

THERMO FISHER SCIENTIFIC INC.

Form S-3ASR

February 28, 2019

As filed with the Securities and Exchange Commission on February 28, 2019

Registration No. 333-

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

THERMO FISHER SCIENTIFIC INC.

THERMO FISHER SCIENTIFIC
(FINANCE I) B.V.

(Exact name of registrant as specified in its charter)

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of

The Netherlands
(State or other jurisdiction of

incorporation or organization)

incorporation or organization)

**04-2209186
(I.R.S. Employer**

Identification Number)

**168 Third Avenue
Waltham, Massachusetts 02451
(781) 622-1000**

**98-1315372
(I.R.S. Employer**

Identification Number)

**Takkebijsters 1
4817BL Breda
The Netherlands
+31-76-579-5555**

Michael A. Boxer

Senior Vice President and General Counsel

Thermo Fisher Scientific Inc.

**168 Third Avenue
Waltham, Massachusetts 02451
(781) 622-1000**

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7 World Trade Center, 250 Greenwich Street

New York, NY 10007

(212) 230-8800

Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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

Large accelerated filer
Non-accelerated filer

Accelerated filer
Smaller reporting company
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Each Class of	Amount	Proposed		Amount of
		Maximum	Maximum	
Securities to be Registered(1)	to be	Offering Price	Aggregate	Registration Fee(1)
	Registered(1)	Per Unit(1)	Offering Price(1)	
Thermo Fisher Scientific Inc.				
Debt Securities				
Common Stock, par value \$1.00 per share				

Preferred Stock, par value \$100 per share

Depository Shares(2)

Purchase Contracts

Purchase Units

Warrants

Guarantees(3)

Thermo Fisher Scientific (Finance I)

B.V.

Debt Securities

- (1) An indeterminate amount of the securities of each identified class is being registered as may from time to time be offered hereunder at indeterminate prices, along with an indeterminate number of securities that may be issued upon exercise, settlement, exchange or conversion of securities offered or sold hereunder or that are represented by depository shares. Pursuant to Rule 416 under the Securities Act of 1933, as amended (the Securities Act), this registration statement also covers any additional securities that may be offered or issued in connection with any stock split, stock dividend or pursuant to anti-dilution provisions of any of the securities. Separate consideration may or may not be received for securities that are issuable upon conversion, exercise or exchange of other securities. In accordance with Rules 456(b) and 457(r) under the Securities Act, the registrants are deferring payment of all registration fees and will pay the registration fees subsequently in advance or on a pay-as-you-go basis. Securities registered hereunder may be sold either separately or as units comprised of more than one type of security registered hereunder.
- (2) Each depository share will be issued under a deposit agreement, will represent an interest in a fractional share or multiple shares of preferred stock and will be evidenced by a depository receipt.
- (3) Thermo Fisher Scientific Inc. will fully and unconditionally guarantee any series of debt securities issued by Thermo Fisher Scientific (Finance I) B.V. Pursuant to Rule 457(n) under the Securities Act, no separate registration fee will be paid in respect of such guarantees.

PROSPECTUS

Thermo Fisher Scientific Inc.

Debt Securities

Common Stock

Preferred Stock

Depository Shares

Purchase Contracts

Purchase Units

Warrants

Guarantees

Thermo Fisher Scientific (Finance I) B.V.

Debt Securities

(fully and unconditionally guaranteed by Thermo Fisher Scientific Inc.)

The Issuers may issue securities from time to time in one or more offerings. This prospectus describes the general terms of these securities and the general manner in which these securities will be offered. We will provide the specific terms of these securities in supplements to this prospectus. The prospectus supplements will also describe the specific manner in which these securities will be offered and may also supplement, update or amend information contained in this document. You should read this prospectus and any applicable prospectus supplement before you invest.

The Issuers may offer these securities in amounts, at prices and on terms determined at the time of offering. The securities may be sold directly to you, through agents, or through underwriters and dealers. If agents, underwriters or dealers are used to sell the securities, we will name them and describe their compensation in a prospectus supplement.

The common stock of Thermo Fisher Scientific Inc. trades on The New York Stock Exchange under the symbol TMO .

Investing in these securities involves certain risks. See Risk Factors included in or incorporated by reference in any accompanying prospectus supplement and elsewhere in the documents incorporated by reference in this prospectus for a discussion of the factors you should carefully consider before deciding to purchase these

securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is February 28, 2019.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, which we refer to as the SEC, utilizing a shelf registration process. Under this shelf registration process, Thermo Fisher or Thermo Fisher International may from time to time sell any combination of the securities described in this prospectus in one or more offerings.

This prospectus provides you with a general description of the securities the Issuers may offer. Each time Thermo Fisher or Thermo Fisher International sells securities, we will provide one or more prospectus supplements that will contain specific information about the terms of the offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and the accompanying prospectus supplement together with the additional information described under the heading **Where You Can Find More Information** on page 1 of this prospectus.

You should rely only on the information contained in or incorporated by reference in this prospectus, any accompanying prospectus supplement or in any related free writing prospectus filed by us with the SEC. We have not authorized anyone to provide you with different information. This prospectus and the accompanying prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities described in the accompanying prospectus supplement or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus, any prospectus supplement, the documents incorporated by reference and any related free writing prospectus is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

Unless the context otherwise indicates, references in this prospectus to **we**, **our** and **us** refer, collectively, to Thermo Fisher Scientific Inc., a Delaware corporation, and its consolidated subsidiaries. The term **Thermo Fisher** refers to Thermo Fisher Scientific Inc. a Delaware corporation, the term **Thermo Fisher International** refers to Thermo Fisher Scientific (Finance I) B.V., a private limited liability company incorporated under Dutch law and the term **Issuers** refers to Thermo Fisher and Thermo Fisher International, collectively.

Pursuant to Rule 3-10(b) (*Rule 3-10(b)*) of Regulation S-X, this prospectus does not contain separate financial statements for Thermo Fisher International since Thermo Fisher International is an indirect 100%-owned subsidiary of Thermo Fisher, and Thermo Fisher files consolidated financial information under the Securities Exchange Act of 1934, as amended (the *Exchange Act*). Thermo Fisher International is a finance subsidiary of Thermo Fisher under Rule 3-10(b) with no independent function other than financing activities. Thermo Fisher will provide a full and unconditional guarantee of Thermo Fisher International's obligations under its debt securities, and no other subsidiary of Thermo Fisher will guarantee these obligations.

WHERE YOU CAN FIND MORE INFORMATION

Thermo Fisher files annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. Copies of certain information filed by us with the SEC are also available on our website at www.thermofisher.com. Our website is not a part of this prospectus.

This prospectus is part of a registration statement we filed with the SEC. This prospectus omits some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information in and exhibits to the registration statement for further information on us and the securities the Issuers are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these

filings. You should review the complete document to evaluate these statements.

INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus.

Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below (File No.001-08002) and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) until the offering of the securities under the registration statement is terminated or completed:

Annual Report on Form 10-K for the fiscal year ended December 31, 2018, filed with the SEC on February 27, 2019;

the portions of our definitive proxy statement on Schedule 14A filed with the SEC on April 10, 2018 that are incorporated by reference in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017;

Current Report on Form 8-K filed on February 28, 2019; and

the description of our common stock contained in our Amendment No. 3 to Registration Statement on Form 8-A filed on September 9, 1999, including any amendments or reports filed for the purpose of updating such description.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address:

Thermo Fisher Scientific Inc.

168 Third Avenue

Waltham, Massachusetts 02451

Attn: Investor Relations

Telephone: (781) 622-1111

FORWARD-LOOKING STATEMENTS

This prospectus and the information incorporated by reference in this prospectus include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Exchange Act. Any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words believes, anticipates, plans, expects, seeks, estimates, and similar expressions are intended to identify forward-looking statements. While we may elect to update

forward-looking statements in the future, we specifically disclaim any obligation to do so, even if our estimates change, and investors should not rely on those forward-looking statements as representing our views as of any date subsequent to the date of this prospectus or the date of information incorporated by reference herein.

A number of important factors could cause our results to differ materially from those indicated by such forward-looking statements, including those detailed in the section of any prospectus supplement or document incorporated by reference in this prospectus entitled Risk Factors.

THERMO FISHER

Thermo Fisher is the world leader in serving science. Our mission is to enable our customers to make the world healthier, cleaner and safer. We help our customers accelerate life sciences research, solve complex analytical challenges, improve patient diagnostics, deliver medicines to market and increase laboratory productivity.

Thermo Fisher had approximately 70,000 employees and served more than 400,000 customers within pharmaceutical and biotech companies, hospitals and clinical diagnostic labs, universities, research institutions and government agencies, as well as environmental, industrial quality and process control settings, as of December 31, 2018.

We serve our customers through our premier brands, Thermo Scientific, Applied Biosystems, Invitrogen, Fisher Scientific and Unity Lab Services:

The Thermo Scientific brand offers customers in research, diagnostics, industrial, and applied markets a complete range of high-end analytical instruments as well as laboratory equipment, software, services, consumables and reagents. Our portfolio of products includes innovative technologies for mass spectrometry, chromatography, elemental analysis, electron microscopy, molecular spectroscopy, sample preparation, informatics, chemical research and analysis, cell culture, bioprocess production, cellular, protein and molecular biology research, allergy testing, drugs-of-abuse testing, therapeutic drug monitoring testing, microbiology, anatomical pathology, as well as environmental monitoring and process control.

