THERMO FISHER SCIENTIFIC INC. Form 11-K June 22, 2017

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

FORM 11-K

FOR ANNUAL REPORTS OF EMPLOYEE STOCK PURCHASE, SAVINGS AND SIMILAR PLANS PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

(mark one)

[X] Annual Report Pursuant to Section 15(d) of the Securities Exchange Act of 1934 for the Fiscal Year Ended December 31, 2016

Transition Report Pursuant to Section 15(d) of the Securities Exchange Act of1934

Commission File Number 1-8002

THERMO FISHER SCIENTIFIC INC. 401(k) RETIREMENT PLAN

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

Thermo Fisher Scientific Inc. 401(k) Retirement Plan

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

Thermo Fisher Scientific Inc. 168 Third Avenue Waltham, Massachusetts 02451

Thermo Fisher Scientific Inc. 401(k) Retirement Plan December 31, 2016 and 2015

Pursuant to the requirements of the Securities Exchange Act of 1934, the trustees (or other persons who administer the employee benefit plan) have duly caused this annual report to be signed by the undersigned hereunto duly authorized. THERMO FISHER SCIENTIFIC INC. 401(k) RETIREMENT PLAN

By: Thermo Fisher Scientific Inc., Pension Committee

By:/s/ Stephen Williamson Stephen Williamson Senior Vice President, Chief Financial Officer and Member of the Pension Committee

Date: June 22, 2017

Thermo Fisher Scientific Inc. 401(k) Retirement Plan Financial Statements and Supplemental Schedule December 31, 2016 and 2015 Thermo Fisher Scientific Inc. 401(k) Retirement Plan Index

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*Other supplemental schedules required by Section 2520.103.10 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 have been omitted because they are not applicable.

Thermo Fisher Scientific Inc. 401(k) Retirement Plan

Report of Independent Registered Public Accounting Firm

To the Administrator of the Thermo Fisher Scientific Inc. 401(k) Retirement Plan

In our opinion, the accompanying statements of net assets available for benefits and the related statement of changes in net assets available for benefits present fairly, in all material respects, the net assets available for benefits of the Thermo Fisher Scientific Inc. 401(k) Retirement Plan (the "Plan") as of December 31, 2016 and 2015, and the changes in net assets available for benefits for the year ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. 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 of these financial statements 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. An audit 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.

The supplemental Schedule H, Line 4i - Schedule of Assets (Held at End of Year) as of December 31, 2016 has been subjected to audit procedures performed in conjunction with the audit of the Plan's financial statements. The supplemental schedule is the responsibility of the Plan's management. Our audit procedures included determining whether the supplemental schedule 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 schedule. In forming our opinion on the supplemental schedule, we evaluated whether the supplemental schedule, including its form and content, are 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 Schedule H, Line 4i - Schedule of Assets (Held at End of Year) as of December 31, 2016 is fairly stated, in all material respects, in relation to the financial statements as a whole.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts June 22, 2017 Thermo Fisher Scientific Inc. 401(k) Retirement Plan Statements of Net Assets Available for Benefits December 31, 2016 and 2015

| (In thousands) | 2016 | 2015 |
|--|-----------------------|-----------------------|
| Assets Cash Investments, at fair value (Notes 2 and 4) | \$132 3,609,793 | \$156 3,196,417 |
| Receivables Employer contributions Participant contributions Notes receivable from participants | 3,286 92 48,073 | 3,323 88 45,775 |
| Total receivables | 51,451 | 49,186 |
| Net assets available for benefits | \$3,661,376 | \$3,245,759 |

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

Thermo Fisher Scientific Inc. 401(k) Retirement Plan Statement of Changes in Net Assets Available for Benefits For the Year Ended December 31, 2016

| (In thousands) | 2016 |
|--|----------------------|
| Additions | |
| Investment income Dividend income | ¢01 704 |
| | \$21,724 |
| Net appreciation in fair value of investments | 231,290 |
| Total investment gain, net | 253,014 |
| Interest income on notes receivable from participants | 2,056 |
| Contributions | |
| Employer | 101,871 |
| Participants | 151,428 |
| Participant rollovers | 28,426 |
| Total contributions | 281,725 |
| Total additions, net | 536,795 |
| Deductions | |
| Benefits paid to participants | 227,237 |
| Administrative expenses | 447 |
| Total deductions | 227,684 |
| Net increase in net assets available for benefits prior to merger | 309,111 |
| Merger of Affymetrix, Inc. Employee Savings and Investment Plan (Note 1) | 106,506 |
| Net increase in net assets available for benefits | 415,617 |
| | |
| Net Assets Available for Benefits | |
| Beginning of year | 3,245,759 |
| | h a c c c - - |
| End of year | \$3,661,376 |

