
Securities and Exchange Commission
Washington, D. C. 20549

FORM 11-K

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

For the Twelve Month Period Ended December 31, 2011

OR

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

For the transition period from to

Commission file number 1-14643

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

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

**STERIS Corporation
5960 Heisley Road
Mentor, Ohio 44060**

FINANCIAL STATEMENTS AND SUPPLEMENTAL SCHEDULE

STERIS Corporation 401(k) Plan
December 31, 2011 and 2010 and the Year ended December 31, 2011
with Report of Independent Registered Public Accounting Firm

STERIS Corporation 401(k) Plan
Financial Statements and Supplemental Schedule
December 31, 2011 and 2010

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Report of Independent Registered Public Accounting Firm

Board of Directors
STERIS Corporation
Mentor, Ohio

We have audited the accompanying statements of net assets available for benefits of the STERIS Corporation 401(k) Plan as of December 31, 2011 and 2010, and the related statement of changes in net assets available for benefits for the year ended December 31, 2011. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Plan's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of the Plan at December 31, 2011 and 2010, and the changes in its net assets available for benefits for the year ended December 31, 2011, in conformity with U.S. generally accepted accounting principles.

Our audits were conducted for the purpose of forming an opinion on the financial statements taken as a whole. The accompanying supplemental schedule of assets (held at end of year) as of December 31, 2011, is presented for purposes of additional analysis and is not a required part of the financial statements but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. Such information is the responsibility of the Plan's management. The information has been subjected to the auditing procedures applied in our audits of the financial statements and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

/s/ Ernst & Young LLP

Cleveland, Ohio
June 28, 2012

STERIS Corporation
401(k) Plan

Statements of Net Assets Available for Benefits

	<u>December 31,</u>	
	<u>2011</u>	<u>2010</u>
Assets:		
Investments, at fair value	\$ 282,180,297	\$ 291,393,910
Notes receivable from participants	6,446,220	6,466,512
Net assets available for benefits	<u>\$ 288,626,517</u>	<u>\$ 297,860,422</u>

See accompanying notes to the financial statements.

STERIS Corporation
401(k) Plan

Statement of Changes in Net Assets Available for Benefits

Year Ended December 31, 2011

Additions:	
Net realized and unrealized depreciation in the fair value of investments	\$ (11,682,416)
Investment interest and dividend income	5,881,129
Interest on notes receivable from participants	298,919
Contributions:	
Participant	18,198,913
Employer	6,881,743
Total contributions	25,080,656
Total additions	19,578,288
Deductions:	
Benefits paid to participants	\$ 28,571,825
Transfers out	931
Administrative expenses	239,437
Total deductions	28,812,193
Net decrease in net assets available for benefits	(9,233,905)
Net assets available for benefits at:	
Beginning of year	297,860,422
End of year	\$ 288,626,517

See accompanying notes to the financial statements.

**STERIS Corporation
401(k) Plan**

Notes to Financial Statements

December 31, 2011 and 2010

1. Description of Plan

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," "STERIS," or "Plan Administrator"). Generally, all domestic employees of STERIS and certain participating subsidiaries who have attained the age of 18 and have completed 90 days of employment with the Company or a participating subsidiary 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. The Plan was amended in 2010 to include a Qualified Automatic Contribution Arrangement (QACA) to provide safe harbor matching contributions and additional automatic enrollment features.

The Plan is a stock bonus plan and provides for the portion of the Plan consisting of the STERIS Stock Fund shall be an employee stock ownership plan (the "ESOP feature") within the meaning of Section 4975(e)(7) of the Internal Revenue Code (the "Code"), and provides for a cash payment option with respect to dividends paid on STERIS common shares. The Plan also contains a cash or deferred arrangement intended to qualify under Section 401(k) of the Code and is qualified under Section 401(a) of the Code.

Vanguard Fiduciary Trust Company became the Plan trustee and The Vanguard Financial Group, Inc. became the Plan record-keeper (collectively "the Trustee") on June 25, 2010. Prior to June 25, 2010, the assets of the Plan were maintained and the transactions were executed by Delaware Charter Guarantee & Trust Company d/b/a/ Principal Trust CompanySM as Plan trustee, an affiliate of Principal Life Insurance Company[®], which served as the Plan record-keeper. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 ("ERISA").

Contributions

All contributions made by a participant are "before-tax" deferred compensation contributions or 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.