The Applied Biosystems brand offers customers in research, clinical and applied markets integrated instrument systems, reagents, and software for genetic analysis. Our portfolio includes innovative technologies for genetic sequencing and real-time, digital and end point polymerase chain reaction (PCR), that are used to determine meaningful genetic information in applications such as cancer diagnostics, human identification testing, and animal health, as well as inherited and infectious disease.

The Invitrogen brand offers life science customers a broad range of consumables and instruments that accelerate research and ensure consistency of results. Our portfolio of products includes innovative solutions for cellular analysis and biology, flow cytometry, cell culture, protein expression, synthetic biology, molecular biology and protein biology.

Fisher Scientific is our channels brand, offering customers a complete portfolio of laboratory equipment and consumables, chemicals, supplies and services used in scientific research, healthcare, safety, and education markets. These products are offered through an extensive network of direct sales professionals, segment-relevant printed collateral and digital content, a state-of-the-art website and supply-chain management services. We also offer a range of biopharma services for clinical trials management and biospecimen storage.

Unity Lab Services is our instrument and equipment services brand, offering a complete portfolio of services from enterprise level engagements to individual instruments and laboratory equipment, regardless of the original manufacturer. Through our network of world-class service and support personnel, we provide services that are designed to help our customers improve productivity, reduce costs, and drive decisions with better data.

We continuously increase our depth of capabilities in technologies, software and services, and leverage our extensive global channels to address our customers' emerging needs. For example, in October 2018, we acquired, within the Life Sciences Solutions segment, Becton Dickinson and Company's Advanced Bioprocessing business, expanding our bioproduction offerings. Our goal is to make our customers more productive in an increasingly competitive business environment, and to allow them to solve their challenges, from complex research to improved patient care, environmental and process monitoring, and consumer safety.

Thermo Fisher is a Delaware corporation and was incorporated in 1956. We completed our initial public offering in 1967 and our common stock was listed on the New York Stock Exchange in 1980. Thermo Fisher's principal executive offices are located at 168 Third Avenue, Waltham, Massachusetts 02451, and its telephone number is (781) 622-1000.

THERMO FISHER INTERNATIONAL

Thermo Fisher International, a private limited liability company (*besloten vennootschap met beperkte aansprakelijkheid*), was incorporated in 2016 under the laws of The Netherlands, with its corporate seat in Breda, The Netherlands, and its registered office is located at Takkebijsters 1, 4817BL Breda, The Netherlands. Thermo Fisher International is an indirect 100%-owned finance subsidiary of Thermo Fisher and conducts no independent operations other than its financing activities. Thermo Fisher International's telephone number is +31-76-579-5555.

USE OF PROCEEDS

We intend to use the net proceeds from the sale of any securities offered under this prospectus for general corporate purposes unless otherwise indicated in the applicable prospectus supplement. General corporate purposes may include the acquisition of companies or businesses, repayment and refinancing of debt, working capital and capital expenditures or the repurchase of our outstanding equity securities. We may temporarily invest the net proceeds in short-term, liquid investments until they are used for their stated purpose.

DESCRIPTION OF THERMO FISHER DEBT SECURITIES

Thermo Fisher may offer debt securities, which may be senior or subordinated. In this Description of Thermo Fisher Debt Securities, we refer to the senior debt securities and the subordinated debt securities that Thermo Fisher issues collectively as debt securities. The following description summarizes the general terms and provisions of the debt securities. We will describe the specific terms of the debt securities and the extent, if any, to which the general provisions summarized below apply to any series of debt securities in the prospectus supplement relating to the series and any applicable free writing prospectus that we authorize to be delivered. References to Thermo Fisher and the Issuer in this Description of Thermo Fisher Debt Securities mean Thermo Fisher Scientific Inc. excluding, unless the context otherwise requires or as otherwise expressly stated, its subsidiaries.

Thermo Fisher may issue senior debt securities from time to time, in one or more series under a senior indenture, dated November 20, 2009, between it and The Bank of New York Mellon Trust Company, N.A., which we refer to as the senior trustee. Thermo Fisher may issue subordinated debt securities from time to time, in one or more series under a subordinated indenture to be entered into between Thermo Fisher and a subordinated trustee to be named in a prospectus supplement, which we refer to as the subordinated trustee. The senior indenture and the form of the subordinated indenture are filed as exhibits to the registration statement of which this prospectus forms a part. Together, the senior indenture and the subordinated indenture are referred to as the indentures and, together, the senior trustee and the subordinated trustee are referred to as the trustees. This prospectus briefly outlines some of the provisions of the indentures. The following summary of the material provisions of the indentures is qualified in its entirety by the provisions of the indentures, including definitions of certain terms used in the indentures. Wherever we refer to particular sections or defined terms of the indentures, those sections or defined terms are incorporated by reference in this prospectus or the applicable prospectus supplement. You should review the indentures that are filed as exhibits to the registration statement of which this prospectus forms a part for additional information.

The indentures do not limit the amount of debt securities that Thermo Fisher may issue. The applicable indenture will provide that debt securities may be issued up to an aggregate principal amount authorized from time to time by the Issuer and may be payable in any currency or currency unit designated by it or in amounts determined by reference to an index.

General

The senior debt securities will constitute the Issuer's unsecured and unsubordinated general obligations and will rank *pari passu* with its other unsecured and unsubordinated obligations. The subordinated debt securities will constitute the Issuer's unsecured and subordinated general obligations and will be junior in right of payment to its senior indebtedness (including senior debt securities), as described under the heading Certain Terms of the Subordinated Debt Securities Subordination.

The debt securities will be the Issuer's unsecured obligations. Any secured debt or other secured obligations will be effectively senior to the debt securities to the extent of the value of the assets securing such debt or other obligations.

The applicable prospectus supplement and/or free writing prospectus will include any additional or different terms of the debt securities being offered, including the following terms:

the title of the debt securities;

whether the debt securities will be senior or subordinated debt securities, and, with respect to debt securities issued under the subordinated indenture, the terms on which they are subordinated;

any limit upon the aggregate principal amount of the debt securities;

the rate or rates (which may be fixed or variable) at which the debt securities will bear interest, or the manner of calculating such rate or rates, if applicable;

the date or dates from which such interest will accrue, the interest payment dates on which such interest will be payable or the manner of determination of such interest payment dates and the related record dates;

any trustees, authenticating agents or paying agents, if different from those set forth in this prospectus;

the right, if any, to extend the interest payment periods or defer the payment of interest and the duration of that extension or deferral;

the period or periods within which, the price or prices at which and the terms and conditions upon which debt securities may be redeemed, in whole or in part, at the Issuer's option;

the manner of paying principal and interest and the place or places where principal and interest will be payable;

provisions for a sinking fund or other analogous fund;

the form of the debt securities;

if other than denominations of \$1,000 or any integral multiple thereof, the denominations in which the debt securities will be issuable;

the currency or currencies in which payment of the principal of, premium, if any, and interest on, the debt securities will be payable;

if the principal amount payable at the stated maturity of the debt securities will not be determinable as of any one or more dates prior to such stated maturity, the amount which will be deemed to be such principal amount as of any such date for any purpose;

the terms of any repurchase or remarketing rights;

whether the debt securities will be issued in global form, the terms upon which the debt securities will be exchanged for definitive form, the depositary for the debt securities and the form of legend;

any conversion or exchange features of the debt securities;

if other than the principal amount thereof, the portion of the principal amount of the debt securities which shall be payable upon declaration of acceleration of the maturity thereof;

any restrictive covenants or events of default in addition to or in lieu of those set forth in this prospectus;

any provisions granting special rights to holders when a specified event occurs;

if the amount of principal or any premium or interest on the debt securities may be determined with reference to an index or pursuant to a formula, the manner in which such amounts will be determined;

any special tax implications of the debt securities;

whether and upon what terms the debt securities may be defeased if different from the provisions set forth in this prospectus;

with regard to the debt securities that do not bear interest, the dates for certain required reports to the applicable trustee; and

any all additional, eliminated or changed terms that will apply to the debt securities.

The Issuer may from time to time, without notice to or the consent of the holders of any series of debt securities, create and issue further debt securities of any such series ranking equally with the debt securities of such series

and having the same terms as such series (or the same terms other than (1) the payment of interest accruing prior to the issue date of such further debt securities or (2) the first payment of interest following the issue date of such further debt securities). Such further debt securities may be consolidated and form a single series with the debt securities of such series and have the same terms as to status, redemption or otherwise as the debt securities of such series.

You may present debt securities for exchange and you may present debt securities for transfer in the manner, at the places and subject to the restrictions set forth in the debt securities and the applicable prospectus supplement. The Issuer will provide you those services without charge, although you may have to pay any tax or other governmental charge payable in connection with any exchange or transfer, as set forth in the indentures.