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

Note 1. Plan Description

The following description of the Thermo Fisher Scientific Inc. 401(k) Retirement Plan (the "Plan") provides only general information. Participants should refer to the Plan document for a more complete description of the Plan's provisions.

General

The Plan is a defined contribution plan for the benefit of certain employees of Thermo Fisher Scientific Inc. (the "Plan Sponsor" or the "Company"). T. Rowe Price Trust Company is the trustee of the Plan. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 ("ERISA").

Merger / Rollover

The Company acquired Affymetrix, Inc. in March 2016. Effective December 16, 2016, the Affymetrix, Inc. Employee Savings and Investment Plan (the "Affymetrix Plan") was merged into the Plan. The assets of the Affymetrix Plan were held by the trustee, Charles Schwab, and were liquidated and the proceeds transferred into the Plan in December 2016. The aggregate value of the proceeds transferred was \$106,506,000. Participants of the Affymetrix Plan became eligible to participate in the Plan effective December 16, 2016. Amounts contributed by Affymetrix for such participants and transferred to the Plan as part of the merger of the Affymetrix Plan shall continue to vest according to the Affymetrix Plan vesting schedule, generally i) 25% per year of service, or ii) 100% at age 55 or death or disability prior to the termination of employment. Any amounts contributed to the Plan for such participants after December 16, 2016 shall be subject to the Plan's regular vesting schedule.

The Company acquired Alfa Aesar from Johnson Matthey Plc. in September 2015. In connection with the acquisition, plan assets belonging to Alfa Aesar employees participating in the Johnson Matthey Inc. Salaried Employees' Savings Investment Plan (the "Johnson Matthey Plan") were rolled over into the Plan effective April 1, 2016. The aggregate value of the assets transferred from the Johnson Matthey Plan was \$9,320,000, and is included in Participant rollovers in the Statement of Changes in Net Assets Available for Benefits. Eligibility

U.S. employees (as defined by the Plan) of the Company and its participating subsidiaries are generally eligible to participate in the Plan and receive Company matching contributions upon their date of hire (or rehire). Participants of certain unions may be eligible to participate in the Plan upon their date of hire (or rehire) but are not eligible for an allocation of Company contributions until the completion of one year of service.

Contributions

Each year participants may contribute on a combined pre-tax and after tax (Roth) basis up to 50% of their eligible compensation, not to exceed the limits of the Internal Revenue Code. Participants may also contribute amounts representing distributions from other qualified plans ("Participant Rollovers"). The Company's non-discretionary matching contribution is equal to 100% of the first 6% of eligible compensation that a participant contributes to the Plan. Participants direct the investment of their contributions and the Company match into various investment options including investment funds and the Company's common stock. Contributions are subject to certain limitations. Employee contributions and Company match are recorded on a bi-weekly basis or weekly for those employees on a weekly payroll.

The Plan includes an auto-enrollment provision whereby all newly eligible employees are automatically enrolled in the Plan unless they affirmatively elect not to participate in the Plan. Automatically enrolled participants have their deferral rate set at 3% of eligible compensation and their contributions invested in a designated asset allocation trust fund until changed by the participant.

Participant Accounts

Each participant's account is credited with the participant's contributions, the Company matching contributions, income or losses on those balances, as well as withdrawals, loan fees and loan repayments, as applicable. Administrative Expenses

The Company pays certain administrative expenses associated with the management of and professional services provided to the Plan which are not included in the Statement of Changes in Net Assets Available for Benefits. Expenses reported in the Statement of Changes in Net Assets Available for Benefits include both administrative fees for loan transactions, which are paid by the participants, and the fees paid from the administrative budget account as described below.

