Securities and Exchange Commission

Washington, D. C. 20549

FORM 11-K

Annual Report Pursuant to Section 15(d) of The Securities Exchange Act of 1934

For the Twelve Month Period Ended December 31, 2017

OR

Transition Report Pursuant to Section 15(d) of The Securities Exchange Act of 1934

For the transition period from to

Commission file number 1-37614

A. Full title of the plan and the address of the plan if different from that of the issuer named below:

STERIS Corporation 401(k) Plan

5960 Heisley Road, Mentor, Ohio 44060-1834

B. Name of issuer of securities held pursuant to the plan and the address of its principal executive office: STERIS plc

Rutherford House, Stephensons Way Chaddesden, Derby, DE21 6LY, England

STERIS Corporation 401(k) Plan Financial Statements and Supplemental Schedules December 31, 2017 and 2016

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Exhibit:

Exhibit 23.1—Consent of Independent Registered Public Accounting Firm

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Participants and Administrator of the STERIS Corporation 401(k) Plan Mentor, Ohio

Opinion on the Financial Statements

We have audited the accompanying Statement of Net Assets Available for Benefits of the STERIS Corporation 401(k) Plan (the "Plan") as of December 31, 2017 and the related Statement of Changes in Net Assets Available for Benefits for the year then ended. In our opinion the financial statements present fairly, in all material respects, the net assets available for benefits of the Plan as of December 31, 2017, and the changes in net assets available for benefits for the year then ended, in conformity with accounting principles generally accepted in the United States of America. The financial statements of the Plan as of December 31, 2016, were audited by other auditors whose report dated June 29, 2017 expressed an unqualified opinion on the financial statements.

Basis for Opinion

These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on the Plan's financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Plan in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud.

Our audit included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion.

Supplemental Information

The supplemental information in the accompanying Schedule of Assets (Held at End of Year) as of December 31, 2017 has been subjected to audit procedures performed in conjunction with the audit of the Plan's financial statements. The supplemental information is the responsibility of the Plan's management. Our audit procedures included determining whether the supplemental information reconciles to the financial statements or the underlying accounting and other records, as applicable, and performing procedures to test the completeness and accuracy of the information presented in the supplemental information. In forming our opinion on the supplemental information, we evaluated whether the supplemental information, including its form and content, is presented in conformity with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. In our opinion, the supplemental information is fairly stated, in all material respects, in relation to the financial statements as a whole.

We have served as the Plan's auditor since 2018.

/s/ BOBER, MARKEY, FEDOROVICH & COMPANY

Cleveland, Ohio June 15, 2018

STERIS Corporation 401(k) Plan Statements of Net Assets Available for Benefits

	December 31,				
	 2017 20				
Assets:					
Investments, at fair value	\$ 638,315,431	\$	519,542,559		
Notes receivable from participants	 10,158,833		9,194,234		
Net assets available for benefits	\$ 648,474,264	\$	528,736,793		

See accompanying notes to the financial statements.

STERIS Corporation 401(k) Plan Statements of Changes in Net Assets Available for Benefits

	Year Ended December 31,		
	 2017		2016
Additions:			
Investment Income:			
Net unrealized and realized appreciation in the fair value of investments	\$ 83,707,578	\$	22,569,570
Investment interest and dividend income	11,322,040		9,871,212
Interest on notes receivable from participants	434,175		368,078
Contributions:			
Participant	38,178,760		35,835,754
Employer	15,086,402		14,511,387
Rollovers	8,355,370		3,640,971
Total contributions	 61,620,532		53,988,112
Total additions	157,084,325		86,796,972
Deductions:			
Benefit payments	36,753,709		31,174,256
Administrative expenses	593,145		501,732
Total deductions	37,346,854		31,675,988
Net increase in net assets available for benefits	119,737,471		55,120,984
Net assets available for benefits at:			
Beginning of year	528,736,793		473,615,809
End of year	\$ 648,474,264	\$	528,736,793

 $See\ accompanying\ notes\ to\ the\ financial\ statements.$

401(k) Plan

Notes to Financial Statements

December 31, 2017 and 2016

1. Plan Description

The following brief description of the STERIS Corporation 401(k) Plan (the "Plan") provides only general information. A complete description of the Plan provisions, including those relating to participation, vesting and benefits, is contained in the Plan document. Participants should refer to the Plan document for complete information regarding the Plan's provisions.