Debt securities will bear interest at a fixed rate or a floating rate. Debt securities bearing no interest or interest at a rate that at the time of issuance is below the prevailing market rate (called original issue discount securities) may be sold at a discount below their stated principal amount. U.S. federal income tax considerations applicable to any such discounted debt securities or to certain debt securities issued at par which are treated as having been issued at a discount for U.S. federal income tax purposes will be described in the applicable prospectus supplement.

The Issuer may issue debt securities with the principal amount payable on any principal payment date, or the amount of interest payable on any interest payment date, to be determined by reference to one or more currency exchange rates, securities or baskets of securities, commodity prices or indices. You may receive a payment of principal on any principal payment date, or a payment of interest on any interest payment date, that is greater than or less than the amount of principal or interest otherwise payable on such dates, depending on the value on such dates of the applicable currency, security or basket of securities, commodity or index. Information as to the methods for determining the amount of principal or interest payable on any date, the currencies, securities or baskets of securities, commodities or indices to which the amount payable on such date is linked and certain related tax considerations will be set forth in the applicable prospectus supplement.

Certain Terms of the Senior Debt Securities

Certain Covenants

Limitations on Liens. The Issuer will not, and will not permit any of its subsidiaries to, create, incur, assume or otherwise cause to become effective any Lien (other than permitted Liens) on any Principal Property or upon shares of stock of any Principal Subsidiary (whether such Principal Property or shares are now existing or owned or hereafter created or acquired), to secure any indebtedness of the Issuer, any of its subsidiaries or any indebtedness of any other Person, unless the Issuer or such subsidiary also secures all payments due under the senior debt securities and all senior debt securities of any series having the benefit of this covenant (together with, if the Issuer shall so determine, any other indebtedness of the Issuer or any subsidiary of the Issuer then existing or thereafter created ranking equally with the senior debt securities), on an equal and ratable basis with such other indebtedness so secured (or, in the case of indebtedness subordinated to the senior debt securities, prior or senior thereto, with the same relative priority as the senior debt securities issued pursuant to the senior indenture will have with respect to such subordinated indebtedness) for so long as such other indebtedness shall be so secured. The senior indenture contains the following exceptions to the foregoing prohibition:

(a) Liens existing on the date when the Issuer first issues the senior debt securities pursuant to the senior indenture;

(b) Liens on property owned or leased by a Person existing at the time such Person is merged with or into or consolidated with the Issuer or any subsidiary of the Issuer or the Issuer or one or more of its subsidiaries acquires directly or indirectly all or substantially all of the stock or assets of such Person; provided that such Liens were in existence prior to the contemplation of such merger, consolidation or acquisition and do not extend to any assets other than those of the Person merged into, consolidated with or acquired by the Issuer or such subsidiary;

(c) Liens on property existing at the time of acquisition thereof by the Issuer or any subsidiary of the Issuer, provided that such Liens were in existence prior to the contemplation of such acquisition and do not extend to any property other than the property so acquired by the Issuer or such subsidiary;

(d) Liens to secure indebtedness incurred prior to, at the time of or within 18 months after the later of the acquisition of any property and the completion of the construction, alteration, repair or improvement of any property, as the case may be, for the purpose of financing all or a part of the purchase price thereof or cost of the construction, alteration, repair or improvement thereof and Liens to the extent they secure indebtedness in excess of such purchase price or cost and for the payment of which recourse may be had only against such property;

(e) Liens in favor of the United States or any state, territory or possession thereof (or the District of Columbia), or any department, agency, instrumentality or political subdivision of the United States or any state, territory or possession thereof (or the District of Columbia), to secure partial, progress, advance or other payments pursuant to any contract or statute or to secure any indebtedness incurred for the purpose of financing all or any part of the purchase price or the cost of constructing or improving the property subject to such Liens;

(f) any Lien securing indebtedness of a subsidiary owing to the Issuer or to one or more of its subsidiaries;

(g) Liens incurred or assumed in connection with the issuance of revenue bonds the interest on which is exempt from federal taxation pursuant to Section 103 of the Internal Revenue Code;

(h) Liens created, incurred or assumed in connection with an industrial revenue bond, pollution control bond or similar financing between the Issuer or any subsidiary of the Issuer and any federal, state or municipal government or other government body or quasi-governmental agency;

(i) any extension, renewal or replacement (or successive extensions, renewals or replacements) in whole or in part of any Lien referred to in clauses (a) through (h) above, inclusive, so long as (1) the principal amount of the indebtedness secured thereby does not exceed the principal amount of indebtedness so secured at the time of the extension, renewal or replacement (except that, where an additional principal amount of indebtedness is incurred to provide funds for the completion of a specific project, the additional principal amount, and any related financing costs, may be secured by the Lien as well) and (2) the Lien is limited to the same property subject to the Lien so extended, renewed or replaced (and improvements on the property); and

(j) any Lien on a Principal Property or the shares of stock of a Principal Subsidiary that would not otherwise be permitted by clauses (a) through (i) above, inclusive, securing indebtedness which, together with:

the aggregate outstanding principal amount of all other indebtedness of the Issuer and its subsidiaries secured by Liens on a Principal Property or the shares of stock of a Principal Subsidiary that is permitted solely pursuant to this clause (j), and

the aggregate Value of existing Sale and Leaseback Transactions that are permitted solely pursuant to clause (c) of Limitation on Sale and Leaseback Transactions and are still in existence, does not exceed 10% of Consolidated Net Assets.

In order to constitute a Principal Property under the senior indenture, a property must have a book value in excess of 3% of the most recently calculated Consolidated Net Assets. Based on Consolidated Net Assets as of December 31, 2018, a property would only constitute a Principal Property if it had a book value in excess of approximately \$1.1 billion. As of the date of this prospectus, neither the Issuer nor any of its subsidiaries owns any Principal Property

as defined. See Definition of Certain Terms.

Limitation on Sale and Leaseback Transactions. The Issuer will not, and will not permit any of its subsidiaries to, enter into any Sale and Leaseback Transaction with respect to any Principal Property unless:

(a) the Issuer or such subsidiary could incur indebtedness, in a principal amount at least equal to the Value of such Sale and Leaseback Transaction, secured by a Lien on the Principal Property to be leased (without equally

and ratably securing debt securities of any series having the benefit of this covenant) pursuant to clauses (a) through (i) under *Limitations on Liens* above;

(b) the Issuer applies, during the six months following the effective date of the Sale and Leaseback Transaction, an amount equal to the Value of the Sale and Leaseback Transaction to either (or a combination of) the voluntary retirement of Funded Debt or to the acquisition of property; or

(c) the aggregate Value of such Sale and Leaseback Transaction plus the Value of all other Sale and Leaseback Transactions of Principal Properties entered into after the date of the issuance of the senior debt securities permitted solely by this clause (c) and still in existence, plus the aggregate amount of all indebtedness secured by Liens permitted solely by clause (j) of *Limitations on Liens* does not exceed 10% of Consolidated Net Assets.

Certain Other Covenants. The senior indenture contains certain other covenants regarding, among other matters, corporate existence and reports to holders of senior debt securities. Unless indicated otherwise in a prospectus supplement, the senior debt securities will not contain any additional financial or restrictive covenants, including covenants relating to total indebtedness, interest coverage, stock repurchases, recapitalizations, dividends and distributions to shareholders or current ratios. The provisions of the senior indenture do not afford holders of senior debt securities issued thereunder protection in the event of a sudden or significant decline in the Issuer's credit quality or in the event of a takeover, recapitalization or highly leveraged or similar transaction involving the Issuer or any of its affiliates that may adversely affect such holders.

Consolidation, Merger and Sale of Assets. Unless indicated otherwise in a prospectus supplement, the Issuer will not consolidate with, merge with or into, or sell, convey, transfer, lease or otherwise dispose of all or substantially all of its and its subsidiaries property and assets taken as a whole (in one transaction or a series of related transactions) to any Person, or permit any Person to merge with or into the Issuer, unless:

the Issuer shall be the continuing Person, or the Person (if other than the Issuer) formed by such consolidation or into which the Issuer is merged or that acquired or leased such property and assets (the *Surviving Person*), shall be a Person organized and validly existing under the laws of the United States of America or any jurisdiction thereof, or, subject to certain conditions (including an obligation to pay additional amounts in respect of withholding taxes), a jurisdiction outside the United States, and shall expressly assume, by a supplemental indenture, executed and delivered to the senior trustee, all of the Issuer's obligations under the senior indenture and the senior debt securities;

immediately after giving effect to such transaction, no default or event of default (each as defined in the senior indenture) shall have occurred and be continuing; and

the Issuer delivers to the senior trustee an officer's certificate and opinion of counsel, in each case stating that such consolidation, merger or transfer and such supplemental indenture complies with this provision and that all conditions precedent provided for herein relating to such transaction have been complied with.

The Surviving Person will succeed to, and be substituted for, the Issuer under the senior indenture and the senior debt securities and, except in the case of a lease, the Issuer shall be released of all obligations under the senior indenture and the senior debt securities.

No Protection in the Event of a Change of Control. Unless the Issuer indicates otherwise in a prospectus supplement with respect to a particular series of senior debt securities, the senior debt securities will not contain any provisions

that may afford holders of the senior debt securities protection in the event the Issuer has a change of control or in the event of a highly leveraged transaction (whether or not such transaction results in a change of control).