Administrative Budget Account

T. Rowe Price earns a set fee for recordkeeping services. Prior to January 2013, if the Plan's share of investment expenses incurred by the mutual plan funds and other investments held by the Plan exceeded this fee amount, the excess was deposited by T. Rowe Price into a non-participant directed account which could be used to pay other Plan expenses, such as audit and investment consultation fees. In January 2013, the Plan's share of investment expenses was reduced to match the fee for recordkeeping services. The remaining balance of the account is held in the Vanguard Treasury Money Market Investment Fund. Prior to August 1, 2016, the remaining balance of the account was held in the T. Rowe Price Summit Cash Reserves Fund. Plan expenses of \$338,000 were paid from the administrative budget account during 2016. At December 31, 2016 and 2015, there was \$418,000 and \$755,000, respectively, in this account available to pay future Plan expenses.

Vesting

Participants are immediately vested in their contributions from rollovers of previous employers' eligible qualified plans, voluntary contributions and any income or losses on those balances. Participants hired before January 1, 2014, are also immediately vested in the Company's matching contributions plus actual income or losses on those balances. Participants hired on or after January 1, 2014, become 100% vested in the Company's matching contributions, plus any income or losses on those balances, after two years of service. See Merger / Rollover above for vesting provisions specific to the Affymetrix Plan balances transferred into the Plan in 2016.

Notes Receivable from Participants

Participants may borrow from their account balance. Loans must be for a minimum of \$1,000 and have a maximum equal to \$50,000 or 50% of the account balance, whichever is less. The term of the loan is generally five years except when use of the proceeds is for the purchase of a primary residence, for which the term can be up to 30 years. The loans are secured by the balance in the participant's account and bear interest set at the prime rate as established in the Wall Street Journal, plus 1%. The prime rate and rate of interest on new Plan loans are determined

as of the beginning of each calendar month. The interest rates on existing loans range from 2.15% to 9.75% at December 31, 2016 and 2015. Principal and interest are repaid through payroll deductions for current employees. Benefit Payments and Plan Withdrawals

Upon termination of service, a participant (or beneficiary) may elect to receive the participant's account balance in either a lump-sum payment or periodic installments. Withdrawals may be made under certain other circumstances in accordance with the Plan document.

Forfeited Accounts

At December 31, 2016 and 2015, forfeited nonvested accounts totaled \$1,820,000 and \$3,000, respectively. These accounts can be used to reduce future employer contributions. In 2016, employer contributions were reduced by \$213,000 from forfeited nonvested accounts. Changes in accumulated forfeited nonvested accounts also include amounts transferred into the Plan with plan mergers and investment gains and losses on the forfeited nonvested accounts.

Note 2. Summary of Significant Accounting Policies

Basis of Accounting

The financial statements of the Plan are prepared on the accrual basis of accounting.

Use of Estimates

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities and changes therein, and the disclosures of contingent assets and liabilities. Actual results could differ from those estimates.

Investment Valuation and Income Recognition

Investments are stated at fair value. Shares of mutual funds are valued at net asset value at year-end. The Plan's interests in collective trusts are valued based on the net asset value per share as provided by the trustee of the fund, which is used as a practical expedient to estimate fair value. The Company's common stock is valued based on quoted market prices. Refer to Note 4 for more information on valuation of the Plan's investments.

Purchases and sales of investments are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date.

In the Statement of Changes in Net Assets Available for Benefits, the Plan presents the net appreciation (depreciation) in the fair value of its investments, which consists of realized gains or losses and the change in unrealized appreciation or depreciation on investments. The cost of investments is determined using the average-cost basis for calculating realized gains or losses.

Investment contracts held by a defined-contribution plan are required to be reported at contract value. The Plan invests in investment contracts through certain collective trusts. The Statements of Net Assets Available for

Benefits presents the investments in the collective trusts at contract value relating to the investment contracts. The Statement of Changes in Net Assets Available for Benefits is also prepared on a contract value basis.

Payment of Benefits

Benefits are recorded when paid.

Notes Receivable from Participants

Notes receivable from participants are measured at their unpaid principal balance plus any accrued but unpaid interest. Delinquent loans are reclassified as distributions based on the terms of the Plan document. Interest income is recorded on the accrual basis. Related fees are recorded as administrative expenses when they are incurred. No allowance for credit losses has been recorded as of December 31, 2016 or 2015. If a participant ceases to make loan repayments and the plan administrator deems the participant loan to be in default, the participant loan balance is reduced and a benefit payment is recorded.