General

The Plan is a defined contribution plan administered by STERIS Corporation (the "Company," or "Plan Administrator"), a wholly-owned subsidiary of STERIS plc ("STERIS").

Generally, all U.S. employees of the Company and certain participating subsidiaries and other affiliates who have attained the age of 18 and have completed 90 days of employment with the Company or a participating subsidiary or other affiliate are eligible to participate in the Plan on the first day of the payroll period that begins after satisfying these requirements. Rehired employees who were previously participants are eligible for participation immediately upon rehire. The Plan contains an automatic enrollment feature for newly eligible participants and a Qualified Automatic Contribution Arrangement (QACA). The Plan contains provisions providing that an employee of the Company or a subsidiary or other affiliate who is not eligible to participate in the Plan and who is transferred to an employment status that makes him/her eligible to participate, will become a participant as of the date of transfer provided that he/she has satisfied the minimum age and service requirements at that time. The Plan was amended and restated in its entirety effective January 1, 2015, to consolidate all prior amendments into one document and to meet then applicable IRS qualification requirements that plan sponsors restate their plan documents.

The Plan is a stock bonus plan. The portion of the Plan fund that holds investments consisting of STERIS plc ordinary shares (the "STERIS Company Stock Fund") is an employee stock ownership plan within the meaning of Section 4975(e)(7) of the Internal Revenue Code (the "Code"). The Plan provides for a cash payment option with respect to dividends paid on STERIS shares held in the STERIS Company Stock Fund. The Plan also contains a cash or deferred arrangement intended to qualify under Section 401(k) of the Code. The Plan is qualified under Section 401(a) of the Code.

The 401(k) Plan Oversight Committee is responsible for the general administration of the Plan. Vanguard Fiduciary Trust Company is the Plan trustee and The Vanguard Financial Group, Inc. is the Plan record-keeper (collectively "the Trustee"). The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 as amended ("ERISA").

Contributions

Contributions made by a participant are "before-tax" deferred compensation contributions or may be designated by the participant as "after-tax" Roth 401(k) contributions.

The Plan allows participants to contribute between one and fifty percent of their compensation received during a calendar year, subject to certain limitations. The contributions for each participant are made by payroll deductions and are determined each pay period by multiplying the participant selected deferral percentage rate then in effect by his/her eligible compensation for such period.

The Plan contains a feature that allows participants to modify deferral percentages at any time.

Participating employers make matching cash contributions to participants' accounts. The matching contributions are a percentage of the contributions made by each participant. For the year ended December 31, 2017, employer matching contributions were 100% of a participant's contribution (not in excess of one percent of eligible compensation), and 50% of the participant's contributions (in excess of one percent but not in excess of six percent of eligible compensation), subject to certain Plan limitations. The employer matching contributions are made each pay period. The Company has reserved the right to amend the Plan, which includes the right to suspend, modify or terminate employer matching contributions.

Participating employers also may make corrective qualified nonelective contributions to the Plan on behalf of participants.

The Plan also allows a participant to contribute into the Plan balances from another qualified benefit plan (known as "rollover contributions").

401(k) Plan

Notes to Financial Statements (continued)

December 31, 2017 and 2016

Participant Accounts

A separate account is maintained for each participant in the Plan, reflecting contributions, investments, realized and unrealized investment gains and losses, loans and interest, withdrawals, rollovers and certain fees. The net value of each participant account is established at the close of each business day through the valuation of each fund's assets at fair value.

Participants may elect to invest contributions, including employer contributions, in any combination of the investment funds offered by the Plan, including the STERIS Company Stock Fund. If a participant does not make an investment election with respect to 100% of the contributions made on behalf of the participant, those contributions for which no election has been made will be invested in the default investment option (Vanguard Target Retirement Date Funds), until an affirmative election of other investment options is received from the participant.

Participants can generally change their investment elections at any time. A participant may elect to have a portion or all of the balance of prior contributions together with earnings transferred from any fund in which it is invested to any other fund, subject to any transfer restrictions that the fund may impose. The STERIS Company Stock Fund will not accept transfers from other investment funds or rollover contributions. A self-directed mutual fund brokerage window option also is available to participants. This option enables participants to invest in a wide variety of mutual funds, beyond the core investment funds available to all Plan participants. Participants who elect this option are subject to additional charges; these additional charges are the responsibility of the electing participants.

Vesting

All participants are immediately vested in their contributions and employer matching contributions plus actual earnings thereon.

Forfeitures

All contributions to the Plan are 100% vested; however, if for any reason an amount is required to be forfeited pursuant to Article VII of the Plan or to a correction under the Internal Revenue Service's Employee Plans Compliance Resolution System (EPCRS) program for which the Employer and the Plan are eligible, as set forth in Revenue Procedure 2013-12 or any successor thereto, such forfeiture shall be used as soon as practicable to pay Plan expenses or to reduce any Employer Contributions to be made in the Plan Year in which the forfeiture occurs or the next following Plan Year.

Plan Withdrawals and Distributions

Upon separation from service with the Company due to death, disability, retirement, or termination, a participant may elect to receive a lump-sum distribution equal to his or her vested account balance.

In-service withdrawals are available in certain limited circumstances, as defined by the Plan. Hardship withdrawals are allowed for participants incurring an immediate and heavy financial need, as defined by the Plan. Hardship withdrawals are strictly regulated by Internal Revenue Service (IRS) requirements and a participant must exhaust all available loan options and available distributions prior to requesting a hardship withdrawal.

Participants Loans

Participants currently employed may borrow from their fund accounts a minimum of \$1,000 up to a maximum equal to the lesser of \$50,000 or 50 percent of their vested account balance. Loan terms generally range from 1-5 years and are secured by the balance in the participant's account. Loan terms for loans used for the purchase of a participant's primary residence can be longer than five years. The loans bear interest at a rate established by the Trustee. Principal and interest is paid through payroll deductions. Participants may have only one loan outstanding at any time and participants may take only one loan in a twelve-month period. If any amount that was not paid when due remains unpaid by the end of the calendar quarter following the quarter in which the payment was due the loan will be in default. If a participant terminates employment with the Company, they may continue to make loan payments directly to the Trustee through a pre-authorized check agreement. If the loan is not repaid, it will automatically be treated as a distribution to the participant as soon as practicable following the default.

401(k) Plan

Notes to Financial Statements (continued)

December 31, 2017 and 2016

STERIS Company Stock Fund

Each participant who has an investment in the STERIS Company Stock Fund holds stock fund units. These units represent a proportionate number of STERIS shares held in the STERIS Company Stock Fund. The Company Stock Fund may hold cash or other short-term securities, although these are expected to be a small percentage of the fund. The Company has implemented a dividend pass-through election for its participants for cash dividends that equal or exceed \$25. Each participant is entitled to exercise voting rights attributable to the STERIS shares that his or her stock units represent. At least thirty days prior to the time such rights are to be exercised, each participant is sent, electronically or by regular mail, a copy of the proxy solicitation materials. Participants are requested to instruct the Trustee as to how shares should be voted. If a participant does not provide the Trustee with instructions as to how shares should be voted, then such shares are voted, as provided in the Plan, proportionately in accordance with the instructions received from other participants in the Plan who are voting.

Plan Termination

The Company, by action of its Board of Directors or Compensation Committee and without approval of its shareholders, has the right under the Plan to amend, suspend, or terminate the Plan in its entirety subject to the provisions of ERISA. The 401(k) Plan Oversight Committee for the Plan also is authorized to make certain Plan amendments.

In the event of Plan termination, participants will remain 100 percent vested in their accounts.

Administrative Expenses

Costs incident to the purchase and sale of securities, such as brokerage commissions and stock transfer taxes, are paid by the respective funds. All other administrative expenses incurred in the administration of the Plan are charged against the respective funds, unless the Company elects to pay such amounts. The quarterly amount of \$17.50 was deducted from each participant account to pay administrative fees. The Company has elected to pay audit, legal, and consulting fees only. Expenses that are paid by the Company are excluded from these financial statements.

2. Summary of Accounting Policies

Basis of Accounting

The financial statements have been prepared in conformity with accounting principles generally accepted in the United States ("U.S. GAAP"). Plan financial statements have been prepared on the accrual basis of accounting. The following is a summary of the significant accounting policies followed by the Plan in the preparation of its financial statements.

Investment Valuation and Income Recognition

Investments held by the Plan are stated at fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). See Note 5 for further discussion and disclosures related to fair value measurements.

Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the exdividend date. Net appreciation (depreciation) includes the Plan's gains and losses on investments bought and sold as well as held during the year.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes and supplemental schedules. Actual results could differ from those estimates.