Definition of Certain Terms. The following are the meanings of terms that are important in understanding the covenants described above.

Capital Lease Obligation means, at the time any determination thereof is to be made, the amount of the liability in respect of a capital lease that would at that time be required to be capitalized on a balance sheet in accordance with U.S. GAAP as in effect on the date of the senior indenture.

Consolidated Net Assets means the consolidated total assets of the Issuer and its subsidiaries as reflected in its most recent balance sheet prepared in accordance with U.S. GAAP as in effect at the time of such determination, less (a) all current liabilities (excluding any notes and loans payable, current maturities of long-term debt, the current portion of deferred revenue and obligations under capital leases) and (b) acquisition-related intangible assets in accordance with U.S. GAAP in effect at the time of such determination. Consolidated Net Assets includes goodwill of the Issuer and its subsidiaries.

Funded Debt means, as of any date of determination, the Issuer's indebtedness or the indebtedness of a subsidiary maturing by its terms more than one year after its creation and indebtedness classified as long-term debt under U.S. GAAP as in effect on the date of the senior indenture, and in each case ranking at least *pari passu* with the senior debt securities.

indebtedness means, with respect to any specified Person, any indebtedness of such Person, whether or not contingent:

- 1) in respect of borrowed money;
- 2) evidenced by bonds, notes, debentures or similar instruments or letters of credit (or reimbursement agreements in respect thereof); and
- 3) in respect of Capital Lease Obligations.

In addition, the term *indebtedness* includes (x) all indebtedness (as defined above) of others secured by a Lien on any asset of the specified Person (whether or not such indebtedness is assumed by the specified Person), *provided* that the amount of such indebtedness will be the lesser of (A) the fair market value of such asset at such date of determination and (B) the amount of such indebtedness, and (y) to the extent not otherwise included, the guarantee by the specified Person of any indebtedness (as defined above) of any other Person.

Lien means, with respect to any asset, any mortgage, lien, pledge, charge, security interest or encumbrance of any kind in respect of such asset, whether or not filed, recorded or otherwise perfected under applicable law, including any conditional sale or other title retention agreement.

Original Issue Discount Security means any debt security which provides for an amount less than the principal amount thereof to be due and payable upon a declaration of acceleration of maturity thereof pursuant to the senior indenture.

Person means any individual, corporation, partnership, limited liability company, joint venture, joint-stock company, association, trust, unincorporated organization or government or any agency or political subdivision of a government or governmental agency.

Principal Property means any single parcel of real property or any permanent improvement thereon (i) owned by the Issuer or any of its subsidiaries located in the United States, including the Issuer's principal corporate office, any manufacturing facility or plant or any portion thereof and (ii) having a book value, as of the date of determination, in excess of 3% of the most recently calculated Consolidated Net Assets. Principal Property does not include any property that the Issuer's board of directors has determined not to be of material importance to the business conducted by the Issuer and its subsidiaries, taken as a whole. As of the date of this prospectus, none of the Issuer's current properties or those of its subsidiaries constitutes a Principal Property.

Principal Subsidiary means any direct or indirect subsidiary of the Issuer that owns a Principal Property.

Sale and Leaseback Transaction means any arrangement with any Person providing for the leasing by the Issuer or any subsidiary of any Principal Property which has been or is to be sold or transferred by the Issuer or such subsidiary to such Person, excluding (1) temporary leases for a term, including renewals at the option of the lessee, of not more than three years, (2) leases between the Issuer and a subsidiary or between subsidiaries of the Issuer, (3) leases of a Principal Property executed by the time of, or within 12 months after the latest of, the acquisition, the completion of construction or improvement, or the commencement of commercial operation of the property, and (4) arrangements pursuant to any provision of law with an effect similar to the former Section 168(f)(8) of the Internal Revenue Code of 1954, as amended.

U.S. GAAP means generally accepted accounting principles set forth in the FASB Accounting Standards Codification or in such other statements by such other entity as have been approved by a significant segment of the accounting profession, which are in effect from time to time.

Value means, with respect to a Sale and Leaseback Transaction, an amount equal to the net present value of the lease payments (other than amounts required to be paid on account of property taxes, maintenance, repairs, insurance, water rates and other items that do not constitute payments for property rights) with respect to the term of the lease remaining on the date as of which the amount is being determined, without regard to any renewal or extension options contained in the lease, discounted at the weighted average interest rate on the debt securities of all series (including the yield to maturity on any Original Issue Discount Securities) which are outstanding on the effective date of such Sale and Leaseback Transaction.

Events of Default

The senior indenture defines an Event of Default with respect to any series of senior debt securities issued pursuant to the senior indenture. Events of Default on the senior debt securities are any of the following:

Default in the payment of the principal or any premium on senior debt securities when due (whether at maturity, upon acceleration, redemption or otherwise);

Default for 30 days in the payment of interest on senior debt securities when due;

Failure by the Issuer to observe or perform any other term of the senior indenture for a period of 90 days after it receives a notice of default stating that it is in breach. The notice must be sent by either the senior trustee or holders of 25% of the principal amount of the senior debt securities of the affected series;

(1) Failure by the Issuer to pay indebtedness for money it borrowed or guaranteed the payment of in an aggregate principal amount of at least \$100 million at the later of final maturity and the expiration of any related applicable grace period and such defaulted payment shall not have been made, waived or extended within 30 days or (2) acceleration of the maturity of any indebtedness for money that the Issuer borrowed or guaranteed the payment of in an aggregate principal amount of at least \$100 million, if such indebtedness has not been discharged in full or such acceleration has not been rescinded or annulled within 30 days; *provided, however*, that, if the default under the instrument is cured by the Issuer, or waived by the holders of the indebtedness, in each case as permitted by the governing instrument, then the Event of Default under the senior indenture governing the senior debt securities caused by such default will be deemed likewise to be cured or waived;

Certain events in bankruptcy, insolvency or reorganization with respect to the Issuer; and

Any other Event of Default provided for in such series of senior debt securities as may be specified in the applicable prospectus supplement.

An Event of Default under one series of senior debt securities issued pursuant to the senior indenture does not necessarily constitute an Event of Default under any other series of senior debt securities. The senior indenture provides that the senior trustee may withhold notice to the holders of any series of senior debt securities issued

thereunder of any default if the trustee's board of directors, executive committee, or a trust committee of directors or trustees and/or certain officers of the trustee in good faith determine it in the interest of such holders to do so.

Remedies If an Event of Default Occurs. The senior indenture provides that if an Event of Default has occurred with respect to a series of senior debt securities and has not been cured, the senior trustee or the holders of not less than 25% in principal amount of the senior debt securities of that series may declare the entire principal amount of all the senior debt securities of that series to be due and immediately payable. This is called a declaration of acceleration of maturity. If an Event of Default occurs because of certain events in bankruptcy, insolvency or reorganization with respect to the Issuer, the principal amount of all the senior debt securities will be automatically accelerated, without any action by the senior trustee or any holder. The holders of a majority in aggregate principal amount of the senior debt securities of the affected series may by written notice to the Issuer and the senior trustee may, on behalf of the holders of the senior debt securities of the affected series, rescind an acceleration or waive any existing Default or Event of Default and its consequences under the senior indenture, if the rescission would not conflict with any judgment or decree, except a continuing Default or Event of Default in the payment of principal of, premium on, if any, or interest, if any, on, such senior debt securities.

Except as may otherwise be provided in the senior indenture in cases of default, where the senior trustee has some special duties, the senior trustee is not required to take any action under the senior indenture at the request of any holders unless the holders offer the senior trustee protection from expenses and liability (called an *indemnity*). If indemnity satisfactory to the senior trustee is provided, the holders of a majority in principal amount of the outstanding senior debt securities of the affected series may direct the time, method and place of conducting any lawsuit or other formal legal action seeking any remedy available to the senior trustee. Subject to certain exceptions contained in the senior indenture, these majority holders may also direct the senior trustee in performing any other action under the senior indenture.

Before you bypass the senior trustee and bring your own lawsuit or other formal legal action or take other steps to enforce your rights or protect your interests relating to the senior debt securities, the following must occur:

You must give the senior trustee written notice that an Event of Default has occurred and remains uncured.

The holders of 25% in principal amount of all outstanding senior debt securities of the affected series must make a written request that the senior trustee take action because of the Event of Default and must offer reasonable indemnity to the senior trustee against the cost and other liabilities of taking that action.

The senior trustee must have failed to take action for 60 days after receipt of the above notice and offer of indemnity and during such 60-day period, the senior trustee has not received a contrary instruction from holders of a majority in principal amount of all outstanding senior debt securities.

However, you are entitled at any time to bring a lawsuit for the payment of money due on your senior debt securities on or after the due date of that payment.

The Issuer will furnish to the senior trustee every year a written statement of two of its officers certifying that to their knowledge the Issuer is in compliance with the senior indenture and the senior debt securities, or else specifying any default.