Risks and Uncertainties

The Plan invests in various investment securities, including mutual funds and common collective trusts, which are exposed to various risks, such as interest rate, credit and overall market volatility. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, it is at least reasonably possible that changes in values of investment securities will occur in the near term and that such changes could materially affect the participants' account balances and the amounts reported in the Statements of Net Assets Available for Benefits.

Subsequent Events

The Plan has evaluated events and transactions occurring after the Statements of Net Assets Available for Benefits date through the date of issuance for recognition or disclosure in the financial statements and notes. Note 3. Tax Status

The Plan has received a favorable determination letter dated July 6, 2012, from the Internal Revenue Service. The Plan has been amended since receiving the determination letter; however, the Plan administrator, management and the Plan's ERISA counsel believe that the Plan has been designed and operated in compliance with the applicable requirements of the Internal Revenue Code.

Accounting principles generally accepted in the United States of America require plan management to evaluate tax positions taken by the plan and recognize a tax liability (or asset) 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 plan administrator has analyzed the tax positions taken by the plan, and has concluded that as of December 31, 2016 and 2015, there are no uncertain positions taken or expected to be taken that would require recognition of a liability (or asset) or disclosure in the financial statements. The plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress. The plan administrator believes it is no longer subject to income tax examinations for years prior to 2012.

Thermo Fisher Scientific Inc. 401(k) Retirement Plan Notes to Financial Statements For the Year Ended December 31, 2016

Note 4. Fair Value Measurements

The fair value accounting guidance requires that assets and liabilities carried at fair value, excluding assets measured at the net asset value per share (or its equivalent) practical expedient, be classified and disclosed in one of the following three categories:

Level 1: Quoted market prices in active markets for identical assets or liabilities that the Company has the ability to access.

Level 2: Observable market based inputs or unobservable inputs that are corroborated by market data such as quoted prices, interest rates and yield curves.

Level 3: Inputs are unobservable data points that are not corroborated by market data.

The asset's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used maximize the use of observable inputs and minimize the use of unobservable inputs.

The following table presents information about the Plan's investments measured at fair value on a recurring basis as of December 31, 2016:

| (In thousands) | Total | Level 1 | Level 2 | Level 3 | Not subject to leveling (1) |
|--|----------------------------------|-------------------------|------------|------------|-----------------------------------|
| Mutual funds Common collective trusts Common stock | \$476,043 3,051,275 82,475 | \$476,043 82,475 | \$ - | -\$ - | _\$ 3,051,275 |

Total investments at fair value \$3,609,793 \$558,518 \$ -\$ -\$3,051,275

(1) Investments measured at the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy.

The following table presents information about the Plan's investments measured at fair value on a recurring basis as of December 31, 2015:

| (In thousands) | Total | Level 1 | Level 2 | Level 3 | Not subject to leveling (1) |
|--|----------------------------------|---------------|------------|------------|-----------------------------------|
| Mutual funds Common collective trusts Common stock | \$412,732 2,702,311 81,374 | \$412,732 | \$ - | _\$ - | \$ 2,702,311 |

Total investments at fair value \$3,196,417 \$494,106 \$ -\$ -\$2,702,311

(1) Investments measured at the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy.

There were no transfers between levels during 2016 or 2015.

Thermo Fisher Scientific Inc. 401(k) Retirement Plan Notes to Financial Statements For the Year Ended December 31, 2016

The table below presents the fair value of Plan investments that are measured at the net asset value per share (or its equivalent) practical expedient:

| | Fair Value as of | | | | |
|--------------------------------------|------------------|-------------|----------|-------------|--|
| | December 31, | | Unfunded | Redemption | Redemption |
| (In thousands) | 2016 | 2015 | Commitme | ntFrequency | Notice Period |
| Asset Category | | | | | |
| Asset allocation funds | \$2,496,329 | \$2,220,635 | \$ - | —Daily | Daily for participant withdrawals 0-90 days for Plan withdrawals |
| Equity funds | 302,318 | 264,746 | _ | Daily | Daily for participant withdrawals 0-90 days for Plan withdrawals |
| Guaranteed investment contract funds | 252,628 | 216,930 | | Daily | Daily for participant withdrawals 12-30 months for Plan withdrawals |
| | \$3,051,275 | \$2,702,311 | \$ - | _ | |