Notes Receivable from Participants

Notes receivable from participants are measured at amortized cost, which represents the unpaid principal balance plus any accrued but unpaid interest. Interest income on notes receivable from participants is recorded when earned. Related fees are recorded as administrative expenses and are recorded when incurred. If a participant ceases to make loan repayments and the plan administrator deems the participant loan to be a distribution, the participant loan balance is reduced and a benefit payment is recorded. No allowance for credit losses has been recorded as of December 31, 2017 and 2016.

Payment of Benefits

Benefits are recorded when paid.

401(k) Plan

Notes to Financial Statements (continued)

December 31, 2017 and 2016

Subsequent Events

Plan management evaluates subsequent events through the financial statement issuance date.

3. Transactions with Parties-in-Interest

Party-in-interest transactions include the investment in the funds of the Trustee and funds maintained by entities affiliated with the Trustee and the payment of administrative expenses. Permissible Plan loans to participants are also party-in-interest transactions.

The Plan purchased shares of STERIS for \$3,840,997, sold shares of STERIS for \$5,823,796, and received dividends on such shares totaling \$769,506 during the year ended December 31, 2017. These transactions qualify as party-in-interest transactions; however, they are exempt from the prohibited transactions rules under ERISA.

The Plan purchased shares of STERIS for \$3,855,473, sold shares of STERIS for \$4,492,451, and received dividends on such shares totaling \$717,794 during the year ended December 31, 2016. These transactions qualify as party-in-interest transactions; however, they are exempt from the prohibited transactions rules under ERISA.

4. Tax Status

The Plan received a determination letter from the Internal Revenue Service dated October 9, 2015, stating that the Plan is qualified under Section 401(a) of the Code. This determination also meant, in effect, that the related trust was determined to be exempt from taxation. The determination was subject to a request that certain proposed amendments previously submitted to the IRS be adopted. These amendments, contained in a First Amendment, were adopted later in October 2015. The Plan is required to operate in conformity with the Code to maintain its qualified status. The Plan Administrator has indicated that it will take the necessary steps, if any, to bring the Plan's operations into compliance with the Code requirements in the event of any noncompliance.

U.S. GAAP requires the Company to evaluate tax positions taken by the Plan and recognize a tax asset or liability if the Plan has taken an uncertain position that more likely than not would not be sustained upon examination by the Internal Revenue Service. The Company has analyzed the tax positions taken by the Plan, and has concluded that as of December 31, 2017, there are no uncertain positions taken or expected to be taken. The Plan is subject to routine audits by the Internal Revenue Service; however, there are currently no tax audits for any tax periods in respect of the Plan in progress.

5. Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Investments are classified in a hierarchy based on the inputs to valuation techniques used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. The three levels of the fair value hierarchy are described below:

Level 1 - Unadjusted quoted prices for identical assets or liabilities in active markets.

<u>Level 2</u> - Inputs to the valuation methodology include, quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in inactive markets; inputs other than quoted prices that are observable for the asset or liability; and inputs that are derived principally from or corroborated by observable market data by correlation or other means. If the asset or liability has a specified (contractual) term, the Level 2 input must be observable for substantially the full term of the asset or liability.

401(k) Plan

Notes to Financial Statements (continued)

December 31, 2017 and 2016

Level 3 - Inputs to the valuation methodology are unobservable and significant to the fair value measurement. These inputs reflect management's judgment about the assumptions that a market participant would use in pricing the investment and are based on the best available information, some of which may be internally developed.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The following describes the valuation techniques used for assets measured at fair value.

Mutual funds: Valued at the price reported by the fund. Mutual funds held by the Plan have publicly available prices and are registered with the Securities and Exchange Commission. Money market fund holdings are valued at a net asset value ("NAV). NAV is computed by dividing the total assets, minus liabilities, of the fund by the number of fund shares outstanding. The instruments held by a money market fund generally are valued on the basis of amortized cost, which does not take into account unrealized capital gains or losses.

STERIS Company Stock Fund: Valued based on the year end unit value; unit values were determined by the Trustee by dividing the fair values of the total net assets at year end by the outstanding units.

The following tables set forth by level, within the fair value hierarchy, the Plan's assets measured at fair value on a recurring basis as of December 31, 2017 and 2016:

		Total	Level 1		Level 2		Level 3		
December 31, 2017									
Mutual funds:									
Mutual Funds	\$	550,016,745	\$	550,016,745	\$	_	\$		_
STERIS Company Stock Fund		56,697,440		56,697,440		_			_
Mutual funds - Taxable Money Market		31,601,246		_		31,601,246			_
Total assets at fair value	\$	638,315,431	\$	606,714,185	\$	\$ 31,601,246			
		Total		Level 1		Level 2		Level 3	
December 31, 2016		Total		Level 1		Level 2		Level 3	
December 31, 2016 Mutual funds:		Total		Level 1		Level 2		Level 3	
,	\$	Total 439,718,065	\$	Level 1 439,718,065	\$	Level 2	\$	Level 3	_
Mutual funds:	\$		\$		\$	Level 2 — —	\$	Level 3	
Mutual funds: Mutual funds	\$	439,718,065	\$	439,718,065	\$	Level 2 — — — 34,307,261	\$	Level 3	

6. Risks and Uncertainties

The Plan invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect participants' account balances and the amounts reported in the statements of net assets available for benefits.

Participants are responsible for researching and judging for themselves the suitability of any particular security, transaction or investment strategy and the associated inherent risk of loss.

STERIS Corporation 401(k) Plan

EIN: 34-1482024 Plan Number: 001

Schedule H, Line 4i—Schedule of Assets

(Held at End of Year) December 31, 2017

Identity of Issuer, Borrower, Lessor, or Similar Party	Including Maturity Da Rate of Interest, Collat	Description of Investment Including Maturity Date, Rate of Interest, Collateral, Par, or Maturity Value			Current Value	
Stock:						
* STERIS plc	STERIS Company Stock Fund - 663,283	Units	**	\$	56,697,440	
Mutual Funds:						
* Vanguard Extended Market Index Fund: Institutional Shares	885,989	Shares	**		75,087,583	
* Vanguard FTSE All-World ex-US Index Fund: Institutional Shares	283,387	Shares	**		30,512,316	
* Vanguard Federal Money Market Fund	31,056,470	Shares	**		31,056,470	
* Vanguard Institutional Index Fund	531,814	Shares	**		129,475,464	
* Vanguard Institutional Target Retirement 2015 Fund	417,119	Shares	**		9,172,454	
* Vanguard Institutional Target Retirement 2020 Fund	1,761,255	Shares	**		39,681,066	
* Vanguard Institutional Target Retirement 2025 Fund	2,258,900	Shares	**		51,638,459	
* Vanguard Institutional Target Retirement 2030 Fund	1,847,220	Shares	**		42,707,726	
* Vanguard Institutional Target Retirement 2035 Fund	1,540,567	Shares	**		36,003,051	
* Vanguard Institutional Target Retirement 2040 Fund	1,257,682	Shares	**		29,706,440	
* Vanguard Institutional Target Retirement 2045 Fund	1,054,080	Shares	**		25,087,104	
* Vanguard Institutional Target Retirement 2050 Fund	817,144	Shares	**		19,464,363	
* Vanguard Institutional Target Retirement 2055 Fund	390,749	Shares	**		9,323,272	
* Vanguard Institutional Target Retirement 2060 Fund	93,120	Shares	**		2,221,832	
* Vanguard Institutional Target Retirement 2065 Fund	1,003	Shares	**		21,775	
* Vanguard Institutional Target Retirement Income	242,442	Shares	**		5,212,512	
* Vanguard Total Bond Market Index Fund Institutional Shares	3,730,138	Shares	**		40,098,985	
* Vanguard brokerage option - registered investment companies	5,147,119	Units	**		5,147,119	
					581,617,991	
Other:						
	Bearing interest between 4.25% and 5.75% and					
* Participant Loans	maturing through 2027		-	\$	10,158,833	
				\$	648,474,264	

 $[\]ensuremath{^{*}}$ Indicated party-in-interest to the Plan.

^{**} Participant-directed investment, cost not required

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the Administrator of the Plan has duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

STERIS Corporation 401(k) Plan

By: STERIS Corporation

Plan Administrator

Dated: June 15, 2018 By: /s/ KAREN L. BURTON

Karen L. Burton

Vice President, Corporate Controller and Chief Accounting Officer

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-207722) pertaining to the STERIS Corporation 401(k) Plan of STERIS Corporation of our report dated June 15, 2018, with respect to the financial statements and schedule of the STERIS Corporation 401(k) Plan included in this Annual Report (Form 11-K) for the year ended December 31, 2017.

/s/ BOBER, MARKEY, FEDOROVICH & COMPANY

Cleveland, Ohio

June 15, 2018