The Company and participating subsidiaries 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, 2011, Company 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 Company matching contribution, which is made each pay period, is approved by the Company's Board of Directors on an annual basis. The Company has reserved the right to amend the Plan to suspend, modify or terminate its matching contributions.

The Company also may make corrective qualified nonelective contributions to the Plan on behalf of participants.

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

STERIS Corporation
401(k) Plan

Notes to Financial Statements (continued)

Vesting

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

Participant Accounts

A separate account is maintained for each participant in the Plan, reflecting contributions, investments, realized and unrealized investment gains and losses, loans, withdrawals, rollovers, and investment 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 the Company contributions, in any combination of the investment funds offered by the Plan, including STERIS Corporation Common Stock. 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 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 may 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.

Plan Withdrawals and Distributions

Upon death, disability or retirement or other termination of service, participants may receive a lump sum amount equal to the value of their account balance. Employed participants who have a specific financial hardship may withdraw all or a portion of their account balance. Additionally, participants who are age 59 1/2 or older may withdraw all or a portion of their account balance for any reason.

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.

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 Company Common Shares held in the STERIS Company Stock Fund. Each participant is entitled to exercise voting rights attributable to the Company's Common 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 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.

STERIS Corporation
401(k) Plan

Notes to Financial Statements (continued)

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. Quarterly, an amount of \$14.25 is deducted from each participant account to pay administrative fees. The Company has elected to pay audit and consulting fees only.

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 6 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 ex-dividend date.

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. Actual results could differ from those estimates.

Notes receivable from Participants

Notes receivable from participants are measured at amortized cost, which represents unpaid principal balance plus any accrued but unpaid interest.

Payment of Benefits

Benefits are recorded when paid.

Recent Accounting Pronouncements

In May 2011, the FASB issued accounting standards update titled "Fair Value Measurements: Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRSs." The update, effective for interim or annual reporting periods beginning after December 15, 2011, provides clarification about the application of existing fair value measurement and disclosure requirements, and expands certain other disclosure requirements. The adoption is not expected to have a material impact on the Plans' financial condition.

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 parties-in-interest transactions.

The Plan purchased Common Shares of the Company for \$2,743,843, sold Common Shares of the Company for \$4,318,207, and received dividends on Common Shares of the Company totaling \$537,263 during the year ended December 31, 2011. These transactions qualify as party-in-interest transactions; however, they are exempt from the prohibited transactions rules under ERISA.

4. Income Tax Status

The Plan received a determination letter from the Internal Revenue Service dated May 21, 2012, 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

**STERIS Corporation
401(k) Plan**

Notes to Financial Statements (continued)

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 Fifth Amendment, were adopted in June 2012. The letter expires on January 31, 2015. Once qualified, the Plan is required to operate in conformity with the Code to maintain its qualified status. The plan administrator believes the Plan is being operated in compliance with the applicable requirements of the Code and therefore, believes the Plan, as amended, is qualified and the related trust is tax-exempt.

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, 2011, 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. The Company believes it is no longer subject to examinations of its Forms 5500 for years prior to 2008.

5. Investments

During 2011, the Plan's investments (including investments purchased, sold, and held during the year) depreciated in value as follows:

	Year Ended December 31,
Net realized and unrealized depreciation in the value of investments:	
STERIS Company Stock Fund	\$ (5,595,704)
Mutual funds	(6,086,712)
Net realized and unrealized depreciation in the value of investments	\$ (11,682,416)

The following presents investments at December 31, 2011 and 2010 that represent 5 percent or more of the Plan's net assets available for benefits:

	December 31,	
	2011	2010
Vanguard Institutional Index Fund	\$ 60,383,285	\$ 60,829,192
Vanguard Extended Market Index Fund Institutional Shares	36,848,379	41,402,116
Vanguard Total Bond Market Index Fund Institutional Shares	36,661,703	34,400,479
Vanguard Prime Money Market Fund Institutional Shares	33,683,548	33,618,130
STERIS Company Stock Fund	24,800,780	31,945,729
Vanguard FTSE All-World ex-US Index Fund Institutional Shares	18,044,844	21,248,051
Vanguard Target Retirement 2020 Fund	16,584,874	16,734,192
Vanguard Target Retirement 2025 Fund	14,758,934	14,271,109

6. 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.

Level 2 - 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; 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.

STERIS Corporation
401(k) Plan

Notes to Financial Statements (continued)

Level 3 - Inputs to the valuation methodology are unobservable and significant to the fair value measurement and unobservable. 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 methodologies used for assets measured at fair value. Also, there have been no changes in the methodologies utilized as of December 31, 2011 and 2010.