Note 5. Parties-in-Interest and Related-party Transactions

Certain Plan investments are shares of mutual funds or interests in common collective trusts managed by T. Rowe Price Retirement Services, an affiliate of T. Rowe Price Trust Company, the trustee of the Plan. Therefore, transactions in these investments, including dividends earned of \$4,610,000, qualify as party-in-interest transactions. Fees borne by the Plan for investment management services were included indirectly as a reduction of the return earned on each fund. Notes receivable from participants also qualify as party-in-interest transactions. Interest on notes receivable from participants was \$2,056,000 in 2016.

The Plan invests in common stock of the Company and transactions in this common stock are related-party transactions. As of December 31, 2016 and 2015, the Plan held 584,513 and 573,660 shares, respectively, of Company common stock. In 2016 and 2015, the Plan purchased shares of Company common stock on the open market having a value of \$14,585,000 and \$12,360,000, respectively. In 2016 and 2015, the Plan sold shares of Company common stock on the open market having a value of \$13,315,000 and \$12,103,000, respectively. In 2016 and 2015, the Plan received cash dividends of \$348,000 and \$344,000, respectively on shares of Company common stock held.

Note 6. Plan Termination

Although it has not expressed an intention to do so, the Company has the right under the Plan to discontinue its contributions at any time and to terminate the Plan, subject to the provisions of ERISA. In such event, the assets of the Plan would be distributed to participants in accordance with plan provisions.

Thermo Fisher Scientific Inc. 401(k) Retirement Plan Schedule H, Line 4i – Schedule of Assets (Held at End of Year) December 31, 2016 Supplemental Schedule

| Identity of Issue/Borrower, Lessor or Similar Party | Description of investments including maturity date, rate of interest, collateral, par or maturity value | Cost | Current Value (In thousands) |
|--|---|--|---|
| Cash | | | \$132 |
| Mutual Funds Dodge & Cox Dodge & Cox Vanguard PIMCO Vanguard Total mutual funds | Dodge & Cox Stock Fund Dodge & Cox International Stock Fund Vanguard Mid Capitalization Index Fund, Instl. PIMCO Total Return Fund Vanguard Treasury Money Market Inv. | (2) (2) (2) (2) \$418 | 141,784 96,416 159,087 78,338 418 476,043 |
| Common Collective Trusts T. Rowe Price T. Rowe Price T. Rowe Price T. Rowe Price T. Rowe Price T. Rowe Price T. Rowe Price State Street Global Advisors T. Rowe Price Jennison Associates T. Rowe Price T. Rowe Price | Retirement 2025 Active Trust D (1) Retirement 2030 Active Trust D (1) Retirement 2020 Active Trust D (1) Retirement 2035 Active Trust D (1) Retirement 2040 Active Trust D (1) T. Rowe Price Stable Value Fund (1) Retirement 2015 Active Trust D (1) Retirement 2045 Active Trust D (1) SSGA S&P 500 Index Fund Class C T. Rowe Price Growth Stock Trust Class A (1) Jennison Institutional U.S. Small-Cap Equity Fund Retirement 2050 Active Trust D (1) Retirement 2010 Active Trust D (1) Retirement Balanced Active Trust D (1) Retirement 2005 Active Trust D (1) Retirement 2005 Active Trust D (1) Retirement 2060 Active Trust D (1) | (2) | 458,485 456,924 386,452 380,286 297,334 252,628 152,625 156,184 157,330 75,505 69,483 82,493 52,680 20,897 29,158 19,891 2,920 3,051,275 |
| Common Stock Thermo Fisher Scientific Inc. | Common Stock (1) | (2) | 82,475 |
| Participant Loans | Participant Loans (for a term not exceeding 30 years at interest rates ranging from 2.15% to 9.75%) (1) | (2) | 48,073 |
| Total | | | \$3,657,998 |

(1) Assets are a party-in-interest to the Plan.

(2) Cost information is not required for participant-directed investments and, therefore, is not included.

Thermo Fisher Scientific Inc. 401(k) Retirement Plan Exhibit Index December 31, 2016 and 2015

Exhibit NumberDescription of Exhibit

23.1 Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm