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

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2017

or

o **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 1-37614

STERIS plc

(Exact name of registrant as specified in its charter)

England and Wales	**98-1203539**
(State or other jurisdiction of incorporation or organization)	**(IRS Employer Identification No.)**
Chancery House, 190 Waterside Road, Hamilton Industrial Park Leicester, United Kingdom	**LE51QZ**
(Address of principal executive offices)	**(Zip code)**

44-116-276-8636
(Registrant's telephone number, including area code)

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 x No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, 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 and post such files). Yes x No o

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

Large Accelerated Filer x	Accelerated Filer o
Non-Accelerated Filer o (Do not check if a smaller reporting company)	Smaller Reporting Company o
	Emerging Growth Company o

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 o No x

The number of ordinary shares outstanding as of November 3, 2017: 85,052,363

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 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, 2017	March 31, 2017
	(Unaudited)	
Assets		
Current assets:		
Cash and cash equivalents	$ 295,628	$ 282,918
Accounts receivable (net of allowances of $12,684 and $10,357, respectively)	449,371	483,451
Inventories, net	224,795	197,837
Prepaid expenses and other current assets	57,441	53,596
Total current assets	1,027,235	1,017,802
Property, plant, and equipment, net	962,515	915,908
Goodwill and intangibles, net	3,091,095	2,956,190
Other assets	39,431	34,555
Total assets	$ 5,120,276	$ 4,924,455
Liabilities and equity		
Current liabilities:		
Accounts payable	$ 129,208	$ 133,479
Accrued income taxes	10,856	14,640
Accrued payroll and other related liabilities	71,255	78,575
Accrued expenses and other	156,151	154,889
Total current liabilities	367,470	381,583
Long-term indebtedness	1,445,297	1,478,361
Deferred income taxes, net	178,726	171,805
Other liabilities	87,978	82,673
Total liabilities	$ 2,079,471	$ 2,114,422
Commitments and contingencies (see Note 8)		
Preferred shares, with £0.10 par value; 100 shares authorized; 100 issued and outstanding	15	15
Ordinary shares, with £0.10 par value; £17,006 shares aggregate par amount authorized; 85,123 and 84,948 ordinary shares issued and outstanding, respectively	2,081,494	2,085,134
Retained earnings	1,028,543	954,155
Accumulated other comprehensive loss	(80,059)	(240,702)
Total shareholders' equity	3,029,993	2,798,602
Noncontrolling interests	10,812	11,431
Total equity	3,040,805	2,810,033
Total liabilities and equity	$ 5,120,276	$ 4,924,455

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,	
	2017	**2016**	**2017**	**2016**
Revenues:				
Product	**$ 286,557**	$ 292,216	**$ 560,162**	$ 563,966
Service	**347,602**	354,199	**681,961**	720,827
Total revenues	**634,159**	646,415	**1,242,123**	1,284,793
Cost of revenues:				
Product	**152,611**	155,110	**295,856**	297,809
Service	**214,787**	243,397	**423,385**	499,086
Total cost of revenues	**367,398**	398,507	**719,241**	796,895
Gross profit	**266,761**	247,908	**522,882**	487,898
Operating expenses:				
Selling, general, and administrative	**153,356**	163,680	**309,167**	315,566
Research and development	**13,974**	14,617	**27,978**	29,045
Restructuring expenses	**27**	48	**78**	202
Total operating expenses	**167,357**	178,345	**337,223**	344,813
Income from operations	**99,404**	69,563	**185,659**	143,085
Non-operating expenses, net:				
Interest expense	**12,683**	10,924	**25,149**	21,995
Interest income and miscellaneous expense	**(626)**	(284)	**(1,091)**	(778)
Total non-operating expenses, net	**12,057**	10,640	**24,058**	21,217
Income before income tax expense	**87,347**	58,923	**161,601**	121,868
Income tax expense	**22,903**	18,721	**38,942**	32,955
Net income	**64,444**	40,202	**122,659**	88,913
Less: Net income (loss) attributable to noncontrolling interests	**(15)**	(214)	**123**	95
Net income attributable to shareholders	**$ 64,459**	$ 40,416	**$ 122,536**	$ 88,818
Net income per share attributed to shareholders				
Basic	**$ 0.76**	$ 0.47	**$ 1.44**	$ 1.03
Diluted	**$ 0.75**	$ 0.47	**$ 1.43**	$ 1.03
Cash dividends declared per share ordinary outstanding	**$ 0.31**	$ 0.28	**$ 0.59**	$ 0.53

See notes to consolidated financial statements.

STERIS PLC AND SUBSIDIARIES

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

	Three Months Ended September 30,		Six Months Ended September 30,	
	2017	**2016**	**2017**	**2016**
Net income	**$ 64,444**	$ 40,202	**$ 122,659**	$ 88,913
Less: Net income (loss) attributable to noncontrolling interests	**(15)**	(214)	**123**	95
Net income attributable to shareholders	**64,459**	40,416	**122,536**	88,818
Other comprehensive income (loss)				
Unrealized gain (loss) on available for sale securities, (net of taxes of $268, $80, $483 and $67, respectively)	**1,103**	26	**1,771**	(94)
Amortization of pension and postretirement benefit plans costs, (net of taxes of $250, $242, $500 and $482, respectively)	**(404)**	(390)	**(808)**	(780)
Change in cumulative currency translation adjustment	**66,819**	(7,946)	**159,680**	(24,995)
Total other comprehensive income (loss)	**67,518**	(8,310)	**160,643**	(25,869)
Comprehensive income	**$ 131,977**	$ 32,106	**$ 283,179**	$ 62,949

See notes to consolidated financial statements.

STERIS PLC AND SUBSIDIARIES

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

	Six Months Ended September 30,	
	2017	**2016**
Operating activities:		
Net income	**$ 122,659**	$ 88,913
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation, depletion, and amortization	**89,199**	103,861
Deferred income taxes	**(3,272)**	(4,606)
Share-based compensation expense	**12,029**	10,564
(Gain) loss on the disposal of property, plant, equipment, and intangibles, net	**(578)**	281
Loss on sale of businesses, net	**1,134**	13,802
Other items	**7,521**	5,696
Changes in operating assets and liabilities, net of effects of acquisitions:		
Accounts receivable, net	**42,769**	11,671
Inventories, net	**(19,009)**	(21,723)
Other current assets	**(4,225)**	6,216
Accounts payable	**(8,615)**	(16,954)
Accruals and other, net	**(22,235)**	(9,220)
Net cash provided by operating activities	**217,377**	188,501
Investing activities:		
Purchases of property, plant, equipment, and intangibles, net	**(75,420)**	(73,866)
Proceeds from the sale of property, plant, equipment, and intangibles	**2,075**	4,763
Proceeds from the sale of businesses	**1,313**	131,586
Purchase of investments	**—**	(6,356)
Acquisition of businesses, net of cash acquired	**(29,509)**	(64,872)
Net cash used in investing activities	**(101,541)**	(8,745)
Financing activities:		
Payments on long-term obligations	**(15,000)**	(10,000)
Payments under credit facilities, net	**(38,199)**	(47,646)
Deferred financing fees and debt issuance costs	**(44)**	—
Acquisition related deferred or contingent consideration	**(1,876)**	(6,000)
Repurchases of ordinary shares	**(20,652)**	(59,895)
Cash dividends paid to ordinary shareholders	**(50,280)**	(45,585)
Proceeds from issuance of equity to minority shareholders	**—**	5,022
Stock option and other equity transactions, net	**6,706**	2,494
Net cash used in financing activities	**(119,345)**	(161,610)
Effect of exchange rate changes on cash and cash equivalents	**16,219**	(12,636)
Increase in cash and cash equivalents	**12,710**	5,510
Cash and cash equivalents at beginning of period	**282,918**	248,841
Cash and cash equivalents at end of period	**$ 295,628**	$ 254,351

See notes to consolidated financial statements.

STERIS PLC AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)
For the Three and Six Months Ended September 30, 2017 and 2016
(dollars in thousands, unless noted and except per share amounts)

1. Nature of Operations and Summary of Significant Accounting Policies

Nature of Operations

STERIS plc ("Parent") was organized in 2014 under the name Solar New HoldCo Limited as a private limited company for the purpose of effecting under the laws of England and Wales the combination ("Combination") of STERIS Corporation, an Ohio corporation ("Old STERIS"), and Synergy Health plc, a public limited company organized under the laws of England and Wales ("Synergy"). Effective November 2, 2015 the Parent was re-registered as a public company under the name STERIS plc and the Combination closed. As a result of the Combination closing, STERIS plc became the ultimate parent company of Old STERIS and Synergy. Synergy has been re-registered under the name of Synergy Health Limited.

STERIS offers Customers capital equipment products, such as sterilizers and surgical tables; connectivity solutions such as operating room integration; consumable products, such as detergents, gastrointestinal endoscopy accessories, barrier product solutions, and other products and services, including: equipment installation and maintenance, microbial reduction of medical devices, instrument and scope repair solutions, among other services.

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, 2017 dated May 26, 2017. The Consolidated Balance Sheet at March 31, 2017 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 three and six month periods ended September 30, 2017 are not necessarily indicative of results that may be expected for future quarters or for the full fiscal year ending March 31, 2018.

Recently Issued Accounting Standards Impacting the Company

Recently issued accounting standards impacting the Company are presented in the following table:

(dollars in thousands, except as noted)

Standard	Date of Issuance	Description	Date of Adoption	Effect on the financial statements or other significant matters
Standards that have recently been adopted				
ASU 2016-07, "Investments - Equity Method and Joint Ventures, Simplifying the Transition to the Equity Method of Accounting" (Topic 323)	March 2016	The update replaces the previous requirement to retroactively adopt the equity method. The new standard requires that the equity method investor add the cost of acquiring the additional interest in the investee to the current basis of the investor's previously held interest and adopt the equity method of accounting as of the date the investment becomes qualified for equity method accounting. The standard is effective for annual periods beginning after December 15, 2016 and interim periods within that period. Early adoption is permitted.	First Quarter Fiscal 2018	The prospective adoption of this standard did not have a material impact on our consolidated statements of financial position, results of operations and cash flows.
ASU 2015-11, "Inventory - Simplifying the Measurement of Inventory" (Topic 330)	July 2015	The standard requires an entity to measure inventory within the scope of this update at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. Subsequent measurement is unchanged for inventory measured using LIFO or the retail inventory method. The standard is effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years and should be applied prospectively. Early adoption is permitted.	First Quarter Fiscal 2018	The prospective adoption of this standard did not have a material impact on our consolidated statements of financial position, results of operations and cash flows.
Standards that have yet to be adopted				
ASU 2014-09, "Revenue from Contracts with Customers" and subsequently issued amendments	May 2014	The standard will replace existing revenue recognition standards and significantly expand the disclosure requirements for revenue arrangements. It may be adopted either retrospectively or on a modified retrospective basis to new contracts and existing contracts with remaining performance obligations as of the effective date. The standard update is effective for annual periods beginning after December 15, 2017 and interim periods within that period. Early adoption is not permitted before the original public entity effective date of December 15, 2016.	N/A	We have started the implementation process, including a review of Customer contracts, and we are continuing to evaluate and quantify the potential impacts that the standard may have on our consolidated statements of financial position, results of operations, and related disclosures. We currently anticipate adopting this standard using the modified-retrospective method.

(dollars in thousands, except as noted)

ASU 2016-01, "Financial Instruments - Overall - Recognition and Measurement of Financial Assets and Liabilities" (Subtopic 825-10)	January 2016	The standard changes how equity investments are measured and the presentation of changes in the fair value of financial liabilities measured under the fair value option. Presentation and disclosure requirements for financial instruments are also affected. Entities will be required to measure equity investments that do not result in consolidation and are not recorded under the equity method at fair value with changes in fair value recognized in net income. The standard clarifies guidance related to the valuation allowance assessment when recognizing deferred tax assets resulting from unrealized losses on available-for-sale securities. The accounting for other financial instruments, such as loans, investments in debt securities, and financial liabilities is largely unchanged. The standard is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years.	N/A	We are in the process of evaluating the impact that the standard will have on our consolidated statements of financial position, results of operations and cash flows.
ASU 2016-02, "Leases" (Topic 842)	February 2016	The update 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.	N/A	We are in the process of evaluating the impact that the standard will have on our consolidated statements of financial position, results of operations and cash flows.
ASU 2016-15, "Statement of Cash Flows" (Topic 230)	August 2016	This update provides guidance on the following several specific cash flow issues: debt prepayment or debt extinguishment costs, settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of borrowing, contingent consideration payments made after a business combination, proceeds from the settlement of insurance claims, proceeds from the settlement of corporate-owned life insurance policies, including bank-owned life insurance policies, distributions received from equity method investees, beneficial interests in securitization transactions, and separately identifiable cash flows and application of the predominance principle. The standard is effective for annual periods beginning after December 15, 2017 and interim periods within that period. Early adoption is permitted.	N/A	We are in the process of evaluating the impact that the standard will have on our consolidated statement of cash flows.
ASU 2016-16, "Income Taxes, Intra-Entity Transfers of Assets Other Than Inventory" (Topic 740)	October 2016	The update improves the accounting for the income tax consequences of intra-entity transfers of assets other than inventory. The new standard requires the recognition of income tax consequences resulting from an intra-entity transfer of an asset other than inventory when the transfer occurs. The standard is effective for annual periods beginning after December 15, 2018. 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.

(dollars in thousands, except as noted)

ASU 2017-04, "Intangibles - Goodwill and Other, Simplifying the Test for Goodwill Impairment" (Topic 350)	January 2017	This update eliminates Step 2 from the goodwill impairment test. In computing the implied fair value of goodwill under Step 2, an entity had to perform procedures to determine the fair value at the impairment testing date of its assets and liabilities (including unrecognized assets and liabilities) following the procedures that would be required in determining the fair value of assets acquired and liabilities assumed in a business combination. Instead, under the amendments of this standard, an entity would perform its annual or interim goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. The loss should not exceed the total amount of goodwill allocated to that reporting unit. Tax effects should be considered. The standard is effective for fiscal years beginning after December 15, 2019. Early adoption is permitted.	N/A	We are in process of evaluating the impact that the standard will have on our annual goodwill impairment test.
ASU 2017-07 "Compensation - Retirement Benefits - Improving the Presentation of Net Periodic Pension and Net Periodic Postretirement Benefit Cost" (Topic 715)	March 2017	This standard requires that an employer report the service cost component in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net benefit cost are required to be presented in the income statement separately from the service cost component and outside the subtotal of income from operations, if one is presented. The standard is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2017. Early adoption is permitted.	N/A	We are in the process of evaluating the impact that the standard will have on our consolidated statements of financial position and results of operations.
ASU 2017-09 "Compensation - Stock Compensation" (Topic 718)	May 2017	The update provides guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. This standard is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2017. Early adoption is permitted.	N/A	We are in the process of evaluating the impact that the standard will have on our consolidated statements of financial position, results of operations and cash flows.

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, 2017 dated May 26, 2017. Our significant and critical accounting policies, estimates, and assumptions have not changed materially from March 31, 2017.

(dollars in thousands, except as noted)

2. Business Acquisitions and Divestitures

Fiscal 2018 Acquisitions

We completed four minor purchases that continued to expand our product and service offerings in the Healthcare Products and the Applied Sterilization Technologies segments. The aggregate purchase price associated with these transactions was approximately $34.2 million, including potential contingent consideration of $5.3 million. The purchase price for the acquisitions was financed with both cash on hand and with credit facility borrowings. Acquisition related costs are recorded in the Selling, General and Administrative line of the Consolidated Statements of Income and amounts are not material. Purchase price allocations will be finalized within a measurement period not to exceed one year from closing.

Fiscal 2017 Acquisitions

Compass Medical, Inc.

On September 16, 2016, we purchased the assets of Compass Medical, Inc., for approximately $16.0 million. The purchase price was financed with credit facility borrowings. Compass Medical, Inc. specializes in the sale and repair of flexible endoscopes. On an annual basis, Compass Medical, Inc. generated revenues of approximately $6.0 million and is being integrated into our Healthcare Specialty Services segment.

Phoenix Surgical Holdings, Ltd. and Endo-Tek LLP

On August 31, 2016, we purchased 100% of the shares of Phoenix Surgical Holdings, Ltd. and the assets of Endo-Tek LLP for approximately $14.3 million combined, net of cash acquired. The purchase price was financed with cash on hand. On an annual basis, these operations, which specialize in the repair of endoscopes, generated approximately $8.0 million in combined revenue and are being integrated into our Healthcare Specialty Services segment.

Medisafe

On July 22, 2016, we purchased 100% of the shares of Medisafe Holdings, Ltd., a U.K. manufacturer of washer/disinfector equipment and related consumables and services for approximately $34.5 million, net of cash acquired. The purchase price was financed with cash on hand. On an annual basis, the Medisafe product line generated approximately $18.0 million in revenue. The acquisition of Medisafe provides washer manufacturing and research and development capabilities in the U.K. Medisafe's products and services are being integrated into our Healthcare Products segment.

The Consolidated Financial Statements include the operating results of acquisitions from the acquisition dates. The table below summarizes the allocation of the purchase price to the net assets acquired based on fair values at the acquisition date for fiscal 2017 acquisitions.

	Medisafe	Compass	Phoenix and Endo-Tek
Cash	$ 3,751	$ —	$ 769
Accounts receivable	3,634	629	1,123
Inventory	2,454	659	950
Property, plant and equipment	639	13	1,092
Other assets	—	31	46
Intangible assets	17,151	5,992	7,824
Goodwill	19,599	8,987	5,938
Total Assets	47,228	16,311	17,742
Current liabilities	(5,562)	(309)	(1,373)
Non-current liabilities	(3,398)	—	(1,263)
Total Liabilities	(8,960)	(309)	(2,636)
Net Assets	$ 38,268	$ 16,002	$ 15,106

Fiscal 2017 Divestitures

Netherlands Linen Management Services

On February 9, 2017, we sold our Synergy Health Netherlands Linen Management Services business to EMEA B.V. Annual revenues for Synergy Health Netherlands Linen Management Services were approximately $75 million and were included in the Healthcare Specialty Services segment. We recorded a $42.9 million pre-tax loss on the sale in Selling, general, and administrative expense in the Consolidated Statements of Income as a result of the divestiture. In connection with the divestiture, we entered into a loan agreement with the purchasers to provide financing of up to €15 million for a term of up to 15 years. Loans carry an interest rate of 4 percent for the first four years and 12 percent thereafter. No borrowings were outstanding at September 30, 2017.

US Linen Management Services

On November 3, 2016 we sold our Synergy Health US Linen Management Services business to SRI Healthcare LLC. Annual revenues for the US Linen Management Services were approximately $50 million and were included in the Healthcare Specialty Services segment. We recorded proceeds of $4.5 million and recognized a pre-tax loss on the sale, subject to final adjustments, of $31.2 million in Selling, general, and administrative expense in the Consolidated Statement of Income.

Synergy Health Labs

On September 2, 2016 we sold Synergy Health Laboratory Services to SYNLAB International. Annual revenues for the Synergy Health Labs were approximately $15 million and were included in the Applied Sterilization Technologies segment. We recorded proceeds of $26.3 million, net of cash divested, and recognized a pre-tax gain on the sale of $17.4 million in Selling, general, and administrative expense in the Consolidated Statement of Income.

Applied Infection Control

On August 31, 2016 we completed the sale of our Applied Infection Control ("AIC") product line to DEB USA, Inc., a wholly-owned subsidiary of S.C Johnson & Son, Inc. Annual revenues for the AIC product line were typically less than $50 million and were included in the Healthcare Products segment. We recorded proceeds of $41.8 million and recognized a pre-tax gain on the sale of $35.5 million in Selling, general, and administrative expense in the Consolidated Statement of Income.

UK Linen Management Services

On July 1, 2016 we sold our Synergy Health UK Linen Management Services business to STAR Mayan Limited. Annual revenues for the UK Linen Management Services were approximately $50 million and were included in the Healthcare Specialty Services segment. We recorded proceeds of $65.4 million, net of cash divested, and recognized a pre-tax loss on the sale of $66.3 million after allocation of a portion of the identified intangibles and goodwill associated with the Combination with Synergy in Selling, general, and administrative expense in the Consolidated Statement of Income.

(dollars in thousands, except as noted)

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, 2017	March 31, 2017
Raw materials	**$ 73,961**	$ 65,300
Work in process	**30,933**	26,538
Finished goods	**158,265**	140,559
LIFO reserve	**(17,640)**	(16,706)
Reserve for excess and obsolete inventory	**(20,724)**	(17,854)
Inventories, net	**$ 224,795**	$ 197,837

4. Property, Plant and Equipment

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

	September 30, 2017	March 31, 2017
Land and land improvements (1)	**$ 47,214**	$ 46,848
Buildings and leasehold improvements	**405,556**	393,692
Machinery and equipment	**536,556**	508,247
Information systems	**132,935**	119,920
Radioisotope	**456,982**	436,787
Construction in progress (1)	**107,078**	77,421
Total property, plant, and equipment	**1,686,321**	1,582,915
Less: accumulated depreciation and depletion	**(723,806)**	(667,007)
Property, plant, and equipment, net	**$ 962,515**	$ 915,908

(1) Land is not depreciated. Construction in progress is not depreciated until placed in service.

5. Debt

Indebtedness was as follows:

	September 30, 2017	March 31, 2017
Private Placement	**$ 978,315**	$ 960,684
Deferred financing costs	**(3,683)**	(3,927)
Credit Agreement	**470,665**	521,604
Total long term debt	**$ 1,445,297**	$ 1,478,361

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, 2017 dated May 26, 2017.

(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, 2017	March 31, 2017
Accrued payroll and other related liabilities:		
Compensation and related items	**$ 30,157**	$ 29,777
Accrued vacation/paid time off	**10,622**	8,651
Accrued bonuses	**16,810**	20,715
Accrued employee commissions	**10,645**	16,201
Other postretirement benefit obligations-current portion	**2,187**	2,187
Other employee benefit plans obligations-current portion	**834**	1,044
Total accrued payroll and other related liabilities	**$ 71,255**	$ 78,575
Accrued expenses and other:		
Deferred revenues	**$ 71,905**	$ 71,020
Self-insured risk reserves-current portion	**8,730**	6,633
Accrued dealer commissions	**14,241**	16,122
Accrued warranty	**6,576**	6,861
Asset retirement obligation-current portion	**1,313**	—
Other	**53,386**	54,253
Total accrued expenses and other	**$ 156,151**	$ 154,889
Other liabilities:		
Self-insured risk reserves-long-term portion	**$ 15,584**	$ 15,584
Other postretirement benefit obligations-long-term portion	**13,284**	13,821
Defined benefit pension plans obligations-long-term portion	**27,539**	27,234
Other employee benefit plans obligations-long-term portion	**3,880**	3,661
Accrued long-term income taxes	**2,593**	2,089
Asset retirement obligation-long-term portion	**9,478**	9,953
Other	**15,620**	10,331
Total other liabilities	**$ 87,978**	$ 82,673

7. Income Tax Expense

The effective income tax rates for the three month periods ended September 30, 2017 and 2016 were 26.2% and 31.8%, respectively. The effective income tax rates for the six month periods ended September 30, 2017 and 2016 were 24.1% and 27.0%, respectively. During the prior year, the tax rates were higher due to non-deductible losses on divestitures.

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 non-United States jurisdictions. We are no longer subject to United States federal examinations for years before fiscal 2015 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 2012. We remain subject to tax authority audits in various jurisdictions wherever we do business. We do not expect the results of these examinations to have a material adverse effect on our consolidated financial statements.

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, 2017 dated May 26, 2017: Item 1 titled “Business - Information with respect to our Business in General - Government Regulation”, and the “Risk Factors” in Item 1A titled "Product related regulations and claims".

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.

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.

Additional information regarding our contingencies is included in Item 2 titled, “Management’s Discussion and Analysis of Financial Conditions and Results of Operations" under "Contingencies".

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. Corporate, which is presented separately, contains costs that are associated with being a publicly traded company and certain other corporate costs.

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. Linen Management Services were divested in fiscal 2017.

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

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

Certain minor organizational changes were made to better align with our Customers, resulting in several smaller operations shifting among the segments. The prior period revenues and operating income measures have been recast for comparability.