Mutual funds: Valued at the net asset value of shares held by the Plan at year end.

STERIS Company Common 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, 2011 and 2010:

	Level 1	Level 2	Level 3	Total
December 31, 2011				
Mutual funds				
Domestic Balanced	\$ 71,245,711	\$ —	\$ —	\$ 71,245,711
Large Blend	60,383,285	—	—	60,383,285
Mid Cap	36,848,379	—	—	36,848,379
Intermediate Term Bond	36,661,703	—	—	36,661,703
Taxable Money Market	34,195,595	—	—	34,195,595
Foreign Large Blend	18,044,844	—	—	18,044,844
STERIS Company Stock Fund	—	24,800,780	—	24,800,780
Total assets at fair value	<u>\$ 257,379,517</u>	<u>\$ 24,800,780</u>	<u>\$ —</u>	<u>\$ 282,180,297</u>

	Level 1	Level 2	Level 3	Total
December 31, 2010				
Mutual funds				
Domestic Balanced	\$ 67,656,358	\$ —	\$ —	\$ 67,656,358
Large Blend	60,829,192	—	—	60,829,192
Mid Cap	41,402,115	—	—	41,402,115
Intermediate Term Bond	34,400,480	—	—	34,400,480
Taxable Money Market	33,911,985	—	—	33,911,985
Foreign Large Blend	21,248,051	—	—	21,248,051
STERIS Company Stock Fund	—	31,945,729	—	31,945,729
Total assets at fair value	<u>\$ 259,448,181</u>	<u>\$ 31,945,729</u>	<u>\$ —</u>	<u>\$ 291,393,910</u>

7. 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 Statement 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, 2011

Identity of Issuer, Borrower, Lessor, or Similar Party	Description of Investment Including Maturity Date, Rate of Interest, Collateral, Par, or Maturity Value	Current Value
Common Stock:		
* STERIS Corporation	STERIS Company Stock Fund - 847,890 Units	\$ 24,800,780
Mutual Funds:		
* Vanguard Extended Market Index Fund Institutional Shares	936,664 Shares	36,848,379
* Vanguard FTSE All-World ex-US Index Fund Institutional Shares	232,148 Shares	18,044,844
* Vanguard Institutional Index Fund	524,889 Shares	60,383,285
* Vanguard Prime Money Market Institutional Shares	33,683,548 Units	33,683,548
* Vanguard Target Retirement 2005 Fund	70,435 Shares	843,805
* Vanguard Target Retirement 2010 Fund	175,526 Shares	3,937,045
* Vanguard Target Retirement 2015 Fund	812,091 Shares	9,988,720
* Vanguard Target Retirement 2020 Fund	764,632 Shares	16,584,874
* Vanguard Target Retirement 2025 Fund	1,202,847 Shares	14,758,934
* Vanguard Target Retirement 2030 Fund	475,071 Shares	9,938,492
* Vanguard Target Retirement 2035 Fund	571,697 Shares	7,151,931
* Vanguard Target Retirement 2040 Fund	155,058 Shares	3,178,695
* Vanguard Target Retirement 2045 Fund	182,278 Shares	2,345,919
* Vanguard Target Retirement 2050 Fund	54,247 Shares	1,107,191
* Vanguard Target Retirement 2055 Fund	8,634 Shares	188,740
* Vanguard Target Retirement Income	105,929 Shares	1,221,365
* Vanguard Total Bond Market Index Fund Institutional Shares	3,332,882 Shares	36,661,703
* Vanguard brokerage option - registered investment companies	512,047 Units	512,047
		257,379,517
Other:		
* Participant Loans	Bearing interest between 4.25% and 9.25% and maturing through 2040	6,446,220
		\$ 288,626,517

* Indicated party-in-interest to the Plan.

SIGNATURE

The Plan. 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 28, 2012

By: /s/ MICHAEL J. TOKICH
Michael J. Tokich
Senior Vice President and Chief Financial Officer,
STERIS Corporation

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

Registration

Number

Description

33-55976	Form S-8 Registration Statement - STERIS Corporation 401(k) Plan
333-09733	Form S-8 Registration Statement - STERIS Corporation 401(k) Plan
333-170884	Form S-8 Registration Statement - STERIS Corporation 401(k) Plan

of our report dated June 28, 2012, 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, 2011.

/s/ ERNST & YOUNG LLP

Cleveland, Ohio

June 28, 2012