the Date of Grant. Subject to the restrictions contained herein, the Ordinary Shares subject to this grant of Restricted Shares shall be registered in the Grantee’s name in STERIS’s stock registry as fully paid and nonassessable. Any certificate or other evidence of ownership or the book entry representing the Restricted Shares shall bear an appropriate legend referring to the restrictions hereinafter set forth.

2. *Documents Delivered with Agreement.* STERIS has delivered or made available to the Grantee, along with this Agreement, the following documents: (a) STERIS’s Insider Trading Policy (the “Policy”); (b) the Plan and its related Prospectus; (c) the Nondisclosure and Noncompetition Agreement to be entered into between STERIS and Grantee (the “Nondisclosure Agreement”); (d) the Acknowledgment; and (e) STERIS or STERIS Corporation’s most recent Annual Report to Shareholders including Form 10-K filed with the US Securities and Exchange Commission and most recent Irish Statutory Financial Statements. Acceptance and compliance with these documents is a condition to the effectiveness of this grant of Restricted Shares. By accepting this Agreement or executing the Acknowledgment, the Grantee acknowledges receipt, review and acceptance of these documents and compliance with their terms. Furthermore, as a condition of this grant of Restricted Shares, STERIS in its discretion, may require Grantee to return an executed copy of the Acknowledgement in such format as STERIS may require.

3. *Restrictions on Transfer of Shares.* The Ordinary Shares subject to this grant of Restricted Shares may not be sold, exchanged, assigned, transferred, pledged, encumbered or otherwise disposed of by the Grantee, except to STERIS, unless, and only to the extent, the Restricted Shares have vested and become nonforfeitable as provided in Section 4 hereof or as otherwise

provided in the Plan; provided, however, that the Grantee's rights with respect to such Ordinary Shares may be transferred by will or pursuant to the laws of descent and distribution. Any purported transfer or encumbrance in violation of the provisions of this Section 3 shall be void, and the other party to any such purported transaction shall not obtain any rights to or interest in such Ordinary Shares. STERIS in its sole discretion, when and as permitted by the Plan, may waive the restrictions on transferability with respect to all or a portion of the Ordinary Shares subject to this grant of Restricted Shares.

4. *Vesting of Restricted Shares*. Subject to the terms of this Agreement and the Plan, other than Section 22 of the Plan, the provisions of which shall not apply, this grant of Restricted Shares is subject to the following limitations:

[For All Grantees Who Are Not UK Residents]

[(a) If at the Date of Grant Grantee has attained age 55 and been in the service of STERIS and/or a Subsidiary for at least five consecutive years ("Qualifying Retirement Eligible") or if at the Date of Grant Grantee has been in the service of STERIS and/or a Subsidiary for at least twenty-five consecutive years ("Qualifying Service Eligible"), then in either case the Restricted Shares shall vest and become nonforfeitable in _______ equal annual installments, with the first installment to vest on _____________ and the remaining _______ installment(s) to vest on [each of] the ___ succeeding anniversary(ies) (each such ________, an "Anniversary Date").

(b) If at the Date of Grant the Grantee is not Qualifying Retirement Eligible or Qualifying Service Eligible, the Restricted Shares shall vest and become nonforfeitable on _____________.

(c) Notwithstanding the foregoing (i) if before the Restricted Shares have otherwise become vested and nonforfeitable pursuant to paragraph (b) above the Grantee becomes Qualifying Retirement Eligible, then on the Anniversary Date that coincides with or immediately succeeds the date the Grantee becomes Qualifying Retirement Eligible and provided the Grantee has remained in the employ of STERIS or a Subsidiary through such Anniversary Date, the Restricted Shares will become vested and nonforfeitable to the same extent as they would have been on such date under paragraph (a) had the Grantee been Qualifying Retirement Eligible at the Date of Grant, and if such Anniversary Date is not the last Anniversary Date subsequent to the Date of Grant, the Restricted Shares will thereafter continue to vest in the same manner and to the same extent as would have been the case under paragraph (a) had the Grantee been Qualifying Retirement Eligible at the Date of Grant, or (ii) if before the Restricted Shares have otherwise become vested and nonforfeitable pursuant to paragraph (b) above the Grantee becomes Qualifying Service Eligible, then on the Anniversary Date that coincides with or immediately succeeds the date the Grantee becomes Qualifying Service Eligible and provided the Grantee has remained in the employ of STERIS or a Subsidiary through such Anniversary Date, the Restricted Shares will become vested and nonforfeitable to the same extent as they would have been on such date under paragraph (a) had the Grantee been Qualifying Service Eligible at the Date of Grant, and if such Anniversary Date is not the last Anniversary Date subsequent to the Date of Grant, the Restricted Shares will thereafter continue to vest in the same manner and to the same extent as would have been the case under paragraph (a) had the Grantee been Qualifying Service Eligible at the Date of Grant. If the Grantee would be entitled to vesting pursuant to either or both clause (i) or clause (ii) above prior to the date specified in paragraph (b) above, then whichever clause results in the more rapid vesting shall be applicable to the Grantee.

(d) Notwithstanding the foregoing, if any Anniversary Date on which the Restricted Shares or a portion thereof would otherwise vest is not a trading day on the New York Stock Exchange, such vesting shall be deferred until the first trading day thereafter.

(e) Notwithstanding anything herein to the contrary, the provisions of Section 11 of the Plan, other than Section 11(d)(iii), shall not apply to the Restricted Shares, and if the Grantee terminates service with STERIS and all Subsidiaries prior to the date on which the Grantee's Restricted Shares have become fully vested and nonforfeitable, subject to the provisions of Section 11(d)(iii) of the Plan, those portions of the Restricted Shares that are not vested at the time of such termination shall be forfeited.

(f) Also notwithstanding the foregoing, if on any Anniversary Date any portion of the Restricted Shares that would otherwise vest on such Anniversary Date represents a fractional share, that portion shall be aggregated with any portions of the Restricted Shares that represent fractional shares and would otherwise vest on succeeding Anniversary Dates and all portions so aggregated shall vest on the first of the aforesaid Anniversary Dates.

[For Grantees Resident in the UK]

(a) If at the Date of Grant, Grantee has been in the service of STERIS and/or a Subsidiary for at least twenty-five consecutive years ("Qualifying Service Eligible"), the Restricted Shares shall vest and become nonforfeitable in _____ equal annual installments, with the first installment to vest on _______________ and the remaining _____ installment(s) to vest on [each of] the ____ succeeding anniversary(ies) (each such ______, an "Anniversary Date").

(b) If at the Date of Grant the Grantee is not Qualifying Service Eligible, the Restricted Shares shall vest and become nonforfeitable on _____________; provided, however, that if before the Restricted Shares have otherwise become vested and nonforfeitable pursuant to the foregoing provision, the Grantee becomes Qualifying Service Eligible, then on the Anniversary Date that coincides with or immediately succeeds the date the Grantee becomes Qualifying Service Eligible and provided the Grantee has remained in the employ of STERIS or a Subsidiary through such Anniversary Date, the Restricted Shares will become vested and nonforfeitable to the same extent as they would have been on such date under paragraph (a) had the Grantee been Qualifying Service Eligible at the Date of Grant, and if such Anniversary Date is not the last Anniversary Date subsequent to the Date of Grant, the Restricted Shares will thereafter continue to vest in the same manner and to the same extent as would have been the case under paragraph (a) had the Grantee been Qualifying Service Eligible at the Date of Grant.

(c) Notwithstanding the foregoing, if any Anniversary Date or other date on which the Restricted Shares or a portion thereof would otherwise vest is not a trading day on the New York Stock Exchange, such vesting shall be deferred until the first trading day thereafter.

(d) Notwithstanding anything herein to the contrary, the provisions of Section 11 of the Plan, other than Section 11(d)(iii), shall not apply to the Restricted Shares, and if the Grantee terminates service with STERIS and all Subsidiaries prior to the date on which the Grantee's Restricted Shares have become fully vested and nonforfeitable, subject to the provisions of Section 11(d)(iii) of the Plan, those portions of the Restricted Shares that are not vested at the time of such termination shall be forfeited.

(e) Also notwithstanding the foregoing, if on any Anniversary Date any portion of the Restricted Shares that would otherwise vest on such Anniversary Date represents a fractional share, that portion shall be aggregated with any portions of the Restricted Shares that represent fractional shares and would otherwise vest on succeeding Anniversary Dates and all portions so aggregated shall vest on the first of the aforesaid Anniversary Dates.

5. *Forfeiture of Shares*. Subject to the terms of this Agreement and the Plan, if the Grantee violates the Policy, this Agreement, or the Nondisclosure Agreement or ceases to be employed by STERIS or a Subsidiary prior to the time all of the Restricted Shares have become vested and nonforfeitable, the Restricted Shares shall be forfeited, to the extent not then vested, subject to the provisions of Section 11(d)(iii) of the Plan. Without limiting the generality of the foregoing, should Grantee, while employed by or otherwise in the service of the Company or a Subsidiary, or within a period of two years after termination of such employment or other service, engage in Detrimental Activity and the Board or the Chief Executive Officer or his delegate or delegatees, if applicable, shall so find, then forthwith upon notice to Grantee of such finding, any and all of those remedies set forth in Section 15 of the Plan shall be applicable in respect of Grantee, and such remedies shall not be deemed exclusive remedies or limit the remedies otherwise available to the Company. In the event of a forfeiture under this Section 5 or otherwise under the Plan, any forfeited Restricted Shares shall be returned by the Grantee to STERIS for no consideration except as otherwise provided in the Plan.

6. *Dividend, Voting and Other Rights*. Except as otherwise provided herein, from and after the Date of Grant, the Grantee shall have all of the rights of a shareholder with respect to the Restricted Shares covered by this Agreement, including the right to vote such Restricted Shares and receive any dividends that may be paid thereon; provided, however, that any additional Ordinary Shares or other securities that the Grantee may become entitled to receive pursuant to a stock dividend, issuance of rights or warrants, stock split, combination of shares, recapitalization, merger, consolidation, separation, or reorganization or any other change in the capital structure of STERIS shall be subject to the same or similar restrictions as the Restricted Shares covered by this Agreement as determined by STERIS.

7. *Stock Certificate(s)*. The Ordinary Shares subject to this grant of Restricted Shares shall not be represented by certificates unless otherwise provided by resolution of the Board of STERIS or required by law, and if such Ordinary Shares should be represented by certificates, the

certificates will be held in custody by STERIS until those shares shall vest in accordance with the provisions hereof or as otherwise provided in the Plan. STERIS shall cause the Restricted Shares to be registered in the name of Grantee in STERIS's stock registry, with the foregoing restrictions noted thereon. STERIS may require as a condition to the effectiveness of this grant of Restricted Shares that Grantee deliver to STERIS a stock power endorsed in blank by the Grantee with respect to the Restricted Shares and Grantee agrees to deliver the same.

8. *Compliance with Law*. Notwithstanding any other provision of this Agreement, STERIS shall not be obligated to issue any Ordinary Shares pursuant to this Agreement if the issuance thereof would result in a violation of any applicable law.

9. *Employment*. For purposes of this Agreement, the continuous employment of the Grantee with STERIS or a Subsidiary shall not be deemed to have been interrupted, and Grantee shall not be deemed to cease being an employee of STERIS or Subsidiary, by reason of (i) the transfer of his or her employment among STERIS and its Subsidiaries or (ii) a leave of absence not to exceed 12 months approved in writing by a duly elected officer of STERIS.

10. *Certain Determinations.* The application, violation, or other interpretation of the terms of this Agreement, the Plan, the Nondisclosure Agreement, the Policy, or any other STERIS policy shall be determined by the Board or the Chief Executive Officer or his delegatee or delegatees, if applicable, in their sole discretion, and such determination shall be final and binding on the Grantee.

11. *Termination of the Plan; No Right to Future Grants; No Right of Employment; Extraordinary Item of Compensation.* By entering into this Agreement, the Grantee acknowledges: (a) that the Plan is discretionary in nature and may be suspended or terminated by STERIS at any time; (b) that the grant of Restricted Shares is a one-time benefit which does not create any contractual or other right to receive future grants of restricted shares, or benefits in lieu of restricted shares; (c) that all determinations with respect to any such future grants, including, but not limited to, the times when the restricted shares shall be granted, the number of shares subject to each grant of restricted shares, and the time or times when the restricted shares shall become nonforfeitable, will be at the sole discretion of STERIS; (d) that the Grantee's participation in the Plan shall not create a right to further employment with the Grantee's employer and shall not interfere with the ability of the Grantee's employer to terminate the Grantee's employment relationship at any time with or without cause; (e) that the Grantee's participation in the Plan is voluntary; (f) that the value of the Restricted Shares is an extraordinary item of compensation which is outside the scope of the Grantee's employment contract, if any; (g) that the Restricted Shares are not part of normal and expected compensation for purposes of any other employee benefit plan or program of STERIS, including for purposes of calculating any severance, resignation, redundancy, end of service, bonus, long-service, pension or retirement benefits or similar payments; (h) that the right to vesting of the Restricted Shares ceases upon termination of employment for any reason except as may otherwise be explicitly provided in the Plan or this Agreement; (i) that the future value, if any, of the Restricted Shares is unknown and cannot be predicted with certainty; and (j) that, where the Grantee's employer is a Subsidiary of STERIS, the Restricted Shares have been granted to the

Grantee in the Grantee’s status as an employee of such Subsidiary and the terms of this Agreement can be modified by STERIS to facilitate the issuance and administration of the award and can in no event be understood or interpreted to mean that STERIS is the Grantee’s employer or that the Grantee has an employment relationship with STERIS.

12. *Employee Data Privacy.* By entering into the Agreement, and as a condition of this award of Restricted Shares, the Grantee consents to the collection, use and transfer of personal data as described in this Section 12. The Grantee understands that STERIS and its Subsidiaries hold certain personal information about the Grantee, including, but not limited to, the Grantee’s name, home address and telephone number, date of birth, social insurance number, salary, nationality, job title, any shares of stock or directorships held in STERIS, details of all Restricted Shares or other entitlement to shares of stock awarded, canceled, exercised, vested, unvested or outstanding in the Grantee’s favor, for the purpose of managing and administering the Plan (“Data”). The Grantee further understands that STERIS and/or its Subsidiaries will transfer Data among themselves as necessary for the purposes of implementation, administration and management of the Grantee’s participation in the Plan, and that STERIS and/or its Subsidiaries may each further transfer Data to any third parties assisting STERIS in the implementation, administration and management of the Plan (“Data Recipients”). The Grantee understands that these Data Recipients may be located in the Grantee’s country of residence, the European Economic Area, and in countries outside the European Economic Area, including the United States. The Grantee authorizes the Data Recipients to receive, possess, use, retain and transfer Data in electronic or other form, for the purposes of implementing, administering and managing the Plan, including any transfer of such Data, as may be necessary or appropriate for the administration of the Plan and/or the subsequent holding of shares of stock on the Grantee’s behalf, to a broker or third party with whom the shares acquired on exercise may be deposited. The Grantee understands that he or she may, at any time, review the Data, require any necessary amendments to it or withdraw the consent herein by notifying STERIS in writing. The Grantee further understands that withdrawing consent may affect the Grantee’s ability to participate in the Plan, at the sole discretion of the Board or the Chief Executive Officer or its delegatee or delegatees.

13. *Relation to Plan*. This Agreement is subject to the terms and conditions of the Plan. In the event of any inconsistency between the provisions of this Agreement and the Plan, the Plan shall govern.

14. *Amendments.* Any amendment to the Plan shall be deemed to be an amendment to this Agreement to the extent that the amendment is applicable hereto; provided, however, that no amendment shall have a material adverse effect on the rights of the Grantee under this Agreement without the Grantee’s consent.

15. *Severability.* If any provision of this Agreement or the application of any provision hereof to any person or circumstances is held invalid or unenforceable, the remainder of this Agreement and the application of such provision to any other person or circumstances shall not be affected, and the provisions so held to be invalid or unenforceable shall be reformed to the extent (and

only to the extent) necessary to make it enforceable and valid while accomplishing the most similar purpose.

16. *Governing Law.* This Agreement shall be governed by and construed in accordance with the internal substantive laws of the State of Ohio, without giving effect to any principle of law that would result in the application of the law of any other jurisdiction. Any unresolved dispute shall be submitted exclusively to the jurisdiction of the courts of Lake County, Ohio.

17. *Payment of Par Value.* By entering into this Agreement, the Grantee undertakes and agrees to pay the par value of $.001 for each Restricted Share granted pursuant to this Agreement (the “Par Value Consideration”) on or before the date (“Payment Date”) that is six weeks after the Date of Grant as such date may be extended by STERIS in its sole discretion, unless such payment is waived by the Company. Such payment of the Par Value Consideration shall be made, at the option of Grantee’s employer, on or before the Payment Date through withholding of the Par Value Consideration by the Grantee’s employer from the Grantee’s compensation as soon as reasonably practicable after the Grant Date or by other means of payment by the Grantee as determined by STERIS or such employer. If such payment is not received by the Payment Date, the Restricted Shares shall be forfeited for non-payment pursuant to the Articles of Association of STERIS.

[For US Grantees]

18. *Taxes*. Unless Grantee has made an election under Section 83(b) of the Code with respect to the Restricted Shares, each time any of the Restricted Shares become vested and nonforfeitable STERIS shall withhold or cause to be withheld from such Restricted Shares at the time such vesting occurs a number of Ordinary Shares having a value equal to the amount of federal, state, local, foreign or other taxes required to be withheld pursuant to applicable employment or tax laws, as determined by STERIS. Likewise, with respect to previous Plan grants of restricted shares and in respect of which the Grantee has not made an election under Section 83(b) of the Code, STERIS shall withhold or cause to be withheld from such restricted shares at the time such vesting occurs a number of Ordinary Shares having a value equal to the amount of federal, state, local, foreign or other taxes required to be withheld pursuant to applicable employment or tax laws, as determined by STERIS. For purposes of the foregoing withholding, the Ordinary Shares used for tax withholding will be valued at an amount equal to the Market Value per Share of such Ordinary Shares on the date the benefit is to be included in the Grantee’s income. The foregoing provisions shall apply notwithstanding any alternate methods for the payment of withholding of taxes contained in the Plan.

[For non-US Grantees]

18. *Withholding Taxes.* STERIS, or the Subsidiary that employs Grantee, shall withhold an amount equal to STERIS’s or such Subsidiary’s required statutory withholding taxes in the relevant tax jurisdiction on any payment made or benefit realized by Grantee. Taxes for purposes of the foregoing shall include, without limitation, any United Kingdom primary Class 1 (employee’s) national insurance contributions. In connection with the foregoing each time any of

the Restricted Shares become vested and nonforfeitable STERIS or the Subsidiary that employs Grantee shall withhold from such Restricted Shares at the time such vesting occurs a number of Ordinary Shares having a value equal to the amount of federal, state, local, foreign or other taxes required to be withheld pursuant to applicable employment or tax laws, as determined by STERIS. Likewise, with respect to previous Plan grants of restricted shares, STERIS or the Subsidiary that employs Grantee shall withhold from such restricted shares at the time such vesting occurs a number of Ordinary Shares having a value equal to the amount of federal, state, local, foreign or other taxes required to be withheld pursuant to applicable employment or tax laws, as determined by STERIS. For purposes of the foregoing withholding the Ordinary Shares used for tax withholding will be valued at an amount equal to the Market Value per Share of such Ordinary Shares on the date the benefit is to be included in the Grantee's income. The foregoing provisions shall apply notwithstanding any alternate methods for the payment of withholding of taxes contained in the Plan.

19. *Miscellaneous.* Nothing contained in this Agreement shall be understood as conferring on Grantee any right to continue as an employee of STERIS or any Subsidiary or affiliate. STERIS reserves the right to correct any clerical, typographical, or other error in this Agreement or otherwise with respect to this grant. This Agreement shall inure to the benefit of and be binding upon its parties and their respective heirs, executors, administrators, successors, and assigns, but the Restricted Shares shall not be transferable by Grantee other than as provided in Section 17 of the Plan.

20. *Authority*. Any director or authorised signatory of STERIS is authorised to execute any document and do any act necessary or desirable to effect the forfeiture of any Restricted Shares which are subject to forfeiture and their return to STERIS for no consideration in accordance with the Plan and/or this Agreement.

STERIS has caused this Agreement to be executed on its behalf by its duly authorized officer, and Grantee has entered into this Agreement and accepted all terms and conditions thereof by electronic acceptance and/or by the signed Acknowledgment, either of which has the same force and binding effect as if this Agreement were physically signed by Grantee, all as of the Date of Grant.

STERIS plc	**Grantee**
By:	**Signature by electronic acceptance and/or execution of the Acknowledgment and Acceptance form.**
Senior Vice President, General Counsel and Company Secretary	

FORM OF STERIS PLC NONQUALIFIED STOCK OPTION AGREEMENT FOR EMPLOYEES

STERIS plc
NONQUALIFIED STOCK OPTION AGREEMENT
FOR EMPLOYEES – __________, 20__

This Agreement (“Agreement”) is between STERIS plc (“STERIS” or “Company”) and <first_name> <middle_name> <last_name> (“Optionee”), with respect to the grant of a Nonqualified Stock Option by STERIS to Optionee pursuant to the STERIS plc 2006 Long-Term Equity Incentive Plan, as Amended and Restated Effective March 28, 2019, and as further amended from time to time (the “Plan”). All terms used herein with initial capital letters and not otherwise defined herein that are defined in the Plan shall have the meanings assigned to them in the Plan.

1. *Grant of Option*. STERIS hereby grants to Optionee, as of the date (“Date of Grant”) set forth above and in the Acknowledgment and Acceptance Form accompanying this Agreement (“Acknowledgment”) an option (the “Option”) to purchase all or any number of an aggregate <shares_awarded> of STERIS Ordinary Shares, as previously disclosed to Optionee and as reflected in the records of STERIS as granted as of the Date of Grant, at an exercise price equal to ___% of the closing sales price per share of STERIS’s Ordinary Shares as of the Date of Grant and as reported on the New York Stock Exchange Composite Tape (the “Option Price”), upon and subject to the terms of this Agreement and the Plan.

2. *Documents Delivered with Agreement.* STERIS has delivered or made available to the Optionee, along with this Agreement, the following documents: (a) STERIS’s Insider Trading Policy (the “Policy”); (b) the Plan and its related Prospectus; (c) the Nondisclosure and Noncompetition Agreement to be entered into between STERIS and Optionee (the “Nondisclosure Agreement”); (d) the Acknowledgment; and (e) STERIS’s most recent Annual Report to Shareholders including Form 10-K filed with the US Securities and Exchange Commission and most recent Irish Statutory Financial Statements. Acceptance and compliance with these documents is a condition to the effectiveness of this grant of nonqualified stock options. By accepting this Agreement or executing the Acknowledgment, the Optionee acknowledges receipt, review and acceptance of these documents and compliance with their terms. Furthermore, as a condition of the grant of this Option, STERIS in its discretion, may require Optionee to return an executed copy of the Acknowledgement in such format as STERIS may require.

3. *Terms and Conditions of Option.* (a) The Option is a Nonqualified Option and shall not be treated as an Incentive Stock Option. In addition to this Agreement, the Option shall also be subject to all of the terms and conditions of the Policy and Plan. The Option shall be effective upon the Optionee’s acceptance of this Agreement and the Nondisclosure Agreement, both of which shall be conclusively deemed to have occurred either upon electronic acceptance or STERIS’s receipt of the signed Acknowledgment.

(b) If Optionee violates the terms of the Policy, the Plan, this Agreement, the Nondisclosure Agreement, or any agreement with similar terms previously entered into by Optionee (collectively “Prior Agreements”), any and all options to purchase Ordinary Shares that were granted by STERIS to Optionee (including the Option granted by this Agreement or any Prior Agreements) shall be forfeited, void, and of no further force and effect. Without limiting the generality of the foregoing, should Optionee, while employed by or otherwise in service with STERIS or a Subsidiary, or within a period of two years after termination of such employment or other service, engage in Detrimental Activity and the Board or the

Chief Executive Officer or his delegate or delegatees, if applicable, shall so find, then forthwith upon notice to Optionee of such finding, any and all of those remedies set forth in Section 15 of the Plan shall be applicable in respect of Optionee, and such remedies shall not be deemed exclusive remedies or limit the remedies otherwise available to the Company.

(c) By accepting this Option, Optionee agrees that the Board or Chief Executive Officer of STERIS or his delegatee or delegatees may require the Optionee to use a specific broker dealer for the exercise and sale of the STERIS Ordinary Shares subject to this Option or subject to any other option previously granted by STERIS to Optionee.

4. *Term of Option.* Unless earlier terminated pursuant to Section 11 of the Plan, the Option shall terminate at the close of business on, and shall not be exercisable at any time after, the tenth (10^{th}) anniversary of the Date of Grant.

5. *Vesting.* So long as Optionee remains in the employ of STERIS or a Subsidiary, but subject to the terms of this Agreement and the Plan, the Option shall vest in _____ equal annual installments, with the first installment to vest on _______________ and the ______ remaining installments to vest on each of the ______ succeeding anniversary(ies) thereof (except that any portions of such installments representing fractional Ordinary Shares shall be aggregated and shall be included in the portion of the Option that vests on the earliest vesting date after the Date of Grant); provided, however, the provisions of Section 11(d)(ii) of the Plan regarding immediate exercisability of Option Rights shall apply to the Option only if Optionee dies while in the service of STERIS or any Subsidiary. Notwithstanding the foregoing, if any date on which the Option or a portion thereof would otherwise vest is not a trading day on the New York Stock Exchange, such vesting shall be deferred until the first trading day thereafter.

6. *Exercise of Vested Option*. Except as otherwise provided in Section 11 of the Plan, the rules of which, as modified hereby, shall apply to this Agreement including as described in Section 16 of this Agreement, the Option shall be exercisable only while Optionee is in the employ of STERIS or a Subsidiary. To the extent exercisable under this Agreement, the Option may be exercised from time to time in whole or in part.

7. *Method of Exercise*. A request to exercise the Option requires delivery of (a) the Option Price payable in cash or by check acceptable to STERIS or by wire transfer of immediately available funds, or by such other methods as may be approved by the Board or the Chief Executive Officer or his delegatee or delegatees, as applicable and (b) a written notice to STERIS identifying this Agreement and specifying the number of Ordinary Shares as to which the Option is being exercised. The Ordinary Shares to which Optionee is entitled upon exercise of the Option shall not be represented by certificates unless otherwise provided by resolution of the Board of STERIS or required by law, but STERIS shall cause such Ordinary Shares to be registered in the name of Optionee or Optionee's nominee in STERIS's stock registry promptly following exercise.

8. *Certain Determinations*. Application, violation, or other interpretation of the terms of this Agreement, the Nondisclosure Agreement, the Plan, the Policy, any Prior Agreement, or any STERIS policy shall be determined by the Board or the Chief Executive Officer or his delegatee or delegatees, if applicable, in their sole discretion, and such determination shall be final and binding on Optionee.

9. *Termination of the Plan; No Right to Future Grants; No Right of Employment; Extraordinary Item of Compensation* . By entering into this Agreement, Optionee acknowledges: (a) that the Plan is discretionary in nature and may be suspended or terminated by STERIS at any time; (b) that the grant of

the Option is a one-time benefit which does not create any contractual or other right to receive future grants of options, or benefits in lieu of options; (c) that all determinations with respect to any such future grants, including, but not limited to, the times when each option shall be granted, the number of shares subject to each option, the option price, and the time or times when each option shall be exercisable, will be at the sole discretion of STERIS; (d) that Optionee's participation in the Plan shall not create a right to further employment with Optionee's employer and shall not interfere with the ability of Optionee's employer to terminate Optionee's employment relationship at any time with or without cause; (e) that Optionee's participation in the Plan is voluntary; (f) that the value of the Option is an extraordinary item of compensation which is outside the scope of Optionee's employment contract, if any; (g) that the Option is not part of normal and expected compensation for purposes of any other employee benefit plan or program of STERIS, including for purposes of calculating any severance, resignation, redundancy, end of service, bonus, long-service, pension or retirement benefits or similar payments; (h) that the right to purchase stock ceases upon termination of employment for any reason except as may otherwise be explicitly provided in the Plan or this Agreement; (i) that the future value, if any, of the shares is unknown and cannot be predicted with certainty; (j) that, where Optionee's employer is a Subsidiary of STERIS, the Option has been granted to Optionee in Optionee's status as an employee of such Subsidiary, and the terms of this Agreement can be modified by STERIS to facilitate the issuance and administration of the award, and can in no event be understood or interpreted to mean that STERIS is Optionee's employer or that Optionee has an employment relationship with STERIS; (k) that neither STERIS nor Optionee's employer has any obligation to or intends to notify Optionee of any impending expiration or lapse of the Option or any other option granted to Optionee by STERIS, it being the responsibility of Optionee to remain informed of the same, and neither STERIS nor such employer shall have any liability to Optionee as a result of Optionee's failure to exercise the Option or any other option prior to the expiration or lapse thereof; and (l) that to the extent unvested, the Options have no value and if the underlying shares do not increase in value above the Option Price, vested Options will have no value.

10. *Employee Data Privacy*. By entering into the Agreement, and as a condition of the grant of the Option, Optionee consents to the collection, use and transfer of personal data as described in this Section 10. Optionee understands that STERIS and its Subsidiaries hold certain personal information about Optionee, including, but not limited to, Optionee's name, home address and telephone number, date of birth, social security number, salary, nationality, job title, any shares of stock or directorships held in STERIS, details of all Options or other evidence of shares of stock or options awarded, canceled, exercised, vested, unvested or outstanding in Optionee's favor, for the purpose of managing and administering the Plan ("Data"). Optionee further understands that STERIS and/or its Subsidiaries will transfer Data among themselves as necessary for the purposes of implementation, administration and management of the Optionee's participation in the Plan, and that STERIS and/or its Subsidiaries may each further transfer Data to any third parties assisting STERIS in the implementation, administration and management of the Plan ("Data Recipients"). Optionee understands that these Data Recipients may be located in Optionee's country of residence, the European Economic Area, and in countries outside the European Economic Area, including the United States. Optionee authorizes the Data Recipients to receive, possess, use, retain and transfer Data in electronic or other form, for the purposes of implementing, administering and managing the Plan, including any transfer of such Data, as may be necessary or appropriate for the administration of the Plan and/or the subsequent holding of shares of stock on Optionee's behalf, to a broker or third party with whom the shares acquired on exercise may be deposited. Optionee understands that he or she may, at any time, review the Data, require any necessary amendments to it or withdraw the consent herein by notifying STERIS in writing. Optionee further understands that withdrawing consent may affect Optionee's ability to participate in the Plan, at the sole discretion of the Board or the Chief Executive Officer or his delegatee or delegatees, if applicable.

11. *Relation to Plan*. This Agreement is subject to the terms and conditions of the Plan. In the event of any inconsistency between the provisions of this Agreement and the Plan, the Plan shall govern.

12. *Amendments*. Any amendment to the Plan shall be deemed to be an amendment to this Agreement to the extent that the amendment is applicable hereto; provided, however, that no amendment shall have a material adverse effect on the rights of Optionee under this Agreement without Optionee's consent.

13. *Severability*. If any provision of this Agreement or the application of any provision hereof to any person or circumstances is held invalid or unenforceable, the remainder of this Agreement and the application of such provision to any other person or circumstances shall not be affected, and the provisions so held to be invalid or unenforceable shall be reformed to the extent (and only to the extent) necessary to make it enforceable and valid while accomplishing the most similar purpose.

14. *Governing Law*. This Agreement shall be governed by and construed in accordance with the internal substantive laws of the State of Ohio, without giving effect to any principle of law that would result in the application of the law of any other jurisdiction. Any unresolved dispute relating to this Agreement shall be submitted exclusively to the jurisdiction of the courts of Lake County Ohio.

15. *Miscellaneous*. Nothing contained in this Agreement shall be understood as conferring on Optionee any right to continue as an employee of STERIS or any Subsidiary. STERIS reserves the right to correct any clerical, typographical, or other error in this Agreement or otherwise with respect to this grant. This Agreement shall inure to the benefit of and be binding upon its parties and their respective heirs, executors, administrators, successors, and assigns, but the Option shall not be transferable by Optionee other than as provided in Section 17 of the Plan.

16. *Extended Option Exercises*. (a) Pursuant to Section 11 of the Plan, the Board hereby consents to the Optionee's Qualifying Retirement if, at the time that the Optionee terminates service with STERIS, the Optionee satisfies the requirements of Section 11(b)(iii) of the Plan other than the requirement of the Board having consented thereto (which consent is hereby given). Notwithstanding Section 11(b)(i) of the Plan, for purposes of this Agreement and for purposes of the Option and the Plan provisions relating to this Agreement and the Option that use the term "Extended Exercise Period", "Extended Exercise Period" means the period that begins on the date of retirement and ends on the expiration date of the Option; provided, however, (i) if at any time during the Extended Exercise Period, the Optionee fails to remain in Good Standing, any portion of this Option then outstanding and held by the Optionee shall be forfeited and of no force or effect; and (ii) if the Optionee dies during the Extended Exercise Period and while in Good Standing, this Option will thereafter be exercisable, to the extent exercisable by the Optionee on the date of his death, at the same times (for so long and only so long after the Optionee's death) as if the Optionee had continued in the service of the Company through the date of the Optionee's death. The foregoing provisions of this Section 16(a) and the provisions of Section 11(b) of the Plan shall not apply to this Option, and the Optionee shall not be deemed to have terminated employment in a Qualifying Retirement at such time as his or her employment terminates, if at the time of the grant of this Option the Optionee is a resident of the United Kingdom (other than a US expatriate then residing in the United Kingdom) or the application of such provisions would otherwise violate applicable law because of the age requirement included in the Qualifying Retirement definition.

(b) Without limiting the foregoing and notwithstanding Section 11(b)(i) of the Plan, if the Optionee has at least twenty-five consecutive years of service at the time his Service Termination Date occurs, the Optionee shall be entitled to exercise the vested portion of this Option from time to time on any date during the period that begins on Optionee's Service Termination Date and ends on the expiration of this

Option ("Special Service Exercise Period"); provided, however, (i) if, at any time during the Special Service Exercise Period, the Optionee fails to remain in Good Standing, any portion of this Option then held by Optionee shall be forfeited and of no force or effect; and (ii) if the Optionee dies during the Special Service Exercise Period and while in Good Standing, the Option will thereafter be exercisable, to the extent exercisable by the Optionee on the date of the Optionee's death, at the same times (for so long and only so long after the Optionee's death) as if the Optionee had continued in the service of the Company through the date of the Optionee's death.

(c) For the purposes of this Section 16, the Optionee will cease to remain in "Good Standing" during his or her Extended Exercise Period or Special Service Exercise Period if the Optionee engages or has engaged in any Detrimental Activity or commits or has committed a material violation of any applicable provision of any Company policy or of any Evidence of Award or other agreement with the Company or a subsidiary or if, at any time during the Extended Exercise Period or Special Service Exercise Period, he or she otherwise acts in a manner detrimental to the interests of the Company or any of its Subsidiaries, including but not limited to, if the Optionee is a Non-Employee Director, directly or indirectly materially competing with the Company or any of its Subsidiaries.

STERIS has caused this Agreement to be executed on its behalf by its duly authorized officer, and Optionee has entered into this Agreement and accepted all terms and conditions thereof by electronic acceptance and/or by the signed Acknowledgment, either of which has the same force and binding effect as if this Agreement were physically signed by Optionee, all as of the Date of Grant.

STERIS plc	**Optionee**
By:	**Signature by electronic acceptance and/or execution of the Acknowledgment and Acceptance form.**
J. Adam Zangerle Senior Vice President, General Counsel & Company Secretary	

Exhibit 15.1

LETTER REGARDING UNAUDITED INTERIM FINANCIAL INFORMATION

Shareholders and Board of Directors
STERIS plc

We are aware of the incorporation by reference in the following STERIS plc Registration Statements of our review report dated November 7, 2019 relating to the unaudited consolidated interim financial statements of STERIS plc and subsidiaries that are included in its Form 10-Q for the quarter ended September 30, 2019:

Registration Number	Description
333-230557	Form S-8 Registration Statement of STERIS plc pertaining to the STERIS Corporation 401(k) Plan
333-230558	Form S-8 Registration Statement of STERIS plc pertaining to the STERIS plc 2006 Long-Term Equity Incentive Plan (As Assumed, Amended and Restated Effective March 28, 2019)

/s/ Ernst & Young LLP

Cleveland, Ohio
November 7, 2019

Exhibit 31.1

CERTIFICATION OF THE PRINCIPAL EXECUTIVE OFFICER

I, Walter M Rosebrough, Jr., certify that:

1. I have reviewed this quarterly report on Form 10-Q of STERIS plc;
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.

Date: November 7, 2019

/s/ WALTER M ROSEBROUGH, JR

Walter M Rosebrough, Jr.
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION OF THE PRINCIPAL FINANCIAL OFFICER

I, Michael J. Tokich, certify that:

1. I have reviewed this quarterly report on Form 10-Q of STERIS plc;
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.

Date: November 7, 2019

/s/ MICHAEL J. TOKICH

Michael J. Tokich
Senior Vice President and Chief Financial Officer

Exhibit 32.1

Certification Pursuant to § 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, in connection with the filing of the Form 10-Q of STERIS plc (the "Company") for the quarter ended September 30, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certifies, that, to such officer's knowledge:

(1) The Report 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 the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

	/s/ WALTER M ROSEBROUGH, JR
Name:	**Walter M Rosebrough, Jr.**
Title:	**President and Chief Executive Officer**
	/s/ MICHAEL J. TOKICH
Name:	**Michael J. Tokich**
Title:	**Senior Vice President and Chief Financial Officer**

Dated: November 7, 2019