The accounting policies for reportable segments are the same as those for the consolidated Company. Management evaluates performance and allocates resources based on a segment operating income measure. Operating income (loss) for each segment is calculated as the segment's gross profit less direct expenses and indirect cost allocations, which result in the full allocation of all distribution and research and development expenses, and the partial allocation of corporate costs. These allocations are based upon variables such as segment headcount and revenues. Products and services are transferred between segments at cost. Corporate includes certain unallocated corporate costs related to being a publicly traded company and legacy pension and post-retirement benefits. Segment operating income excludes certain adjustments which include acquisition related costs, amortization of acquired intangibles, restructuring costs and other charges that management believes may or may not recur with similar materiality or impact on operating income in future periods. Management believes that by excluding these items they gain better insight and greater transparency of the operating performance of the segments, thus aiding them in more meaningful financial trend analysis and operational decision making.

For the three and six months ended September 30, 2017, 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, 2017, dated May 26, 2017.

(dollars in thousands, except as noted)

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

	Three Months Ended September 30,		Six Months Ended September 30,	
	2017	2016	2017	2016
Revenues:				
Healthcare Products	**$ 302,094**	$ 306,676	**$ 591,158**	$ 589,353
Healthcare Specialty Services	**116,111**	137,661	**229,545**	289,636
Life Sciences	**89,461**	81,519	**170,396**	162,917
Applied Sterilization Technologies	**126,493**	120,559	**251,024**	242,887
Total revenues	**$ 634,159**	$ 646,415	**$ 1,242,123**	$ 1,284,793
Segment operating income:				
Healthcare Products	**$ 47,493**	$ 50,835	**$ 89,730**	$ 86,808
Healthcare Specialty Services	**9,323**	1,370	**15,317**	3,843
Life Sciences	**27,646**	22,471	**49,461**	46,715
Applied Sterilization Technologies	**43,394**	41,540	**84,592**	81,948
Corporate	**(6,202)**	(5,149)	**(10,067)**	(6,723)
Total segment operating income	**$ 121,654**	$ 111,067	**$ 229,033**	$ 212,591
Less: Adjustments				
Restructuring charges (1)	**$ 27**	$ 48	**$ 78**	$ 202
Amortization of acquired intangible assets (2)	**17,171**	17,779	**33,473**	37,308
Acquisition and integration related charges (3)	**3,393**	6,640	**7,422**	11,873
Loss on fair value adjustment of acquisition related contingent consideration (2)	**—**	1,850	**—**	1,850
Net loss on divestiture of businesses (2)	**1,010**	13,802	**1,134**	13,802
Amortization of inventory and property "step up" to fair value (2)	**649**	1,385	**1,267**	4,471
Total operating income	**$ 99,404**	$ 69,563	**$ 185,659**	$ 143,085

(1) For more information related to restructuring, see our Annual Report on Form 10-K for the year ended March 31, 2017, dated May 26, 2017.
(2) For more information regarding our recent acquisitions and divestitures see Note 2 titled, "Business Acquisitions and Divestitures", as well as our Annual Report on Form 10-K for the year ended March 31, 2017, dated May 26, 2017.
(3) Acquisition and integration related charges include transaction costs and integration expenses associated with acquisitions.

10. Shares and Preferred Shares

Ordinary shares

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):	2017	2016	2017	2016
Weighted average shares outstanding—basic	**85,199**	85,851	**85,145**	85,944
Dilutive effect of share equivalents	**670**	482	**650**	482
Weighted average shares outstanding and share equivalents—diluted	**85,869**	86,333	**85,795**	86,426

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)	**2017**	**2016**	**2017**	**2016**
Number of share options	**416**	627	**492**	496

Preferred Shares

Pursuant to an engagement letter dated October 23, 2015, we issued 100,000 preferred shares, par value of £0.10 each, for an aggregate consideration of approximately $15, in satisfaction of debt owed to a service provider. The holders of the preferred shares are entitled to a fixed cumulative preferential annual dividend of 5 percent on the amount paid periodically on the preferred shares respectively held by them. On a return of capital of the Company whether on liquidation or otherwise, the holders of the preferred shares shall be entitled to receive the sum of £0.10 per preferred share plus any accrued but unpaid dividends out of the assets of the Company available for distribution to its shareholders, but will not be entitled to any further participation in the assets of the Company. The holders of the preferred shares will have no right to attend, speak or vote, whether in person or by proxy, at any general meeting of the Company or any meeting of a class of members of the Company in respect of the preferred shares and will not be entitled to receive any notice of meetings.

11. Repurchases of Ordinary Shares

On August 9, 2016, the Company announced that its Board of Directors had authorized the purchase of up to $300 million of our ordinary shares. We may enter into share repurchase contracts until August 2, 2021 to effect these purchases. Shares may be repurchased from time to time through open market transactions, including 10b5-1 plans. The repurchase program may be suspended or discontinued at any time. During the first half of fiscal 2018, we repurchased 184,547 of our ordinary shares for the aggregate amount of $15,685 pursuant to this authorization.

During the first half of fiscal 2018, we obtained 101,135 of our ordinary shares in the aggregate amount of $5,600 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 Compensation Committee of the Board of Directors, or 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, subject to the terms of the option plan and agreements. Generally, one-fourth of the stock options granted 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 full year of employment after the grant date. As of September 30, 2017, 4,995,098 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 2018 and 2017:

	Fiscal 2018	Fiscal 2017
Risk-free interest rate	**2.01%**	1.29%
Expected life of options	**5.7 years**	5.7 years
Expected dividend yield of stock	**1.58%**	1.54%
Expected volatility of stock	**22.08%**	22.92%

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 2.25% and 1.85% was applied in fiscal 2018 and 2017, 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**	**Average Remaining Contractual Term**	**Aggregate Intrinsic Value**
Outstanding at March 31, 2017	1,945,274	$ 50.28		
Granted	429,360	77.75		
Exercised	(227,914)	34.53		
Forfeited	(15,817)	66.56		
Outstanding at September 30, 2017	**2,130,903**	**$ 57.38**	**6.9 years**	**$ 66,102**
Exercisable at September 30, 2017	**1,241,541**	**$ 47.50**	**5.5 years**	**$ 50,776**

We estimate that 865,781 of the non-vested stock options outstanding at September 30, 2017 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 $88.40 closing price of our ordinary shares on September 30, 2017 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 2018 and fiscal 2017 was $10,243 and $3,386, respectively. Net cash proceeds from the exercise of stock options were $7,726 and $2,494 for the first six months of fiscal 2018 and fiscal 2017, respectively.

The weighted average grant date fair value of stock option grants was $15.51 and $13.42 for the first six months of fiscal 2018 and fiscal 2017, 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, 2017 and 2016 was $1,853 and $2,001, 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, 2017	780,526	34,013	$ 60.87
Granted	224,169	23,259	77.53
Vested	(189,141)	(19,676)	53.42
Forfeited	(27,151)	(660)	68.45
Non-vested at September 30, 2017	**788,403**	**36,936**	**$ 67.51**

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 2018 was $11,155.

As of September 30, 2017, there was a total of $44,525 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 2.31 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 half of fiscal 2018 were as follows:

	Warranties
Balance, March 31, 2017	$ 6,861
Warranties issued during the period	5,668
Settlements made during the period	(5,953)
Balance, September 30, 2017	**$ 6,576**

(dollars in thousands, except as noted)

We also sell product maintenance contracts to our Customers. These contracts range in terms from one to five years and require us to maintain and repair the product over the maintenance contract term. We initially record amounts due from Customers under these contracts as a liability for deferred service contract revenue on the accompanying Consolidated Balance Sheets within "Accrued expenses and other." The liability recorded for such deferred service revenue was $32,955 and $32,136 as of September 30, 2017 and March 31, 2017, respectively. Such deferred revenue is then amortized on a straight-line basis over the contract term and recognized as service revenue on our accompanying Consolidated Statements of Income. The activity related to the liability for deferred service contract revenue is excluded from the table presented above.

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 first quarter of fiscal 2018, we also entered into forward foreign 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 foreign currency exchange contracts will mature during fiscal 2018. 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.

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, 2017, we held foreign currency forward contracts to buy 127.2 million Mexican pesos, 16.4 million Canadian dollars and 7.7 million Brazilian reais; and to sell 7.7 million euros and 3.2 million British pounds sterling. At September 30, 2017, we held commodity swap contracts to buy 310.1 thousand pounds of nickel.

	Asset Derivatives		Liability Derivatives	
Balance sheet location	Fair Value at September 30, 2017	Fair Value at March 31, 2017	Fair Value at September 30, 2017	Fair Value at March 31, 2017
Prepaid & Other	**$ 502**	$ 160	**$ —**	$ —
Accrued expenses and other	**—**	—	**1,247**	35

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			
		Three Months Ended September 30,		Six Months Ended September 30,	
	Location of gain (loss) recognized in income	2017	2016	2017	2016
Foreign currency forward contracts	Selling, general and administrative	**$ 321**	$ (531)	**$ (516)**	$ (1,550)
Commodity swap contracts	Cost of revenues	**$ 196**	$ 205	**$ 26**	$ 416

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 $65.1 million at September 30, 2017. 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, 2017 and March 31, 2017:

			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	**$ 295,628**	$ 282,918	**$ 295,628**	$ 282,918	**$ —**	$ —	**$ —**	$ —
Forward and swap contracts [1]	**502**	160	**—**	—	**502**	160	**—**	—
Investments [2]	**$ 15,610**	12,552	**15,610**	12,552	**—**	—	**—**	—
Liabilities:								
Forward and swap contracts [1]	**$ 1,247**	$ 35	**$ —**	$ —	**$ 1,247**	$ 35	**$ —**	$ —
Deferred compensation plans [2]	**1,732**	1,677	**1,732**	1,677	**—**	—	**—**	—
Long term debt [3]	**$ 1,445,297**	1,478,361	**—**	—	**$ 1,463,984**	1,496,966	**—**	—
Contingent consideration obligations [4]	**8,336**	4,451	**—**	—	**—**	—	**8,336**	4,451

(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. Changes in the value of the investment accounts are recognized each period based on the fair value of the underlying investments. 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 value of the investment are recognized each period based on the fair value of the investment.

(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, 2017 are summarized as follows:

	Contingent Consideration
Balance at March 31, 2017	$ 4,451
Additions	5,310
Payments	(1,535)
Currency translation adjustments	110
Balance at September 30, 2017	**$ 8,336**

Information regarding our investments is as follows:

	Investments at September 30, 2017 and March 31, 2017							
	Cost		Unrealized Gains [2]		Unrealized Losses [2]		Fair Value	
	September 30	March 31	September 30	March 31	September 30	March 31	September 30	March 31
Available-for-sale securities:								
Marketable equity securities and other [1]	**$ 11,037**	$ 11,037	**$ 2,939**	$ —	**$ —**	$ (72)	**$ 13,976**	$ 10,965
Mutual funds	**1,059**	1,091	**575**	496	**—**	—	**1,634**	1,587
Total available-for-sale securities	**$ 12,096**	$ 12,128	**$ 3,514**	$ 496	**$ —**	$ (72)	**$ 15,610**	$ 12,552

[1] Our marketable equity securities have been in a unrealized loss position for less than 12 months.
[2] Amounts reported include the impact of currency movements relative to the U.S. dollar.

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 and six months ended September 30, 2017 and 2016 were as follows:

	Gain (Loss) on Available for Sale Securities [1]		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	$ 846	$ 178	$ (2,759)	$ (2,355)	$ (145,664)	$ (238,525)	$ (147,577)	$ (240,702)
Other Comprehensive Income (Loss) before reclassifications	1,094	1,745	120	240	66,819	159,680	68,033	161,665
Amounts reclassified from Accumulated Other Comprehensive Income (Loss)	9	26	(524)	(1,048)	—	—	(515)	(1,022)
Net current-period Other Comprehensive (Loss)	1,103	1,771	(404)	(808)	66,819	159,680	67,518	160,643
Balance at September 30, 2017	**$ 1,949**	**$ 1,949**	**$ (3,163)**	**$ (3,163)**	**$ (78,845)**	**$ (78,845)**	**$ (80,059)**	**$ (80,059)**

(dollars in thousands, except as noted)

	Gain (Loss) on Available for Sale Securities [1]		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	$ (793)	$ (673)	$ 4,718	$ 5,108	$ (89,643)	$ (72,594)	$ (85,718)	$ (68,159)
Other Comprehensive Income (Loss) before reclassifications	17	(131)	103	206	(7,946)	(24,995)	(7,826)	(24,920)
Amounts reclassified from Accumulated Other Comprehensive Income (Loss)	9	37	(493)	(986)	—	—	(484)	(949)
Net current-period Other Comprehensive Income (Loss)	26	(94)	(390)	(780)	(7,946)	(24,995)	(8,310)	(25,869)
Balance at September 30, 2016	$ (767)	$ (767)	$ 4,328	$ 4,328	$ (97,589)	$ (97,589)	$ (94,028)	$ (94,028)

[1] Realized gain (loss) on available for sale securities is reported in the Interest income and miscellaneous expense line of the Consolidated Statements of Income.
[2] Amortization (gain) of defined benefit pension items is reported in the Selling, general and administrative expense line of the 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.

Report of Independent Registered Public Accounting Firm

Board of Directors and Shareholders of STERIS plc

We have reviewed the consolidated balance sheet of STERIS plc and subsidiaries ("the Company") as of September 30, 2017, and the related consolidated statements of income, comprehensive income and cash flows for the three-month and six-month periods ended September 30, 2017 and 2016. These financial statements are the responsibility of the Company's management.

We conducted our review in accordance with the standards of the Public Company Accounting Oversight Board (United States). A review of interim financial information 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 Public Company Accounting Oversight Board (United States), 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.

Based on our review, we are not aware of any material modifications that should be made to the consolidated financial statements referred to above 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), the consolidated balance sheet of STERIS plc and subsidiaries as of March 31, 2017, and the related consolidated statements of income, comprehensive income, shareholders' equity and cash flows for the year then ended (not presented herein) and we expressed an unqualified audit opinion on those consolidated financial statements in our report dated May 26, 2017. In our opinion, the accompanying consolidated balance sheet of STERIS plc and subsidiaries as of March 31, 2017, is fairly stated, in all material respects, in relation to the consolidated balance sheet from which it has been derived.

/s/ Ernst & Young LLP

Cleveland, Ohio
November 7, 2017

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, pay cash dividends and fund 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 2018 and fiscal 2017. It may also be helpful to read the MD&A in our Annual Report on Form 10-K for the year ended March 31, 2017, dated May 26, 2017. 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; net 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.
- Net debt-to-total capital – We define net debt-to-total capital as total debt less cash ("net debt") divided by the sum of net debt and shareholders' equity. We also 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 and instrument and scope repairs as well as revenues generated from contract sterilization and laboratory services offered through our Applied Sterilization Technologies segment. Service revenues also include linen management services operations divested in fiscal 2017.
- Capital Equipment Revenues – We define capital equipment revenues as revenues generated from sales of capital equipment, which includes steam sterilizers, low temperature liquid chemical sterilant processing systems, including SYSTEM 1 and 1E, washing systems, VHP® technology, water stills, and pure steam generators; 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 SYSTEM 1 and 1E consumables, V-Pro consumables, gastrointestinal endoscopy accessories, sterility assurance products, skin care products, 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 plc (“Parent”) was organized in 2014 under the laws of England and Wales under the name Solar New HoldCo Limited as a private limited company for the purpose of effecting under the laws of England and Wales the combination (“Combination”) of STERIS Corporation, an Ohio corporation (“Old STERIS”), and Synergy Health plc, a public limited company organized under the laws of England and Wales (“Synergy”). Effective November 2, 2015, the Parent was re-registered as a public company under the name of STERIS plc and the Combination closed. As a result of the Combination closing, STERIS plc became the ultimate parent company of Old STERIS and Synergy. Synergy has been re-registered under the name of Synergy Health Limited.

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. Our dedicated employees around the world work together to supply a broad range of solutions by offering a combination of capital equipment, consumables, and services to healthcare, pharmaceutical, industrial, and governmental Customers.

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 FDA 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.

We are actively pursuing new opportunities to adapt our proven technologies to meet the changing needs of the global marketplace. We are also executing on our strategic initiatives by expanding into adjacent markets with acquisitions, divesting non-core assets and integrating Synergy.

During fiscal 2017, we purchased Medisafe Holdings Ltd., a United Kingdom manufacturer of washer/disinfector equipment and related consumables and services. The purchase provides washer manufacturing and research and development capabilities in the U.K. We also completed several other minor purchases in fiscal 2018 and 2017, that expand our product and service offerings to our Customers.

During the first half of fiscal 2017, we divested our Applied Infection Control ("AIC") product line and certain businesses acquired in the Combination with Synergy including Linen Management Services in the United Kingdom and United States and Synergy Health Laboratory Services. These divested businesses generated approximately $115.0 million of revenues annually. During the second half of fiscal 2017 we divested the assets associated with Linen Management Services in the United States and Netherlands, which generated approximately $125.0 million of revenues annually.

Revenues for the second quarter of fiscal 2018 were $634.2 million, representing a decrease of 1.9% over the second quarter of fiscal 2017 revenues of $646.4 million. Revenues for the first half of fiscal 2018 were $1,242.1 million, representing a decrease of 3.3% over the revenues for the first half of fiscal 2017 of $1,284.8 million. The fiscal 2018 revenue decreases over the prior year periods were attributable to the fiscal 2017 divestitures and the negative impact of currencies, in the year-to-date period, which more than offset organic growth within all segments.

Gross margin percentage for the second quarter of fiscal 2018 was 42.1% compared with 38.4% for the second quarter of fiscal 2017. Gross margin percentage for the first half of fiscal 2018 was 42.1% compared with 38.0% for the first half of fiscal 2017. The fiscal 2018 gross margin percentage increases over the prior year periods were primarily due to the favorable impact of the divestitures of lower margin operations, favorable mix and pricing, and our fiscal 2018 acquisitions, which were slightly offset by the negative impact of currencies.

Operating income during the second quarter of fiscal 2018 was $99.4 million compared to $69.6 million for the second quarter of fiscal 2017. Operating income during the first half of fiscal 2018 was $185.7 million, compared to $143.1 million for the first half of fiscal 2017. The fiscal 2018 increases over the prior year periods were attributable to the gross margin improvement and lower acquisition related expenses.

Cash flows from operations were $217.4 million and free cash flow was $144.0 million in the first six months of fiscal 2018 compared to cash flows from operations of $188.5 million and free cash flow of $119.4 million in the first six months of fiscal 2017 (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 fiscal 2018 increases in cash flows from operations and free cash flow were primarily due to higher net income and lower working capital requirements.

Our debt-to-total capital ratio was 32.3% at September 30, 2017 and 34.6% at March 31, 2017. During the first six months of fiscal 2018, we declared and paid quarterly cash dividends of $0.59 per ordinary share.

Additional information regarding our financial performance during the second quarter and first half of fiscal 2018 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 fund future debt principal repayments and growth outside of core operations, repurchase shares, and pay cash dividends.

The following table summarizes the calculation of our free cash flow for the six months ended September 30, 2017 and 2016:

(dollars in thousands)	Six Months Ended September 30, 2017	2016
Net cash provided by operating activities	**$ 217,377**	$ 188,501
Purchases of property, plant, equipment and intangibles, net	**(75,420)**	(73,866)
Proceeds from the sale of property, plant, equipment and intangibles	**2,075**	4,763
Free cash flow	**$ 144,032**	$ 119,398

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 2018 compared with the same fiscal 2017 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, 2017 to the revenues for the three and six months ended September 30, 2016:

(dollars in thousands)	Three Months Ended September 30, 2017	2016	Change	Percent Change
Total revenues	**$ 634,159**	$ 646,415	$ (12,256)	(1.9)%
Revenues by type:				
Service revenues	**347,602**	354,199	(6,597)	(1.9)%
Consumable revenues	**141,241**	139,576	1,665	1.2 %
Capital equipment revenues	**145,316**	152,640	(7,324)	(4.8)%
Revenues by geography:				
United Kingdom revenues	**54,587**	53,369	1,218	2.3 %
United States revenues	**446,708**	450,513	(3,805)	(0.8)%
Other foreign revenues	**132,864**	142,533	(9,669)	(6.8)%

(dollars in thousands)	Six Months Ended September 30, 2017	2016	Change	Percent Change
Total revenues	**$ 1,242,123**	$ 1,284,793	$ (42,670)	(3.3)%
Revenues by type:				
Service revenues	**681,961**	720,827	(38,866)	(5.4)%
Consumable revenues	**289,103**	285,241	3,862	1.4 %
Capital equipment revenues	**271,059**	278,725	(7,666)	(2.8)%
Revenues by geography:				
United Kingdom revenues	**107,309**	123,808	(16,499)	(13.3)%
United States revenues	**869,667**	878,618	(8,951)	(1.0)%
Other foreign revenues	**265,147**	282,367	(17,220)	(6.1)%

Quarter over Quarter Comparison

Revenues decreased $12.3 million, or 1.9%, to $634.2 million for the three months ended September 30, 2017, as compared to $646.4 million for the same period in the prior year. This decrease was primarily attributable to fiscal 2017 divestitures, which more than offset organic revenue growth within all business segments, our fiscal 2018 acquisitions and the positive impact of fluctuations in currencies.

Consumable revenues increased 1.2% in the second quarter of fiscal 2018 as compared to second quarter of fiscal 2017. Growth within the Life Sciences business segment was largely offset by the impact of the fiscal 2017 divestiture of the AIC product line in the Healthcare Products segment. Capital equipment revenues decreased 4.8%, as growth in the Life Sciences segment was offset by a decline in the Healthcare Products segment. Service revenues slightly declined by 1.9%, as the impact of divestitures more than offset increases in other service offerings.

United Kingdom revenues increased $1.2 million, or 2.3%, to $54.6 million for the three months ended September 30, 2017, as compared to $53.4 million for the same period in the prior year. The increase is primarily due to growth in service revenues.

United States revenues decreased $3.8 million, or 0.8%, to $446.7 million for the three months ended September 30, 2017, as compared to $450.5 million for the same period in the prior year. Strength in service offerings and Life Sciences capital equipment revenues was more than offset by the impact of the fiscal 2017 divestitures and a decline in Healthcare Products capital equipment revenues.

Revenues from other foreign locations decreased $9.7 million, or 6.8%, to $132.9 million for the three months ended September 30, 2017, as compared to $142.5 million for the same period in the prior year, primarily due to the divestiture of Netherlands Linen Management Services which more than offset growth in Canada and in the Asia Pacific region.

First Six Months over First Six Months Comparison

Revenues decreased $42.7 million, or 3.3%, to $1,242.1 million for the six months ended September 30, 2017, as compared to $1,284.8 million for the same period in the prior year. This decrease was primarily attributable to fiscal 2017 divestitures and the negative impact of fluctuations in currencies, which more than offset the positive impact of our fiscal 2018 acquisitions and organic growth in all business segments.

Consumable revenues increased 1.4% in the first six months of fiscal 2018 compared to the first six months of fiscal 2017. Growth within the Life Sciences business segment was largely offset by the impact of the fiscal 2017 divestiture of the AIC product line in the Healthcare Products segment. Capital equipment revenues decreased 2.8%, reflecting declines within both the Healthcare Products and Life Sciences business segments. Service revenues declined 5.4% in the first six months of fiscal 2018, as compared to the same period in fiscal 2017, as the impact of divestitures more than offset increases in other service offerings.

United Kingdom revenues decreased $16.5 million, or 13.3%, to $107.3 million for the six months ended September 30, 2017, as compared to $123.8 million for the same period in the prior year, reflecting declines in both capital equipment and service revenues, and the impact of divestitures, which was partially offset by an increase in consumable revenue.

United States revenues decreased $9.0 million, or 1.0%, to $869.7 million for the six months ended September 30, 2017, as compared to $878.6 million for the same period in the prior year, as strength in service offerings within the Healthcare Products, Life Sciences and Applied Sterilization Technologies business segments was more than offset by the impact of the fiscal 2017 divestitures and a decline in Healthcare Products capital equipment revenues.

Revenues from other foreign locations decreased $17.2 million, or 6.1%, to $265.1 million for the six months ended September 30, 2017, as compared to $282.4 million in the six months ended September 30, 2016, primarily due to the divestiture of Netherlands Linen Management Services, which more than offset growth in Canada and in the Asia Pacific and Latin America regions.

Gross Profit. The following table compares our gross profit for the three and six months ended September 30, 2017 to the three and six months ended September 30, 2016:

(dollars in thousands)	Three Months Ended September 30, 2017	Three Months Ended September 30, 2016	Change	Percent Change
Gross profit:				
Product	**$ 133,946**	$ 137,106	$ (3,160)	(2.3)%
Service	**132,815**	110,802	22,013	19.9 %
Total gross profit	**$ 266,761**	$ 247,908	$ 18,853	7.6 %
Gross profit percentage:				
Product	**46.7%**	46.9%		
Service	**38.2%**	31.3%		
Total gross profit percentage	**42.1%**	38.4%		

(dollars in thousands)	Six Months Ended September 30, 2017	Six Months Ended September 30, 2016	Change	Percent Change
Gross profit:				
Product	**$ 264,306**	$ 266,157	$ (1,851)	(0.7)%
Service	**258,576**	221,741	36,835	16.6 %
Total gross profit	**$ 522,882**	$ 487,898	$ 34,984	7.2 %
Gross profit percentage:				
Product	**47.2%**	47.2%		
Service	**37.9%**	30.8%		
Total gross profit percentage	**42.1%**	38.0%		

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 2018 was 42.1% compared to the gross profit percentage for the second quarter of fiscal 2017 of 38.4%. The increase in our gross profit percentage was primarily due to the favorable impact of divestitures of lower margin operations (260 basis points), favorable mix and other (130 basis points), favorable pricing (10 basis points) and our fiscal 2018 acquisitions (10 basis points) which was offset by the negative impact of currencies (30 basis points) and decline in volume (10 basis points).

Gross profit percentage for the first half of fiscal 2018 was 42.1% compared to the gross profit percentage for the first half of fiscal 2017 of 38.0%. The increase in our gross profit percentage was primarily due to the favorable impact of divestitures of lower margin operations (280 basis points), favorable mix and other (110 basis points), favorable pricing (20 basis points) and our fiscal 2018 acquisitions (20 basis points) which was offset by the negative impact of currencies (10 basis points) and decline in volume (10 basis points).

Operating Expenses. The following table compares our operating expenses for the three and six months ended September 30, 2017 to the three and six months ended September 30, 2016:

(dollars in thousands)	Three Months Ended September 30, 2017	Three Months Ended September 30, 2016	Change	Percent Change
Operating expenses:				
Selling, general, and administrative	**$ 153,356**	$ 163,680	$ (10,324)	(6.3)%
Research and development	**13,974**	14,617	(643)	(4.4)%
Restructuring expenses	**27**	48	(21)	NM
Total operating expenses	**$ 167,357**	$ 178,345	$ (10,988)	(6.2)%

(dollars in thousands)	Six Months Ended September 30, 2017	2016	Change	Percent Change
Operating expenses:				
Selling, general, and administrative	**$ 309,167**	$ 315,566	$ (6,399)	(2.0)%
Research and development	**27,978**	29,045	(1,067)	(3.7)%
Restructuring expenses	**78**	202	(124)	NM
Total operating expenses	**$ 337,223**	$ 344,813	$ (7,590)	(2.2)%

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 decreased 6.3% during the second quarter of fiscal 2018 over the same fiscal 2017 period. SG&A decreased 2.0% during the first half of fiscal 2018 over the same fiscal 2017 period. These decreases in the fiscal 2018 periods over the fiscal 2017 periods are primarily attributable to lower acquisition and integration costs.

Research and Development. Research and development expenses decreased 4.4% during the second quarter of fiscal 2018 over the same fiscal 2017 period. Research and development expenses decreased 3.7% during the first half of fiscal 2018 over the same same fiscal 2017 period. 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 the first half of fiscal 2018, 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.

Non-Operating Expenses, Net. Non-operating expenses, net consists of interest expense on debt, offset by interest earned on cash, cash equivalents, 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, 2017 and 2016:

(dollars in thousands)	Three Months Ended September 30, 2017	2016	Change
Non-operating expenses, net:			
Interest expense	**$ 12,683**	$ 10,924	$ 1,759
Interest income and miscellaneous expense	**(626)**	(284)	(342)
Non-operating expenses, net	**$ 12,057**	$ 10,640	$ 1,417

(dollars in thousands)	Six Months Ended September 30, 2017	2016	Change
Non-operating expenses, net:			
Interest expense	**$ 25,149**	$ 21,995	$ 3,154
Interest income and miscellaneous expense	**(1,091)**	(778)	(313)
Non-operating expenses, net	**$ 24,058**	$ 21,217	$ 2,841

Interest expense increased $1.8 million during the second quarter of fiscal 2018 over the same fiscal 2017 period. Interest expense increased $3.2 million during the first half of fiscal 2018 over the same fiscal 2017 period. These increases were primarily due to an increase in the proportion of higher-cost, fixed rate debt following the issuance and sale of senior notes in a private placement to certain investors on February 27, 2017. Additionally, the weighted average floating interest rate was higher during the fiscal 2018 periods as compared to the same fiscal 2017 periods.

Income Tax Expense. The following tables compare our income tax expense and effective income tax rates for the three and six months ended September 30, 2017 and September 30, 2016:

(dollars in thousands)	Three Months Ended September 30, 2017	2016	Change	Percent Change
Income tax expense	**$ 22,903**	$ 18,721	$ 4,182	22.3%
Effective income tax rate	**26.2%**	31.8%		

(dollars in thousands)	Six Months Ended September 30, 2017	2016	Change	Percent Change
Income tax expense	**$ 38,942**	$ 32,955	$ 5,987	18.2%
Effective income tax rate	**24.1%**	27.0%		

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, 2017 and 2016 were 26.2% and 31.8%, respectively. The effective income tax rates for the six month periods ended September 30, 2017 and 2016 were 24.1% and 27.0%, respectively. During the prior year, the tax rates were higher due to non-deductible losses on divestitures.

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. Corporate, which is presented separately, contains costs that are associated with being a publicly traded company and certain other corporate costs.

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. Linen Management Services were divested in fiscal 2017.

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

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

Certain minor organizational changes were made to better align with our Customers, resulting in several smaller operations shifting among the segments. The prior period revenues and operating income measures have been recast for comparability.

The accounting policies for reportable segments are the same as those for the consolidated Company. Management evaluates performance and allocates resources based on a segment operating income measure. Operating income (loss) for each segment is calculated as the segment's gross profit less direct expenses and indirect cost allocations, which result in the full allocation of all distribution and research and development expenses, and the partial allocation of corporate costs. These allocations are based upon variables such as segment headcount and revenues. Products and services are transferred between segments at cost. Corporate includes certain unallocated corporate costs related to being a publicly traded company and legacy pension and post-retirement benefits. Segment operating income excludes certain adjustments which include acquisition and integration related costs, amortization of acquired intangibles, gains or losses on divestiture of businesses, restructuring costs and other charges that management believes may or may not recur with similar materiality or impact on operating income in future periods. Management believes that by excluding these items they gain better insight and greater transparency of the operating performance of the segments, thus aiding them in more meaningful financial trend analysis and operational decision making.

For both the three and six month periods ended September 30, 2017, 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 its Annual Report on Form 10-K for the year ended March 31, 2017, dated May 26, 2017.

The following table compares business segment revenues, segment operating income and total operating income for the three and six months ended September 30, 2017 and 2016:

	Three Months Ended September 30,		Six Months Ended September 30,	
	2017	2016	2017	2016
Revenues:				
Healthcare Products	**$ 302,094**	$ 306,676	**$ 591,158**	$ 589,353
Healthcare Specialty Services	**116,111**	137,661	**229,545**	289,636
Life Sciences	**89,461**	81,519	**170,396**	162,917
Applied Sterilization Technologies	**126,493**	120,559	**251,024**	242,887
Total revenues	**$ 634,159**	$ 646,415	**$ 1,242,123**	$ 1,284,793
Segment operating income:				
Healthcare Products	**$ 47,493**	$ 50,835	**$ 89,730**	$ 86,808
Healthcare Specialty Services	**9,323**	1,370	**15,317**	3,843
Life Sciences	**27,646**	22,471	**49,461**	46,715
Applied Sterilization Technologies	**43,394**	41,540	**84,592**	81,948
Corporate	**(6,202)**	(5,149)	**(10,067)**	(6,723)
Total segment operating income	**$ 121,654**	$ 111,067	**$ 229,033**	$ 212,591
Less: Adjustments				
Restructuring charges (1)	**$ 27**	$ 48	**$ 78**	$ 202
Amortization of acquired intangible assets (2)	**17,171**	17,779	**33,473**	37,308
Acquisition and integration related charges (3)	**3,393**	6,640	**7,422**	11,873
Loss on fair value adjustment of acquisition related contingent consideration (2)	**—**	1,850	**—**	1,850
Net loss on divestiture of businesses (2)	**1,010**	13,802	**1,134**	13,802
Amortization of inventory and property "step up" to fair value (2)	**649**	1,385	**1,267**	4,471
Total operating income	**$ 99,404**	$ 69,563	**$ 185,659**	$ 143,085

(1) For more information related to restructuring, see our Annual Report on Form 10-K for the year ended March 31, 2017, dated May 26, 2017.

(2) For more information regarding our recent acquisitions and divestitures see Note 2 titled, "Business Acquisitions and Divestitures", as well as our Annual Report on Form 10-K for the year ended March 31, 2017, dated May 26, 2017.

(3) Acquisition and integration related charges include transaction costs and integration expenses associated with acquisitions.

Healthcare Product revenues decreased 1.5% to $302.1 million for the quarter ended September 30, 2017, as compared to $306.7 million in the same prior year period. Fiscal 2018 second quarter revenues reflect an increase of 8.4% in service revenues, which was offset by decreases in consumable and capital equipment revenues of 0.6% and 7.9%, respectively. Healthcare Product revenues increased 0.3% to $591.2 million for the six months ended September 30, 2017, as compared to $589.4 million in the same prior year period. The first six months of fiscal 2018 revenues reflect a 7.9% increase in service revenues, which was partially offset by decreases in consumables and capital equipment revenues of 0.9% and 3.5%, respectively. The fiscal 2018 increases in service revenue are attributable to organic growth and decreases in consumable revenues are primarily the result of the divestiture of the AIC product line and the negative impact of fluctuations in currencies in the year-to-date period. The fiscal 2018 declines in capital equipment revenues are due to lower shipment volumes due to timing and the impact of hurricanes in the United States during the second quarter of fiscal 2018. Backlog has increased during the first half of fiscal 2018 following our record fourth quarter fiscal 2017 shipments. At September 30, 2017, the Healthcare Products segment’s backlog amounted to $150.4 million, decreasing $1.7 million, or 1.1%, compared to the backlog of $152.1 million at September 30, 2016.

Healthcare Specialty Services revenues decreased 15.7% to $116.1 million for the quarter ended September 30, 2017, as compared to $137.7 million in the same prior year period. Healthcare Specialty Services revenues decreased 20.7% to $229.5 million for the six months ended September 30, 2017, as compared to $289.6 million in the same period prior year. The fiscal 2017 divestiture of all Linen Management Services combined with the negative impact of fluctuations in currencies in the year- to-date period more than offset strong organic growth.

Life Sciences revenues increased 9.7% to $89.5 million for the quarter ended September 30, 2017, as compared to $81.5 million for the same prior year period. This increase reflects growth in capital equipment, consumable and service revenues, of 9.3%, 8.0%, and 12.5%, respectively. Life Sciences revenues increased 4.6% to $170.4 million for the first six months ended September 30, 2017, as compared to $162.9 million for the same prior year period. This increase reflects growth in consumable and service revenues of 5.0% and 8.8%, respectively, which were partially offset by a slight decline in capital equipment revenues of 1.0% and the negative impact of fluctuations in currencies, in the year-to-date period. At September 30, 2017, the Life Sciences segment’s backlog amounted to a record $69.8 million, increasing 70.2% or $28.8 million, compared to the backlog of $41.0 million at September 30, 2016.

Applied Sterilization Technologies segment revenues increased 4.9% to $126.5 million for the quarter ended September 30, 2017, as compared to $120.6 million for the same prior year period. Applied Sterilization Technologies segment revenues increased 3.4% to $251.0 million for the six months ended September 30, 2017, as compared to $242.9 million for the same prior year period. Fiscal 2018 revenues increased primarily due to strong organic growth, which was partially offset by the fiscal 2017 divestiture and the negative impact of fluctuations in currencies, in the year-to-date period.

The Healthcare Products segment’s operating income decreased $3.3 million to $47.5 million for the quarter ended September 30, 2017 as compared to $50.8 million in the same prior year period. The segment's operating margin was 15.7% for the second quarter of fiscal 2018 compared to 16.6% for the second quarter of fiscal 2017. The operating margin for the fiscal 2018 period decreased from the prior year period as lower volumes and the negative impact of fluctuations in currencies more than offset the favorable impact of the divestiture of the AIC product line. During the first six months of fiscal 2018, the Healthcare Products segment’s operating income increased $2.9 million to $89.7 million as compared to $86.8 million in the same prior year period. The segment's operating margin was 15.2% for the first six months of fiscal 2018 compared to 14.7% for the first six months of fiscal 2017. The operating margin for the fiscal 2018 period increased compared to the prior year period as the favorable impact of the divestiture of the AIC product line more than offset the impact of flat volumes and the negative impact of fluctuations in currencies.

The Healthcare Specialty Services segment’s operating income increased $8.0 million to $9.3 million for the quarter ended September 30, 2017 as compared to $1.4 million for the same prior year period. The segment's operating margins were 8.0% and 1.0% for the second quarter of fiscal 2018 and fiscal 2017, respectively. During the first six months of fiscal 2018 the Healthcare Specialty Services segment’s operating income increased $11.5 million to $15.3 million as compared to $3.8 million for the same prior year period. The segment's operating margins were 6.7% and 1.3% for the first six months of fiscal 2018 and fiscal 2017, respectively. The operating margin in the fiscal 2018 periods increased compared to the prior year periods primarily due to increased volume, particularly in North America, and the divestiture of the low margin Linen Management Services operations.

The Life Sciences segment’s operating income increased $5.2 million to $27.6 million for the quarter ended September 30, 2017 as compared to $22.5 million in the same prior year period. The segment’s operating margins were 30.9% and 27.6% for the second quarter of fiscal 2018 and fiscal 2017, respectively. During the first six months of fiscal 2018 the Life Sciences segment’s operating income increased $2.7 million to $49.5 million as compared to $46.7 million in the same prior year period. The segment’s operating margins were 29.0% and 28.7% for the first six months of fiscal 2018 and fiscal 2017, respectively. The operating margin increases in the fiscal 2018 periods compared to the prior year periods were primarily due to increased volume.

The Applied Sterilization Technologies segment's operating income increased $1.9 million to $43.4 million in the second quarter of fiscal 2018 as compared to $41.5 million during the same prior year period. The segment’s operating margin of 34.3% in the second quarter of fiscal 2018 were about flat compared to the 34.5% operating margin reported in the second quarter of fiscal 2017. The Applied Sterilization Technologies segment's operating income increased $2.6 million to $84.6 million in the first six months of fiscal 2018 compared to $81.9 million during the same prior year period. The segment’s operating margin of 33.7% in the first six months of fiscal 2018 was consistent with the 33.7% operating margin reported in the first six months of fiscal 2017 and includes the impact of the organizational changes made to better align with our Customers.

Liquidity and Capital Resources

The following table summarizes significant components of our cash flows for the three and six months ended September 30, 2017 and 2016:

(dollars in thousands)	Six Months Ended September 30, 2017	2016
Net cash provided by operating activities	**$ 217,377**	$ 188,501
Net cash used in investing activities	**$ (101,541)**	$ (8,745)
Net cash used in financing activities	**$ (119,345)**	$ (161,610)
Debt-to-total capital ratio	**32.3%**	33.4%
Free cash flow	**$ 144,032**	$ 119,398

Net Cash Provided by Operating Activities – The net cash provided by our operating activities was $217.4 million for the first six months of fiscal 2018, as compared to $188.5 million in net cash provided by operating activities in the first six months of fiscal 2017. The year over year improvement is primarily attributable to an increase in net income and lower working capital requirements.

Net Cash Used In Investing Activities – The net cash used in investing activities totaled $101.5 million for the first six months of fiscal 2018 compared with $8.7 million for the first six months of fiscal 2017. The following discussion summarizes the significant changes in our investing cash flows for the first six months of fiscal 2018 and fiscal 2017:

- Purchases of property, plant, equipment, and intangibles, net – Capital expenditures were $75.4 million for the first six months of fiscal 2018 as compared to $73.9 million during the same prior year period. Capital expenditures were consistent between the first six months of fiscal 2018 and fiscal 2017.

- Proceeds from the sale of business– During the first six months of fiscal 2018, we received $1.3 million in deferred consideration related to the fiscal 2017 sale of the Synergy Health Laboratory Services. During the first six months of fiscal 2017, we received $131.6 million in proceeds from the sale of certain non-core businesses. For more information, refer to our note 2 to our consolidated financial statements, "Business Acquisitions and Divestitures".

- Acquisitions of businesses, net of cash acquired – During the first six months of fiscal 2018, we used $28.9 million for acquisitions as compared to $64.9 million for the same prior year period. For more information on our acquisitions, refer to our Note 2 to our consolidated financial statements, "Business Acquisitions and Divestitures".

- Purchase of investments – During the first six months of fiscal 2017, we invested an additional $6.4 million primarily 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.

Net Cash Used In Financing Activities – The net cash used in financing activities amounted to $119.3 million for the first six months of fiscal 2018 compared with net cash used in financing activities of $161.6 million for the first six months of fiscal 2017. The following discussion summarizes the significant changes in our financing cash flows for the first six months of fiscal 2018 and fiscal 2017:

- Payments on long-term obligations - Payments on long-term obligations totaled $15.0 million in the first six months of fiscal 2018 as compared to $10.0 million in the first three months of fiscal 2017.

- Proceeds (payments) under credit facility, net – Net payments on credit facilities totaled $38.2 million in the first six months of fiscal 2018 compared to net payments of $47.6 million in the first six months of fiscal 2017.

- Repurchases of ordinary shares – During the first six months of fiscal 2018, we purchased 176,547 of our ordinary shares in the aggregate amount of $15.1 million. During the first six months of fiscal 2018, we obtained 101,135 of our ordinary shares in connection with share-based compensation award programs in the aggregate amount of $5.6 million. During the first six months of fiscal 2017, we purchased 763,171 of our ordinary shares in the aggregate amount of $54.3 million. During the first six months of fiscal 2017, we obtained 127,520 of our ordinary shares in connection with share-based compensation award programs in the aggregate amount of $5.6 million.

- Cash dividends paid to ordinary shareholders – During the first six months of fiscal 2018, we paid total cash dividends of $50.3 million, or $0.59 per outstanding share. During the first six months of fiscal 2017, we paid total cash dividends of $45.6 million, or $0.53 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 2018 and fiscal 2017, we received cash proceeds totaling $7.7 million and $2.5 million, respectively, under these programs. During the first six months of fiscal 2018 we also paid dividends in the amount of $1.1 million to minority interest shareholders.

Cash Flow Measures. Free cash flow was $144.0 million in the first six months of fiscal 2018 compared to $119.4 million in the prior year first six months (see the subsection above titled "Non-GAAP Financial Measures" for additional information and related reconciliation of cash flows from operations to free cash flow). Our debt-to-total capital ratio was 32.3% at September 30, 2017 and 33.4% at September 30, 2016.

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, 2017, dated May 26, 2017. We had $470.7 million of outstanding borrowings under the Credit Agreement as of September 30, 2017. There were no letters of credit outstanding under the Credit Agreement at September 30, 2017. Our commercial commitments including letters of credit outstanding under other arrangements were approximately $64.2 million at September 30, 2017 reflecting a net increase of $6.5 million in surety bonds and other commercial commitments from March 31, 2017.

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, 2017, dated May 26, 2017. Our critical accounting policies, estimates, and assumptions have not changed materially from March 31, 2017.

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.

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 on Form 10-Q 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 specified in this Quarterly Report 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,” “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 herein and in STERIS’s other securities filings, including Item 1A of STERIS’s Annual Report on Form 10-K for the year ended March 31, 2017. 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 this Quarterly Report 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 meet expectations regarding the accounting and tax treatments of the Combination (the “Combination”) with STERIS Corporation and Synergy Health plc (“Synergy”), (b) the possibility that the parties may be unable to achieve expected synergies and operating efficiencies in connection with the Combination within the expected time-frames or at all and to successfully integrate the operations of the companies, (c) the integration of the operations of the companies being more difficult, time-consuming or costly than expected, (d) 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 Combination, (e) the retention of certain key employees of Synergy being difficult, (f) 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, (g) the potential for increased pressure on pricing or costs that leads to erosion of profit margins, (h) 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, (i) the possibility that application of or compliance with laws, court rulings, certifications, regulations, regulatory actions, including without limitation those relating to FDA, warning notices or letters, government investigations, the outcome of any pending FDA requests, inspections or submissions, or other requirements or standards may delay, limit or prevent new product introductions, affect the production and marketing of existing products or services or otherwise affect STERIS’s performance, results, prospects or value, (j) the potential of international unrest, economic downturn or effects of currencies, tax assessments, adjustments or anticipated rates, raw material costs or availability, benefit or retirement plan costs, or other regulatory compliance costs, (k) the possibility of reduced demand, or reductions in the rate of growth in demand, for STERIS’s products and services, (l) the possibility of delays in receipt of orders, order cancellations, or delays in the manufacture or shipment of ordered products or in the provisions of services, (m) 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 STERIS’s Annual Report on Form 10-K for the year ended March 31, 2017 and other securities filings, may adversely impact STERIS’s performance, results, prospects or value, (n) the impact on STERIS and its operations of the “Brexit” or the exit of other member countries from the EU, (o) the impact on STERIS and its operations of any new legislation, regulations or orders, including, but not limited to any new trade or tax legislations, regulations or orders, that may be implemented by the new U.S. Administration or Congress, or of any responses thereto, (p) the possibility that anticipated financial results or benefits of recent acquisitions, including the Combination, or of STERIS’s restructuring efforts, or of recent divestitures, will not be realized or will be other than anticipated, and (q) 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. You may also obtain copies of these documents by visiting the SEC’s Public Reference Room at 100 F Street, NE, Washington, D.C. 20549, or by accessing the SEC’s website at *http://www.sec.gov*. You may obtain information on the Public Reference Room by calling the SEC at 1-800-SEC-0330.

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, 2017, dated May 26, 2017. Our exposures to market risks have not changed materially since March 31, 2017.

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 first half of fiscal 2018, 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 2018. We have executed forward currency contracts to hedge a portion of results denominated in euros, British pounds sterling, Mexican pesos, Brazilian reais, 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, 2017 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" and in 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, 2017, dated May 26, 2017.

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 our Annual Report on Form 10-K for the fiscal year ended March 31, 2017.

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

On August 9, 2016, the Company announced that its Board of Directors had authorized the purchase of up to $300 million (net of taxes, fees and commissions) of our ordinary shares. We may enter into share repurchase contracts until August 2, 2021 to effect these purchases. Shares may be repurchased from time to time through open market transactions, including 10b5-1 plans. The repurchase program may be suspended or discontinued at any time. During the first half of fiscal 2018, we repurchased 184,547 of our ordinary shares pursuant to this authorization. During the first half of fiscal 2018, we obtained 101,135 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 2018 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
July 1-31	—	$ —	—	$ 207,104
August 1-31	68,000	85.67	68,000	201,279
September 1-30	80,000	$ 87.05	80,000	$ 194,315
Total	148,000 [1]	86.42 [1]	148,000	194,315

[1] Does not include 11 shares purchased during the quarter at an average price of $85.32 per share by the STERIS Corporation 401(k) Plan on behalf of certain executive officers of the Company who may be deemed to be affiliated purchasers.

ITEM 6. EXHIBITS

Exhibits required by Item 601 of Regulation S-K

Exhibit Number	Exhibit Description
3.1	Certificate of Incorporation of STERIS plc (filed as Exhibit 3.1 to STERIS plc Form 8-K filed November 6, 2015 (Commission File No. 1-37614) and incorporated herein by reference).
3.2	Amended Articles of Association of STERIS plc (Amended by Special Resolution passed on August 2, 2016) (filed as Exhibit 3.2 to STERIS plc Form 10-Q for the fiscal quarter ended September 30, 2016 (Commission File No. 1-37614), and incorporated herein by reference).
4.1	Specimen Form of Stock Certificate (filed as Exhibit 4.1 to STERIS plc Form 10-K for the fiscal year ended March 31, 2016 (Commission File No. 1-37614) and incorporated herein by reference).
10.1	Guarantor Joinder Agreement dated August 8, 2017 by Synergy Health AST, LLC, Synergy Health US Holdings, Inc., and Synergy Health North America, Inc. in favor of JPMorgan Chase Bank, N.A.
10.2	Guaranty Supplement dated August 8, 2017 by Synergy Health AST, LLC, Synergy Health US Holdings, Inc., and Synergy Health North America, Inc. of Affiliate Guaranty dated as of March 31, 2015 of STERIS Corporation August 15, 2008 Note Purchase Agreements, as amended and restated, and of the Notes issued pursuant thereto.
10.3	Guaranty Supplement dated August 8, 2017 by Synergy Health AST, LLC, Synergy Health US Holdings, Inc., and Synergy Health North America, Inc. of Affiliate Guaranty dated as of March 31, 2015 of STERIS Corporation December 4, 2012 Note Purchase Agreements, as amended and restated, and of the Notes issued pursuant thereto.
10.4	Guaranty Supplement dated August 8, 2017 by Synergy Health AST, LLC, Synergy Health US Holdings, Inc., and Synergy Health North America, Inc. of STERIS Corporation May 15, 2015 Note Purchase Agreement and of the Notes issued pursuant thereto.
10.5	Guaranty Supplement dated August 8, 2017 by Synergy Health AST, LLC, Synergy Health US Holdings, Inc. and Synergy Health North America, Inc., of Affiliate Guaranty dated as January 23, 2017 of STERIS plc January 23, 2017 Note Purchase Agreement, and of the Notes issued pursuant thereto.
10.6	Description of STERIS plc Non-Employee Director Compensation Program
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.
EX-101	Instance Document.
EX-101	Schema Document.
EX-101	Calculation Linkbase Document.
EX-101	Definition Linkbase Document.
EX-101	Labels Linkbase Document.
EX-101	Presentation Linkbase Document.

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, Corporate Controller and Chief Accounting Officer
November 7, 2017

GUARANTOR JOINDER AGREEMENT

This Guarantor Joinder Agreement (this "Agreement") dated as of August 8, 2017 is made by Synergy Health AST, LLC, a Delaware limited liability company, Synergy Health US Holdings, Inc., a Delaware corporation, and Synergy Health North America, Inc., a Florida corporation (each, an "Additional Guarantor" and collectively, the "Additional Guarantors") in favor of JPMorgan Chase Bank, N.A., as Administrative Agent (in such capacity, the "Administrative Agent") for the Lenders under the Credit Agreement referred to below.

RECITALS

WHEREAS, reference is made to the Credit Agreement dated as of March 31, 2015 (as amended, amended and restated, supplemented or otherwise modified and in effect on the date hereof, the "Credit Agreement"), among STERIS plc, formerly New Steris Limited ("New HoldCo"), as a Borrower, STERIS Corporation ("STERIS"), as a Borrower, the Guarantors parties thereto from time to time, the Lenders parties thereto and the Administrative Agent.

WHEREAS, pursuant to the Credit Agreement, the Lenders have severally agreed to make Advances to the Borrowers upon the terms and subject to the conditions set forth therein;

WHEREAS, each Additional Guarantor is a Subsidiary of the Reporting Entity;

WHEREAS, the proceeds of the Advances will be used in part to enable the Borrowers to make valuable transfers to the Additional Guarantors in connection with the operation of their businesses;

WHEREAS, each Additional Guarantor acknowledges that it will derive a substantial direct or indirect benefit from the making of the Advances;

Accordingly, the parties hereto agree as follows:

Section 1. Definitions. Except as otherwise defined in this Agreement, terms defined in the Credit Agreement are used herein as defined therein.

Section 2. Joinder. As of the date hereof, each of the Additional Guarantors hereby agrees that it shall become a "Guarantor" under and for all purposes of the Credit Agreement with the same force and effect as if originally named therein as a Guarantor and, without limiting the generality of the foregoing, hereby expressly assumes all obligations and liabilities of a Guarantor under the Credit Agreement and the other Loan Documents, including those set forth in ARTICLE VIII of the Credit Agreement.

Section 3. Governing Law. This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York.

Section 4. Execution in Counterparts. This Agreement may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement. Delivery of an executed counterpart of a signature page to this Agreement by telecopier, facsimile or in a .pdf or similar file shall be effective as delivery of a manually executed counterpart of this Agreement.

Section 5. Miscellaneous. This Agreement shall constitute a "Loan Document" for all purposes of the Credit Agreement and the other Loan Documents.

IN WITNESS WHEREOF, each Additional Guarantor has caused this Guarantor Joinder Agreement to be duly executed and delivered as of the day and year first above written.

SYNERGY HEALTH AST, LLC

By:

/s/ Michael J. Tokich
Name: Michael J. Tokich
Title: President

SYNERGY HEALTH US HOLDINGS, INC.

By:

/s/ Michael J. Tokich
Name: Michael J. Tokich
Title: President

SYNERGY HEALTH NORTH AMERICA, INC.

By:

/s/ Michael J. Tokich
Name: Michael J. Tokich
Title: President

Acknowledged:

JPMORGAN CHASE BANK, N.A., as Administrative Agent

By:

/s/ Brendan Korb
Name: Brendan Korb
Title: Vice President

[Signature Page to Credit Agreement - Joinder of Synergy Health]

GUARANTY SUPPLEMENT

To the Holders of the Series A-2 Notes and Series A-3 Notes, (each, as hereinafter defined) of STERIS Corporation (the *"Company"*)

Ladies and Gentlemen:

WHEREAS, in order to refinance certain debt and for general corporate purposes, the Company entered into those certain Note Purchase Agreements dated as of August 15, 2008 (as amended, the *"Original Note Purchase Agreements"*) between the Company and each of the purchasers party thereto (together with their successors and assigns, the "*Original Holders*"), providing for, *inter alia,* the issue and sale by the Company of: (a) $30,000,000 aggregate principal amount of its 5.63% Senior Notes, Series A-1, due August 15, 2013 (the *"Series A-1 Notes"*), (b) $85,000,000 aggregate principal amount of its 6.33% Senior Notes, Series A-2, due August 15, 2018 (the *"Series A-2 Notes"*), and (c) $35,000,000 aggregate principal amount of its 6.43% Senior Notes, Series A-3, due August 15, 2020 (the *"Series A-3 Notes"*; the Series A-1 Notes, Series A-2 Notes and Series A-3 Notes shall be collectively referred to herein to the *"Original Series A Notes"*).

WHEREAS, the Company and the Holders agreed to (i) enter into that certain First Amendment dated as of March 31, 2015 to the Original Note Purchase Agreements (the *"First Amendment"*), pursuant to which the Amended and Restated Note Purchase Agreement dated as of March 31, 2015 between the Company and the Noteholders (as defined therein) (the *"Note Purchase Agreement"*) replaced the Original Note Purchase Agreement and (ii) replace the outstanding Original Series A Notes with amended and restated notes (the *"Notes"*). Each holder of the Notes shall be referred to as a *"Holder"*.

WHEREAS, as a condition precedent to the entering into the Note Purchase Agreement by the Holders, the Holders required that certain affiliates of the Company enter into an Affiliate Guaranty as security for the Notes (the *"Guaranty"*).

Pursuant to Section 9.7 of the Note Purchase Agreement, the Company has agreed to cause the undersigned, Synergy Health AST, LLC, a limited liability company organized under the laws of Delaware, Synergy Health US Holdings, Inc., a corporation organized under the laws of Delaware, and Synergy Health North America, Inc., a corporation organized under the laws of Florida (the *"Additional Guarantors"*), to join in the Guaranty. In accordance with the requirements of the Guaranty, the Additional Guarantors desire to amend the definition of Guarantor (as the same may have been heretofore amended) set forth in the Guaranty attached hereto so that at all times from and after the date hereof, the Additional Guarantors shall be jointly and severally liable as set forth in the Guaranty for the obligations of the Company under the Note Purchase Agreement and Notes to the extent and in the manner set forth in the Guaranty.

The undersigned is the duly elected President of each of the Additional Guarantors, each a subsidiary of the Company, and is duly authorized to execute and deliver this Guaranty Supplement to each of you. The execution by the undersigned of this Guaranty Supplement shall evidence their consent to and acknowledgment and approval of the terms set forth herein and in the Guaranty and by such execution the Additional Guarantors shall be deemed to have made in favor of the Holders the representations and warranties set forth in Section 5 of the Guaranty.

Upon execution of this Guaranty Supplement, the Guaranty shall be deemed to be amended as set forth above. Except as amended herein, the terms and provisions of the Guaranty are hereby ratified, confirmed and approved in all respects.

Any and all notices, requests, certificates and other instruments (including the Notes) may refer to the Guaranty without making specific reference to the Guaranty Supplement, but nevertheless all such reference shall be deemed to include this Guaranty Supplement unless the context shall otherwise require.

Dated: August 8, 2017

SYNERGY HEALTH AST, LLC

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: President

SYNERGY HEALTH US HOLDINGS, INC.

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: President

SYNERGY HEALTH NORTH AMERICA, INC.

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: President

ACCEPTED AND AGREED:

STERIS CORPORATION

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: Senior Vice President and Chief Financial Officer

[Signature page to 2008 Guaranty Supplement - Joinder of Synergy Health]

EXHIBIT 10.3

GUARANTY SUPPLEMENT

To the Holders of the Series A-1A Notes,
Series A-1B Notes, Series A-2A Notes,
Series A-2B Notes, Series A-3A Notes and
Series A-3B Notes (each, as hereinafter
defined) of STERIS Corporation
(the "Company")

Ladies and Gentlemen:

WHEREAS, in order to refinance certain debt and for general corporate purposes, the Company entered into those certain Note Purchase Agreements dated as of December 4, 2012 (as amended, the "Original Note Purchase Agreements") between the Company and each of the purchasers party thereto (together with their successors and assigns, the "Original Holders"), providing for, inter alia, the issue and sale by the Company of: (a) $47,500,000 aggregate principal amount of its 3.20% Senior Notes, Series A-1A, due December 4, 2022 (the "Series A-1A Notes"), (b) $47,500,000 aggregate principal amount of its 3.20% Senior Notes, Series A-1B, due December 4, 2022 (the "Series A-1B Notes"), (c) $40,000,000 aggregate principal amount of its 3.35% Senior Notes, Series A-2A, due December 4, 2024 (the "Series A-2A Notes"), (d) $40,000,000 aggregate principal amount of its 3.35% Senior Notes, Series A-2B, due December 4, 2024 (the "Series A-2B Notes"), (e) $12,500,000 aggregate principal amount of its 3.55% Senior Notes, Series A-3A, due December 4, 2027 (the "Series A-3A Notes"), and (f) $12,500,000 aggregate principal amount of its 3.55% Senior Notes, Series A-3B, due December 4, 2027 (the "Series A-3B Notes"; the Series A-1A Notes, Series A-1B Notes, Series A-2A Notes, Series A-2B Notes, Series A-3A Notes and Series A-3B Notes shall be collectively referred to herein to the "Original Series A Notes").

WHEREAS, the Company and the Holders agreed to (i) enter into that certain First Amendment dated as of March 31, 2015 to the Original Note Purchase Agreements (the "First Amendment"), pursuant to which the Amended and Restated Note Purchase Agreement dated as of March 31, 2015 between the Company and the Noteholders (as defined therein) (the "Note Purchase Agreement") replaced the Original Note Purchase Agreements and (ii) replace the outstanding Original Series A Notes with amended and restated notes (the "Notes"). Each holder of the Notes shall be referred to as a "Holder".

WHEREAS, as a condition precedent to the entering into the Note Purchase Agreement by the Holders, the Holders required that certain affiliates of the Company enter into an Affiliate Guaranty as security for the Notes (the "Guaranty").

Pursuant to Section 9.7 of the Note Purchase Agreement, the Company has agreed to cause the undersigned, Synergy Health AST, LLC, a limited liability company organized under the laws of Delaware, Synergy Health US Holdings, Inc., a corporation organized under the laws of Delaware, and Synergy Health North America, Inc., a corporation organized under the laws of Florida (the "Additional Guarantors"), to join in the Guaranty. In accordance with the requirements of the Guaranty, the Additional Guarantors desire to amend the definition of Guarantor (as the same may have been heretofore amended) set forth in the Guaranty attached hereto so that at all times from and after the date hereof, the Additional Guarantors shall be jointly and severally liable as set forth in the Guaranty for the obligations of the Company under the Note Purchase Agreement and Notes to the extent and in the manner set forth in the Guaranty.

The undersigned is the duly elected President of each of the Additional Guarantors, each a subsidiary of the Company, and is duly authorized to execute and deliver this Guaranty Supplement to each of you. The execution by the undersigned of this Guaranty Supplement shall evidence their consent to and acknowledgment and approval of the terms set forth herein and in the Guaranty and by such execution the Additional Guarantors shall be deemed to have made in favor of the Holders the representations and warranties set forth in Section 5 of the Guaranty.

Upon execution of this Guaranty Supplement, the Guaranty shall be deemed to be amended as set forth above. Except as amended herein, the terms and provisions of the Guaranty are hereby ratified, confirmed and approved in all respects.

Any and all notices, requests, certificates and other instruments (including the Notes) may refer to the Guaranty without making specific reference to the Guaranty Supplement, but nevertheless all such reference shall be deemed to include this Guaranty Supplement unless the context shall otherwise require.

Dated: August 8, 2017

SYNERGY HEALTH AST, LLC

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: President

SYNERGY HEALTH US HOLDINGS, INC.

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: President

SYNERGY HEALTH NORTH AMERICA, INC.

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: President

ACCEPTED AND AGREED:

STERIS CORPORATION

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: Senior Vice President and Chief Financial Officer

GUARANTY SUPPLEMENT

To the Holders of the Series A Notes, (each, as hereinafter defined) of STERIS Corporation (the *"Company"*)

Ladies and Gentlemen:

WHEREAS, in order to obtain funds for the purposes set forth in Schedule 5.14 to the Note Purchase Agreement, the Company entered into that certain Note Purchase Agreement dated as of May 15, 2015 (the "Note Purchase Agreement") between the Company and each of the Holders as defined therein providing for, inter alia, the issue and sale by the Company of (a) $125,000,000 aggregate principal amount of its 3.45% Senior Notes, Series A-1, due May 14, 2025 (the "Series A-1 Notes"), (b) $125,000,000 aggregate principal amount of its 3.55% Senior Notes, Series A-2, due May 14, 2027 (the "Series A-2 Notes"), and (c) $100,000,000 aggregate principal amount of its 3.70% Senior Notes, Series A-3, due May 14, 2030 (the "Series A-3 Notes"; the Series A-1 Notes, the Series A-2 Notes and the Series A-3 Notes are hereinafter referred to as the "Series A Notes"). Each Holder of a Note shall be referred to as a "Holder".

WHEREAS, as a condition precedent to the entering into the Note Purchase Agreement by the Holders, the Holders required that certain affiliates of the Company enter into an Affiliate Guaranty as security for the Notes (the "Guaranty").

Pursuant to Section 9.7 of the Note Purchase Agreement, the Company has agreed to cause the undersigned, Synergy Health AST, LLC, a limited liability company organized under the laws of Delaware, Synergy Health US Holdings, Inc., a corporation organized under the laws of Delaware, and Synergy Health North America, Inc., a corporation organized under the laws of Florida (the "Additional Guarantors"), to join in the Guaranty. In accordance with the requirements of the Guaranty, the Additional Guarantors desire to amend the definition of Guarantor (as the same may have been heretofore amended) set forth in the Guaranty attached hereto so that at all times from and after the date hereof, the Additional Guarantors shall be jointly and severally liable as set forth in the Guaranty for the obligations of the Company under the Note Purchase Agreement and Notes to the extent and in the manner set forth in the Guaranty.

The undersigned is the duly elected President of each of the Additional Guarantors, each a subsidiary of the Company, and is duly authorized to execute and deliver this Guaranty Supplement to each of you. The execution by the undersigned of this Guaranty Supplement shall evidence their consent to and acknowledgment and approval of the terms set forth herein and in the Guaranty and by such execution the Additional Guarantors shall be deemed to have made in favor of the Holders the representations and warranties set forth in Section 5 of the Guaranty.

Upon execution of this Guaranty Supplement, the Guaranty shall be deemed to be amended as set forth above. Except as amended herein, the terms and provisions of the Guaranty are hereby ratified, confirmed and approved in all respects.

Any and all notices, requests, certificates and other instruments (including the Notes) may refer to the Guaranty without making specific reference to this Guaranty Supplement, but nevertheless all such references shall be deemed to include this Guaranty Supplement unless the context shall otherwise require.

Dated: August 8, 2017

SYNERGY HEALTH AST, LLC

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: President

SYNERGY HEALTH US HOLDINGS, INC.

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: President

SYNERGY HEALTH NORTH AMERICA, INC.

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: President

ACCEPTED AND AGREED:

STERIS CORPORATION

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: Senior Vice President and Chief Financial Officer

[Signature Page to 2015 Guaranty Supplement - Joinder of Synergy Health]

GUARANTY SUPPLEMENT

To the Holders of the Series A-1 Notes,
the Series A-2 Notes, the Series A-3 Notes,
the Series A-4 Notes, the Series A-5 Notes,
the Series A-6 Notes, and the Series A-7 Notes
(each, as hereinafter defined) of STERIS plc (the *"Company"*)

Ladies and Gentlemen:

WHEREAS, in order to obtain funds for the purposes set forth in Schedule 5.14 to the Note Purchase Agreement, the Company entered into that certain Note Purchase Agreement dated as of January 23, 2017 (the *"Note Purchase Agreement"*) among the Company and each of the Holders as defined therein providing for, *inter alia*, the issue and sale by the Company of (a) $50,000,000 aggregate principal amount of its 3.93% Senior Notes, Series A-1, due February 27, 2027 (the *"Series A-1 Notes"*); (b) €60,000,000 aggregate principal amount of its 1.86% Senior Notes, Series A-2, due February 27, 2027 (the *"Series A-2 Notes"*); (c) $45,000,000 aggregate principal amount of its 4.03% Senior Notes, Series A-3, due February 27, 2029 (the *"Series A-3 Notes"*); (d) €20,000,000 aggregate principal amount of its 2.04% Senior Notes, Series A-4, due February 27, 2029 (the *"Series A-4 Notes"*); (e) £45,000,000 aggregate principal amount of its 3.04% Senior Notes, Series A-5, due February 27, 2029 (the *"Series A-5 Notes"*); (f) €19,000,000 aggregate principal amount of its 2.30% Senior Notes, Series A-6, due February 27, 2032 (the *"Series A-6 Notes"*); and (g) £30,000,000 aggregate principal amount of its 3.17% Senior Notes, Series A-7, due February 27, 2032 (the *"Series A-7 Notes"*; the Series A-1 Notes, the Series A-2 Notes, the Series A-3 Notes, the Series A-4 Notes, the Series A-5 Notes, the Series A-6 Notes and the Series A-7 Notes are hereinafter referred to as the *"Series A Notes";* and together with any Supplemental Notes issued pursuant to Section 1.2 of the Note Purchase Agreement, the *"Notes"*). Each holder of a Note shall be referred to as a *"Holder*".

WHEREAS, as a condition precedent to the entering into the Note Purchase Agreement by the Holders, the Holders required that certain affiliates of the Company enter into an Affiliate Guaranty as security for the Notes (the "Guaranty").

Pursuant to Section 9.7 of the Note Purchase Agreement, the Company has agreed to cause the undersigned, Synergy Health AST, LLC, a limited liability company organized under the laws of Delaware, Synergy Health US Holdings, Inc., a corporation organized under the laws of Delaware, and Synergy Health North America, Inc., a corporation organized under the laws of Florida (the "Additional Guarantors"), to join in the Guaranty. In accordance with the requirements of the Guaranty, the Additional Guarantors desire to amend the definition of Guarantor (as the same may have been heretofore amended) set forth in the Guaranty attached hereto so that at all times from and after the date hereof, the Additional Guarantors shall be jointly and severally liable as set forth in the Guaranty for the obligations of the Company under the Note Purchase Agreement and Notes to the extent and in the manner set forth in the Guaranty.

The undersigned is the duly elected President of each of the Additional Guarantors, each a subsidiary of the Company, and is duly authorized to execute and deliver this Guaranty Supplement to each of you. The execution by the undersigned of this Guaranty Supplement shall evidence their consent to and acknowledgment and approval of the terms set forth herein and in the Guaranty and by such execution the Additional Guarantors shall be deemed to have made in favor of the Holders the representations and warranties set forth in Section 5 of the Guaranty.

Upon execution of this Guaranty Supplement, the Guaranty shall be deemed to be amended as set forth above. Except as amended herein, the terms and provisions of the Guaranty are hereby ratified, confirmed and approved in all respects.

Any and all notices, requests, certificates and other instruments (including the Notes) may refer to the Guaranty without making specific reference to this Guaranty Supplement, but nevertheless all such references shall be deemed to include this Guaranty Supplement unless the context shall otherwise require.

Dated: August 8, 2017

SYNERGY HEALTH AST, LLC

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: President

SYNERGY HEALTH US HOLDINGS, INC.

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: President

SYNERGY HEALTH NORTH AMERICA, INC.

By: /s/ Michael J. Tokich

Name: Michael J. Tokich
Title: President

ACCEPTED AND AGREED:

STERIS PLC

By: __/s/ Michael J. Tokich______

Name: Michael J. Tokich
Title: Senior Vice President and Chief Financial Officer

[Signature Page to 2017 Guaranty Supplement]

EXHIBIT 10.6

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 August 1, 2017 and subsequent terms.

An annual retainer of $340,000 is payable to the Chairman of the Board and an annual retainer of $240,000 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 August 1, 2017 the retainer fee is payable as follows: $65,000 in cash ($105,000 for the Chairman), $67,500 in stock options ($97,500 for the Chairman) and $67,500 in career restricted stock units (“CRSUs”) ($97,500 for the Chairman). Each Director may elect to receive all or a part of the cash or option portions of the foregoing fee in STERIS shares or CRSUs and may elect to receive all or part of the CRSU portion of the foregoing fee in STERIS shares. The remaining $40,000 of the retainer fee for the term of office beginning in 2017 is payable as follows: $20,000 in stock options and $20,000 in CRSUs.

For the term of office beginning in 2018, the retainer fee will be as follows: $65,000 in cash ($105,000 for the Chairman), $87,500 in stock options ($117,500 for the Chairman) and $87,500 in career restricted stock units (“CRSUs”) ($117,500 for the Chairman). Each Director may elect to receive all or a part of the cash or option portions of the fee in STERIS shares or CRSUs and may 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 $65,000 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.

Effective for the term of office beginning August 1, 2017 Annual Committee Chair fees are payable in the following amounts, with payments to be made at the beginning of each term: $20,000 for the Audit Committee Chair and $15,000 for the other 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 15.1

LETTER REGARDING UNAUDITED INTERIM FINANCIAL INFORMATION

Board of Directors and Shareholders
STERIS plc

We are aware of the incorporation by reference in the following STERIS plc Registration Statements of our review report, dated November 7, 2017, relating to the unaudited consolidated interim financial statements of STERIS plc and subsidiaries, included in its Form 10-Q for the quarter ended September 30, 2017:

Registration Number	Description
333-207721	Form S-8 Registration Statement – STERIS plc 2006 Long-Term Equity Incentive Plan, Assumed as Amended and Restated
333-207722	Form S-8 Registration Statement – STERIS Corporation 401(k) Plan
333-214491	Form S-8 Registration Statement – STERIS plc 2006 Long-Term Equity Incentive Plan

/s/ Ernst & Young LLP

Cleveland, Ohio
November 7, 2017

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, 2017

/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, 2017

/s/ MICHAEL J. TOKICH

Michael J. Tokich
Senior Vice President, 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, 2017, 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, Chief Financial Officer**

Dated: November 7, 2017