Satisfaction and Discharge

The senior indenture will cease to be of further effect and the senior trustee, upon the Issuer's demand and at its expense, will execute appropriate instruments acknowledging the satisfaction and discharge of the senior indenture upon compliance with certain conditions, including:

the Issuer having paid all sums payable by it under the senior indenture, as and when the same shall be due and payable;

the Issuer having delivered to the senior trustee for cancellation all senior debt securities theretofore authenticated under the senior indenture;

all senior debt securities of any series outstanding under the senior indenture not theretofore delivered to the senior trustee for cancellation shall have become due and payable or are by their terms to become due and payable within one year and the Issuer shall have deposited with the senior trustee sufficient cash or U.S. government or U.S. government agency notes or bonds that will generate enough cash to pay, at maturity or upon redemption, all such senior debt securities of any series outstanding under the senior indenture; or

the Issuer having delivered to the senior trustee an officer's certificate and an opinion of counsel, each stating that these conditions have been satisfied.

Under current U.S. federal tax law, the deposit and the Issuer's legal release from the senior debt securities would be treated as though it took back your senior debt securities and gave you your share of the cash and senior debt securities or bonds deposited in trust. In that event, you could recognize gain or loss on the senior debt securities you give back to the Issuer. Purchasers of the senior debt securities should consult their own advisers with respect to the tax consequences to them of such deposit and discharge, including the applicability and effect of tax laws other than the U.S. income tax law.

Defeasance

Unless the applicable prospectus supplement provides otherwise, the following discussion of legal defeasance and discharge and covenant defeasance will apply to any series of debt securities issued under the indentures.

Full Defeasance. The Issuer can legally release itself from any payment or other obligations on the debt securities of any series (called *full defeasance*) if the following conditions are met:

The Issuer deposits in trust for your benefit and the benefit of all other direct holders of the debt securities of the same series a combination of money and U.S. government or U.S. government agency notes or bonds that will generate enough cash to make interest, principal, any premium and any other payments on the debt securities of that series on their various due dates.

There is a change in current U.S. federal tax law or an IRS ruling that lets the Issuer make the above deposit without causing you to be taxed on the debt securities any differently than if the Issuer did not make the deposit and instead repaid the debt securities itself when due. Under current U.S. federal tax law, the deposit and the Issuer's legal release from the debt securities would be treated as though the Issuer took back your debt securities and gave you your share of the cash and debt securities or bonds deposited in trust. In that event, you could recognize gain or loss on the debt securities you give back to the Issuer.

The Issuer delivers to the trustee a legal opinion of its counsel confirming the tax law change or ruling described above.

If the Issuer ever did accomplish full defeasance, as described above, you would have to rely solely on the trust deposit for repayment of the debt securities. You could not look to the Issuer for repayment in the event of any shortfall.

However, even if the Issuer makes the deposit in trust and opinion delivery arrangements discussed above, a number of its obligations relating to the debt securities will remain. These include the Issuer's obligations:

to register the transfer and exchange of debt securities;

to replace mutilated, destroyed, lost or stolen debt securities;

to maintain paying agencies; and

to hold money for payment in trust.

Covenant Defeasance. Without any change of current U.S. federal tax law, the Issuer can make the same type of deposit described above and be released from some of the covenants on the debt securities of any series. This is called *covenant defeasance*. In that event, you would lose the protection of those covenants but would gain the protection of having money and securities set aside in trust to repay the debt securities. In order to achieve covenant defeasance, the Issuer must do the following:

The Issuer must deposit in trust for your benefit and the benefit of all other direct holders of the debt securities of the same series a combination of money and U.S. government or U.S. government agency notes or bonds that will generate enough cash to make interest, principal, any premium and any other payments on the debt securities of that series on their various due dates.

The Issuer must deliver to the trustee a legal opinion of its counsel confirming that under current U.S. federal income tax law the Issuer may make the above deposit without causing you to be taxed on the debt securities any differently than if it did not make the deposit and instead repaid the debt securities itself when due.

If the Issuer accomplishes covenant defeasance, you can still look to it for repayment of the debt securities if there were a shortfall in the trust deposit. In fact, if one of the Events of Default occurred (such as the Issuer's bankruptcy) and the debt securities become immediately due and payable, there may be such a shortfall. Depending on the event causing the default, you may not be able to obtain payment of the shortfall.

Modification and Waiver

There are three types of changes the Issuer can make to the senior indenture and the senior debt securities.

Changes Requiring Approval of the Holder. First, there are changes that cannot be made to the senior debt securities without specific approval of the holder. The following is a list of those types of changes:

change the stated maturity of the principal or interest on any senior debt securities of such series;

reduce any amounts due on any senior debt securities of such series;

reduce the amount of principal payable upon acceleration of the maturity of the senior debt securities following an Event of Default;

change the place or currency of payment for the senior debt securities;

impair the holder's right to sue for the enforcement of any payment on or with respect to the senior debt securities;

reduce the percentage in principal amount of the senior debt securities, the approval of whose holders is needed to modify or amend the senior indenture or the senior debt securities;

reduce the percentage in principal amount of the senior debt securities, the approval of whose holders is needed to waive compliance with certain provisions of the senior indenture or to waive certain defaults; and

modify any other aspect of the provisions dealing with modification and waiver of the senior indenture, except to increase the percentage required for any modification or to provide that other provisions of the senior indenture may not be modified or waived without consent of the holder of each security of such series affected by the modification.

Changes Not Requiring Approval. The second type of change does not require any vote by holders of the senior debt securities. The following is a list of those types of changes:

cure any ambiguity, defect or inconsistency;

evidence the succession of another entity to the Issuer's obligations under the senior indenture;

provide for uncertificated debt securities in addition to or in place of certificated debt securities;

add to the covenants for the benefit of holders of outstanding debt securities or to surrender any right or power the Issuer has under the senior indenture;

add additional events of default;

secure senior debt securities of any series;

make any change that does not adversely affect the rights of any holder of senior debt securities in any material respect;

issue additional debt securities of any series;

evidence and provide for a successor senior trustee and add to or change the provisions of the senior indenture to provide for or facilitate the administration of the trusts under the senior indenture; or

comply with requirements of the SEC in order to effect or maintain the qualification of the senior indenture under the Trust Indenture Act of 1939, as amended (the *Trust Indenture Act*).

Nor does the Issuer need any approval to make changes that affect only senior debt securities to be issued under the senior indenture after the changes take effect. The Issuer may also make changes or obtain waivers that do not adversely affect the senior debt securities, even if they affect other senior debt securities issued under the senior indenture. In those cases, the Issuer needs only obtain any required approvals from the holders of the affected senior debt securities.

Changes Requiring a Majority Vote. Any other change to the senior indenture and the senior debt securities would require the following approval:

If the change affects only senior debt securities of one series, it must be approved by the holders of a majority in principal amount of the senior debt securities of that series.

If the change affects the senior debt securities as well as the senior debt securities of one or more other series issued under the senior indenture, it must be approved by the holders of a majority in principal amount of the senior debt securities and each other series of senior debt securities affected by the change.

In each case, the required approval must be given by written consent.

The same vote would be required for the Issuer to obtain a waiver of a past default. However, the Issuer cannot obtain a waiver of a payment default or a waiver with respect to any other aspect of the senior indenture and the senior debt securities listed in the first category described previously under *Changes Requiring Approval of the Holder* unless the

Issuer obtains your individual consent to the waiver.

Further Details Concerning Voting

The senior debt securities will not be considered outstanding, and therefore not eligible to vote, if the Issuer has deposited or set aside in trust for you money for their payment or redemption. The senior debt securities will also not be eligible to vote if they have been fully defeased as described above under Full Defeasance.

The Issuer will generally be entitled to set any day as a record date for the purpose of determining the holders of outstanding senior debt securities that are entitled to vote or take other action under the senior indenture. In certain limited circumstances, the senior trustee will be entitled to set a record date for action by holders. If the Issuer or the senior trustee sets a record date for a vote or other action to be taken by holders of senior debt securities, that vote or action may be taken only by persons who are holders of outstanding senior debt securities on the record date and must be taken within 180 days following the record date or another period that the Issuer may specify (or as the senior trustee may specify, if it set the record date). The Issuer may shorten or lengthen (but not beyond 180 days) this period from time to time.

No Personal Liability of Incorporators, Stockholders, Officers, Directors

The senior indenture provides that no recourse shall be had under any obligation, covenant or agreement of the Issuer in the senior indenture or in any of the senior debt securities or because of the creation of any indebtedness represented thereby, against any of its incorporators, stockholders, officers or directors, past, present or future, or of any predecessor or successor entity thereof under any law, statute or constitutional provision or by the enforcement of any assessment or by any legal or equitable proceeding or otherwise. Each holder, by accepting the senior debt securities, waives and releases all such liability.

Concerning the Senior Trustee

The Bank of New York Mellon Trust Company, N.A., as senior trustee under the senior indenture, has been appointed by the Issuer as paying agent, registrar and custodian with regard to the senior debt securities. The senior trustee or its affiliates may from time to time in the future provide banking and other services to the Issuer in the ordinary course of their business.

The senior indenture provides that, prior to the occurrence of an Event of Default with respect to the senior debt securities of a series and after the curing or waiving of all such Events of Default with respect to that series, the senior trustee will not be liable except for the performance of such duties as are specifically set forth in the senior indenture. If an event of default has occurred and has not been cured or waived, the senior trustee will exercise such rights and powers vested in it under the senior indenture and will use the same degree of care and skill in its exercise as a prudent person would exercise under the circumstances in the conduct of such person's own affairs.

The senior indenture and the provisions of the Trust Indenture Act incorporated by reference therein contain limitations on the rights of the senior trustee thereunder, should it become a creditor of the Issuer or any of its subsidiaries, to obtain payment of claims in certain cases or to realize on certain property received by the senior trustee in respect of any such claims, as security or otherwise. The senior trustee is permitted to engage in other transactions, provided that if it acquires any conflicting interest (as defined in the Trust Indenture Act), it must eliminate such conflict or resign.

Unclaimed Funds

All funds deposited with the senior trustee or any paying agent for the payment of principal, interest, premium or additional amounts in respect of the senior debt securities that remain unclaimed for one year after the date upon which the principal of, premium, if any, or interest on such debt securities shall have become due and payable will be repaid to the Issuer. Thereafter, any right of any holder of senior debt securities to such funds shall be enforceable only against the Issuer, and the senior trustee and paying agents will have no liability therefor.

Governing Law

The senior indenture and the senior debt securities will be governed by, and construed in accordance with, the laws of the State of New York.

Certain Terms of the Subordinated Debt Securities

Other than the terms of the subordinated indenture and subordinated debt securities relating to subordination or otherwise as described in the prospectus supplement relating to a particular series of subordinated debt securities, the terms of the subordinated indenture and subordinated debt securities are identical in all material respects to the terms of the senior indenture and senior debt securities, except the subordinated indenture and subordinated debt securities will not include a limitation on liens or a limitation on sale and leaseback transactions.

Additional or different subordination terms may be specified in the prospectus supplement applicable to a particular series.

Subordination. The indebtedness evidenced by the subordinated debt securities is subordinate to the prior payment in full of all of the Issuer's senior indebtedness, as defined in the subordinated indenture. During the continuance beyond any applicable grace period of any default in the payment of principal, premium, interest or any other payment due on any of the Issuer's senior indebtedness, it may not make any payment of principal of, or premium, if any, or interest on the subordinated debt securities, except under limited circumstances set forth in the subordinated indenture. In addition, upon any payment or distribution of the Issuer's assets upon any dissolution, winding up, liquidation or reorganization, the payment of the principal of, or premium, if any, and interest on the subordinated debt securities will be subordinated to the extent provided in the subordinated indenture in right of payment to the prior payment in full of all its senior indebtedness. Because of this subordination, if the Issuer dissolves or otherwise liquidates, holders of its subordinated debt securities may receive less, ratably, than holders of its senior indebtedness. The subordination provisions do not prevent the occurrence of an event of default under the subordinated indenture.

The term "senior indebtedness" of a person means with respect to such person the principal of, premium, if any, interest on, and any other payment due pursuant to any of the following, whether outstanding on the date of the subordinated indenture or incurred by that person in the future:

all of the indebtedness of that person for money borrowed;

all of the indebtedness of that person evidenced by notes, debentures, bonds or other securities sold by that person for money;

all of the lease obligations which are capitalized on the books of that person in accordance with generally accepted accounting principles;

all indebtedness of others of the kinds described in the first two bullet points above and all lease obligations of others of the kind described in the third bullet point above that the person, in any manner, assumes or guarantees or that the person in effect guarantees through an agreement to purchase, whether that agreement is contingent or otherwise; and

all renewals, extensions or refundings of indebtedness of the kinds described in the first, second or fourth bullet point above and all renewals or extensions of leases of the kinds described in the third or fourth bullet point above;

unless, in the case of any particular indebtedness, renewal, extension or refunding, the instrument creating or evidencing it or the assumption or guarantee relating to it expressly provides that such indebtedness, renewal, extension or refunding is not superior in right of payment to the subordinated debt securities. The Issuer's senior debt securities constitute senior indebtedness for purposes of the subordinated indenture.

DESCRIPTION OF THERMO FISHER INTERNATIONAL DEBT SECURITIES

Thermo Fisher International may offer senior debt securities that are fully and unconditionally guaranteed by Thermo Fisher. The following description summarizes the general terms and provisions of the debt securities. We will describe the specific terms of the debt securities and the extent, if any, to which the general provisions summarized below apply to any series of debt securities in the prospectus supplement relating to the series and any applicable free writing prospectus that we authorize to be delivered. References to Thermo Fisher International and Issuer in this Description of Thermo Fisher International Debt Securities mean Thermo Fisher Scientific (Finance I) B.V., excluding, unless the context otherwise requires or as otherwise expressly stated, its subsidiaries and affiliates and references to Thermo Fisher or the Guarantor mean Thermo Fisher Scientific Inc., excluding, unless the context otherwise requires or as otherwise expressly stated, its subsidiaries.

Thermo Fisher International may issue senior debt securities from time to time, in one or more series under an indenture, dated August 9, 2016, among it as issuer, Thermo Fisher as guarantor, and The Bank of New York Mellon Trust Company, N.A., which we refer to as the trustee. The indenture is filed as an exhibit to the registration statement of which this prospectus forms a part. This prospectus briefly outlines some of the provisions of the indenture. The following summary of the material provisions of the indenture is qualified in its entirety by the provisions of the indenture, including definitions of certain terms used in the indenture. Wherever we refer to particular sections or defined terms of the indenture, those sections or defined terms are incorporated by reference in this prospectus or the applicable prospectus supplement. You should review the indenture that is filed as an exhibit to the registration statement of which this prospectus forms a part for additional information.

The indenture will not limit the amount of debt securities that Thermo Fisher International may issue. The indenture will provide that debt securities may be issued up to an aggregate principal amount authorized from time to time by the Issuer and may be payable in any currency or currency unit designated by the Issuer or in amounts determined by reference to an index.

General

The debt securities will constitute the Issuer's unsecured and unsubordinated general obligations, will be fully and unconditionally guaranteed by Thermo Fisher and will rank *pari passu* with the Issuer's other unsecured and unsubordinated obligations. The debt securities will be the Issuer's unsecured obligations. Any secured debt or other secured obligations will be effectively senior to the debt securities to the extent of the value of the assets securing such debt or other obligations. Thermo Fisher International is a finance subsidiary of Thermo Fisher and conducts no independent operations of its own other than financing activities. Thermo Fisher is a holding company that conducts substantially all of its operations through its subsidiaries, and, as a result, the guarantee of debt securities will be effectively subordinated to the creditors of Thermo Fisher's other subsidiaries. This means that all claims of creditors (including trade creditors) of Thermo Fisher's other subsidiaries will have priority with respect to the assets of such subsidiaries over Thermo Fisher's claims (and therefore the claims of its creditors, including holders of debt securities guaranteed by Thermo Fisher).

The applicable prospectus supplement and/or free writing prospectus will include any additional or different terms of the debt securities being offered, including the following terms:

the title of the debt securities;

any limit upon the aggregate principal amount of the debt securities;

the date or dates on which the principal and premium, if any, of the debt securities is payable;

the rate or rates (which may be fixed or variable) at which the debt securities will bear interest, or the manner of calculating such rate or rates, if applicable;

the date or dates from which such interest will accrue, the interest payment dates on which such interest will be payable or the manner of determination of such interest payment dates and the related record dates;

any trustees, authenticating agents or paying agents, if different from those set forth in this prospectus;

the right, if any, to extend the interest payment periods or defer the payment of interest and the duration of that extension or deferral;

the period or periods within which, the price or prices at which and the terms and conditions upon which debt securities may be redeemed, in whole or in part, at the Issuer's option;

provisions for a sinking fund or other analogous fund;

the form of the debt securities;

if other than denominations of \$100,000 or any integral multiple of \$1,000 in excess thereof, the denominations in which the debt securities will be issuable;

the currency or currencies in which payment of the principal of, premium, if any, and interest on, the debt securities will be payable;

if the principal amount payable at the stated maturity of the debt securities will not be determinable as of any one or more dates prior to such stated maturity, the amount which will be deemed to be such principal amount as of any such date for any purpose;

the terms of any repurchase or remarketing rights;

whether the debt securities will be issued in global form, the types of global securities to be issued, the terms upon which the debt securities will be exchanged for definitive form, the depositary for the debt securities and the form of legend;

any conversion or exchange features of the debt securities;

if other than the principal amount thereof, the portion of the principal amount of the debt securities which shall be payable upon declaration of acceleration of the maturity thereof;

any restrictive covenants or events of default in addition to or in lieu of those set forth in this prospectus;

any provisions granting special rights to holders when a specified event occurs;

if the amount of principal or any premium or interest on the debt securities may be determined with reference to an index or pursuant to a formula, the manner in which such amounts will be determined;

any special tax implications of the debt securities;

whether and upon what terms the debt securities may be defeased if different from the provisions set forth in this prospectus;

with regard to the debt securities that do not bear interest, the dates for certain required reports to the trustee;

the terms of the guarantee, including any corresponding changes to the provisions of the indenture then in effect; and

any all additional, eliminated or changed terms that will apply to the debt securities.

The Issuer may from time to time, without notice to or the consent of the holders of any series of debt securities, create and issue further debt securities of any such series ranking equally with the debt securities of such series and having the same terms as such series (or the same terms other than (1) the payment of interest accruing prior to the issue date of such further debt securities or (2) the first payment of interest following the issue date of such further debt securities). Such further debt securities may be consolidated and form a single series with the debt securities of such series and have the same terms as to status, redemption or otherwise as the debt securities of such series.

You may present debt securities for exchange and you may present debt securities for transfer in the manner, at the places and subject to the restrictions set forth in the debt securities and the applicable prospectus supplement. The Issuer will provide you those services without charge, although you may have to pay any tax or other governmental charge payable in connection with any exchange or transfer, as set forth in the indenture.

Debt securities will bear interest at a fixed rate or a floating rate. Debt securities bearing no interest or interest at a rate that at the time of issuance is below the prevailing market rate (called original issue discount securities) may be sold at a discount below their stated principal amount. U.S. federal income tax considerations applicable to any such discounted debt securities or to certain debt securities issued at par which are treated as having been issued at a discount for U.S. federal income tax purposes will be described in the applicable prospectus supplement.

The Issuer may issue debt securities with the principal amount payable on any principal payment date, or the amount of interest payable on any interest payment date, to be determined by reference to one or more currency exchange rates, securities or baskets of securities, commodity prices or indices. You may receive a payment of principal on any principal payment date, or a payment of interest on any interest payment date, that is greater than or less than the amount of principal or interest otherwise payable on such dates, depending on the value on such dates of the applicable currency, security or basket of securities, commodity or index. Information as to the methods for determining the amount of principal or interest payable on any date, the currencies, securities or baskets of securities, commodities or indices to which the amount payable on such date is linked and certain related tax considerations will be set forth in the applicable prospectus supplement.

Guarantee

Thermo Fisher will fully and unconditionally guarantee the full and punctual payment of principal of and premium, if any, and interest on the debt securities on a senior unsecured basis, when and as the same become due and payable, whether on a maturity date, by declaration of acceleration, upon redemption, repurchase or otherwise, and all other obligations of Thermo Fisher International under the indenture.

Under certain circumstances, Thermo Fisher may assume all of the Issuer's obligations under the indenture and the debt securities.

Redemption Upon Changes in Withholding Taxes

Unless otherwise provided in the applicable prospectus supplement, Thermo Fisher International may redeem all, but not less than all, of the debt securities of any series under the following conditions:

if there is an amendment to, or change in, the laws, regulations, rulings or treaties of The Netherlands, the United States or other jurisdiction in which Thermo Fisher International or Thermo Fisher or, in each case, any successor thereof (including a continuing Person formed by a consolidation with Thermo Fisher International or Thermo Fisher, into which Thermo Fisher International or Thermo Fisher is merged, or that acquires or leases all or substantially all of the property and assets of Thermo Fisher International or Thermo Fisher) may be organized, as applicable, or any political subdivision thereof or therein having the power to tax (a *Taxing Jurisdiction*), or any change in the application or official interpretation of such laws, regulations, rulings or treaties, including any action taken by, or a change in published administrative practice of, a taxing authority or a holding by a court of competent jurisdiction, regardless of whether such action, change or holding is with respect to Thermo Fisher International or Thermo Fisher;

as a result of such amendment or change, Thermo Fisher International or Thermo Fisher becomes, or there is a material probability that Thermo Fisher International or Thermo Fisher will become, obligated to pay Additional Amounts as defined below in Payment of Additional Amounts, on the next payment date with respect to the debt securities of such series;

the obligation to pay Additional Amounts cannot be avoided through Thermo Fisher International's or Thermo Fisher's commercially reasonable measures, not including substitution of the obligor of the debt securities;

Thermo Fisher International delivers to the trustee:

a certificate of Thermo Fisher International or Thermo Fisher, as the case may be, stating that the obligation to pay Additional Amounts cannot be avoided by Thermo Fisher International or Thermo Fisher as the case may be, taking commercially reasonable measures available to it; and

a written opinion of independent tax counsel to Thermo Fisher International or Thermo Fisher, as the case may be, of recognized standing to the effect that Thermo Fisher International or Thermo Fisher, as the case may be, has, or there is a material probability that it will become obligated, to pay Additional Amounts as a result of a change, amendment, official interpretation or application described above and that Thermo Fisher International or Thermo Fisher, as the case may be, cannot avoid the payment of such Additional Amounts by taking commercially reasonable measures available to it; and

following the delivery of the certificate and opinion described in the previous bullet point, Thermo Fisher International provides notice of redemption not less than 30 days, but not more than 60 days, prior to the date of redemption. The notice of redemption cannot be given more than 60 days before the earliest date on which Thermo Fisher International or Thermo Fisher would otherwise be, or there is a material probability that it would otherwise be, required to pay Additional Amounts.

Upon the occurrence of each of the bullet points above, Thermo Fisher International may redeem the debt securities of such series at a redemption price equal to 100% of the principal amount thereof, together with accrued and unpaid interest, if any, to the redemption date.

Payment of Additional Amounts

Unless otherwise required by law, neither Thermo Fisher International nor Thermo Fisher will deduct or withhold from payments made by Thermo Fisher International or Thermo Fisher under or with respect to the debt securities and the guarantees on account of any present or future taxes, duties, levies, imposts, assessments or governmental charges of whatever nature imposed or levied by or on behalf of any Taxing Jurisdiction (*Taxes*). In the event that Thermo Fisher International or Thermo Fisher is required to withhold or deduct any amount for or on account of any Taxes from any payment made under or with respect to any debt securities or guarantee, as the case may be, Thermo Fisher International or Thermo Fisher, as the case may be, will pay such additional amounts (*Additional Amounts*) so that the net amount received by each holder of debt securities (including Additional Amounts) after such withholding or deduction will equal the amount that such holder would have received if such Taxes had not been required to be withheld or deducted.

Additional Amounts will not be payable with respect to a payment made to a holder of debt securities or a holder of beneficial interests in global securities where such holder is subject to taxation on such payment by a relevant Taxing Jurisdiction for any reason other than such holder's mere ownership of the debt securities or for or on account of:

any Taxes that are imposed or withheld solely because such holder (or the beneficial owner for whose benefit such holder holds such debt securities) or a fiduciary, settlor, beneficiary, member, shareholder or other equity owner of, or possessor of a power over, such holder (or beneficial owner) if such holder (or beneficial owner) is an estate, trust, partnership, limited liability company, corporation or other entity:

is or was present or engaged in, or is or was treated as present or engaged in, a trade or business in the Taxing Jurisdiction or has or had a permanent establishment in the Taxing Jurisdiction (in each case, other than the mere fact of ownership of such securities, without another presence or business in such Taxing Jurisdiction);

has or had any present or former connection (other than the mere fact of ownership of such debt securities) with the Taxing Jurisdiction imposing such Taxes, including being or having been a national citizen or resident thereof, being treated as being or having been a resident thereof or being or having been physically present therein;

with respect to any withholding Taxes imposed by the United States, is or was with respect to the United States a personal holding company, a passive foreign investment company, a controlled foreign corporation, a foreign private foundation or other foreign tax exempt organization or corporation that has accumulated earnings to avoid United States federal income tax;

actually or constructively owns or owned 10% or more of the total combined voting power of all classes of stock of Thermo Fisher International or Thermo Fisher within the meaning of section 871(h)(3) of the U.S. Internal Revenue Code of 1986, as amended (the *Code*); or

is or was a bank receiving payments on an extension of credit made pursuant to a loan agreement entered into in the ordinary course of its trade or business within the meaning of section 881(c)(3) of the Code;

any estate, inheritance, gift, sales, transfer, excise, personal property or similar Taxes imposed with respect to the debt securities, except as otherwise provided in the indenture;

any Taxes imposed solely as a result of the presentation of such debt securities (where presentation is required) for payment on a date more than 15 days after the date on which such payment became due and payable or the date on which payment thereof is duly provided for, whichever is later, except to the extent that the beneficiary or holder thereof would have been entitled to the payment of Additional Amounts had the debt securities been presented for payment on any date during such 15-day period;

any Taxes imposed or withheld solely as a result of the failure of such holder or any other person to comply with applicable certification, information, documentation or other reporting requirements concerning the nationality, residence, identity or connection with the Taxing Jurisdiction of such holder, if such compliance is required by statute, regulation, ruling or administrative practice of the relevant Taxing Jurisdiction or by any applicable tax treaty to which the relevant Taxing Jurisdiction is a party as a precondition to relief or exemption from such Taxes;

with respect to withholding Taxes imposed by the United States, any such Taxes imposed by reason of the failure of such holder to fulfill the statement requirements of sections 871(h) or 881(c) of the Code;

any Taxes that are payable by any method other than withholding or deduction by Thermo Fisher International or Thermo Fisher or any paying agent from payments in respect of such debt securities;

any Taxes required to be withheld by any paying agent from any payment in respect of any debt securities if such payment can be made without such withholding by at least one other paying agent;

any withholding or deduction for Taxes which would not have been imposed if the relevant debt securities had been presented to another paying agent in a member state of the European Union as of the date of the indenture;

any withholding or deduction required pursuant to sections 1471 through 1474 of the Code, any regulations or agreements thereunder, official interpretations thereof, any intergovernmental agreement, or any law, rule, guidance or administrative practice implementing an intergovernmental agreement entered into in connection with such sections of the Code; or

any combination of the above conditions.

Additional Amounts also will not be payable to any holder of debt securities or the holder of a beneficial interest in a global security that is a fiduciary, partnership, limited liability company or other fiscally transparent entity, or to such holder that is not the sole holder of such security or holder of such beneficial interests in such security, as the case may be. The exception, however, will apply only to the extent that a beneficiary or settlor with respect

to the fiduciary, or a beneficial owner or member of the partnership, limited liability company or other fiscally transparent entity, would not have been entitled to the payment of an Additional Amount had the beneficiary, settlor, beneficial owner or member received directly its beneficial or distributive share of the payment.

Each of Thermo Fisher International and Thermo Fisher, as applicable, also:

will make such withholding or deduction of Taxes;

will remit the full amount of Taxes so deducted or withheld to the relevant Taxing Jurisdiction in accordance with all applicable laws;

will use its commercially reasonable efforts to obtain from each Taxing Jurisdiction imposing such Taxes certified copies of tax receipts evidencing the payment of any Taxes so deducted or withheld; and

upon request, will make available to the holders of the debt securities, within 90 days after the date the payment of any Taxes deducted or withheld is due pursuant to applicable law, certified copies of tax receipts evidencing such payment by Thermo Fisher International or Thermo Fisher or if, notwithstanding Thermo Fisher International's or Thermo Fisher's efforts to obtain such receipts, the same are not obtainable, other evidence of such payments.

At least 30 days prior to each date on which any payment under or with respect to the debt securities of a series or guarantees is due and payable, if Thermo Fisher International or Thermo Fisher will be obligated to pay Additional Amounts with respect to such payment, Thermo Fisher International or Thermo Fisher will deliver to the trustee an officers' certificate stating the fact that such Additional Amounts will be payable, the amounts so payable and such other information as is necessary to enable the trustee to pay such Additional Amounts to holders of such debt securities on the payment date.

In addition, Thermo Fisher International will pay any stamp, issue, registration, documentary or other similar taxes and duties, including interest, penalties and Additional Amounts with respect thereto, payable in The Netherlands or the United States or any political subdivision or taxing authority of or in the foregoing in respect of the creation, issue, offering, enforcement, redemption or retirement of the debt securities.

The foregoing provisions shall survive any termination or the discharge of each indenture and shall apply to any jurisdiction in which Thermo Fisher International or Thermo Fisher or any successor to Thermo Fisher International or Thermo Fisher, as the case may be, is organized or is engaged in business for tax purposes or any political subdivisions or taxing authority or agency thereof or therein.

Whenever in an indenture, any debt securities, any guarantee or in this Description of Thermo Fisher International Debt Securities there is mentioned, in any context, the payment of principal, premium, if any, redemption price, interest or any other amount payable under or with respect to any debt securities, such mention includes the payment of Additional Amounts to the extent payable in the particular context.

Certain Terms of the Debt Securities

Certain Covenants

Limitations on Liens. Thermo Fisher will not, and will not permit any of its subsidiaries to, create, incur, assume or otherwise cause to become effective any Lien (other than permitted Liens) on any Principal Property or upon shares of stock of any Principal Subsidiary (whether such Principal Property or shares are now existing or owned or hereafter created or acquired), to secure any indebtedness of Thermo Fisher, any of its subsidiaries or any indebtedness of any other Person, unless Thermo Fisher or such subsidiary also secures all payments due under the debt securities, the guarantees of the debt securities and guarantees of all debt securities of any series having the benefit of this covenant (together with, if Thermo Fisher shall so determine, any other indebtedness of

Thermo Fisher or any subsidiary of Thermo Fisher then existing or thereafter created ranking equally with the debt securities, the guarantees of the debt securities or such subsidiary indebtedness), on an equal and ratable basis with such other indebtedness so secured (or, in the case of indebtedness subordinated to the debt securities, the guarantees of the debt securities or such subsidiary indebtedness, prior or senior thereto, with the same relative priority as the debt securities, the guarantees of the debt securities or such subsidiary indebtedness will have with respect to such subordinated indebtedness) for so long as such other indebtedness shall be so secured. The indenture contains the following exceptions to the foregoing prohibition:

- (a) Liens existing on the date when the Issuer first issues the debt securities pursuant to the indenture;
- (b) Liens on property owned or leased by a Person existing at the time such Person is merged with or into or consolidated with Thermo Fisher or any of its subsidiaries or Thermo Fisher or one or more of its subsidiaries acquires directly or indirectly all or substantially all of the stock or assets of such Person; provided that such Liens were in existence prior to the contemplation of such merger, consolidation or acquisition and do not extend to any assets other than those of the Person merged into, consolidated with or acquired by Thermo Fisher or such subsidiary;
- (c) Liens on property existing at the time of acquisition thereof by Thermo Fisher or any of its subsidiaries, provided that such Liens were in existence prior to the contemplation of such acquisition and do not extend to any property other than the property so acquired by Thermo Fisher or such subsidiary;
- (d) Liens to secure indebtedness incurred prior to, at the time of or within 18 months after the later of the acquisition of any property and the completion of the construction, alteration, repair or improvement of any property, as the case may be, for the purpose of financing all or a part of the purchase price thereof or cost of the construction, alteration, repair or improvement thereof and Liens to the extent they secure indebtedness in excess of such purchase price or cost and for the payment of which recourse may be had only against such property;
- (e) Liens in favor of the United States or any state, territory or possession thereof (or the District of Columbia), or any department, agency, instrumentality or political subdivision of the United States or any state, territory or possession thereof (or the District of Columbia), to secure partial, progress, advance or other payments pursuant to any contract or statute or to secure any indebtedness incurred for the purpose of financing all or any part of the purchase price or the cost of constructing or improving the property subject to such Liens;
- (f) any Lien securing indebtedness of a subsidiary of Thermo Fisher owing to Thermo Fisher or to one or more of Thermo Fisher's subsidiaries;
- (g) Liens incurred or assumed in connection with the issuance of revenue bonds the interest on which is exempt from federal taxation pursuant to Section 103 of the Code;
- (h) Liens created, incurred or assumed in connection with an industrial revenue bond, pollution control bond or similar financing between Thermo Fisher or any subsidiary of Thermo Fisher and any federal, state or municipal government or other government body or quasi-governmental agency;
- (i) any extension, renewal or replacement (or successive extensions, renewals or replacements) in whole or in part of any Lien referred to in clauses (a) through (h) above, inclusive, so long as (1) the principal amount of the indebtedness secured thereby does not exceed the principal amount of indebtedness so secured at the time of the extension, renewal or replacement (except that, where an additional principal amount of indebtedness is incurred to provide funds for the completion of a specific project, the additional principal amount, and any related financing costs, may be secured by the Lien as well) and (2) the Lien is limited to the same property subject to the Lien so extended, renewed or replaced (and improvements on the property); and

(j) any Lien on a Principal Property or the shares of stock of a Principal Subsidiary that would not otherwise be permitted by clauses (a) through (i) above, inclusive, securing indebtedness which, together with:

the aggregate outstanding principal amount of all other indebtedness of Thermo Fisher and its subsidiaries secured by Liens on a Principal Property or the shares of stock of a Principal Subsidiary that is permitted solely pursuant to this clause (j), and

the aggregate Value of existing Sale and Leaseback Transactions that are permitted solely pursuant to clause (c) of Limitation on Sale and Leaseback Transactions and are still in existence, does not exceed 10% of Thermo Fisher's Consolidated Net Assets.

In order to constitute a Principal Property under the indenture, a property must have a book value in excess of 3% of Thermo Fisher's most recently calculated Consolidated Net Assets. Based on Consolidated Net Assets as of December 31, 2018, a property would only constitute a Principal Property if it had a book value in excess of approximately \$1.1 billion. As of the date of this prospectus, neither Thermo Fisher nor any of its subsidiaries owns any Principal Property as defined. See Definition of Certain Terms.

Limitation on Sale and Leaseback Transactions. Thermo Fisher will not, and will not permit any of its subsidiaries to, enter into any Sale and Leaseback Transaction with respect to any Principal Property unless:

(a) Thermo Fisher or such subsidiary could incur indebtedness, in a principal amount at least equal to the Value of such Sale and Leaseback Transaction, secured by a Lien on the Principal Property to be leased (without equally and ratably securing debt securities of any series having the benefit of this covenant) pursuant to clauses (a) through (i) under Limitations on Liens above;

(b) Thermo Fisher or any subsidiary of Thermo Fisher applies, during the six months following the effective date of the Sale and Leaseback Transaction, an amount equal to the Value of the Sale and Leaseback Transaction to either (or a combination of) the voluntary retirement of Funded Debt or to the acquisition of property; or

(c) the aggregate Value of such Sale and Leaseback Transaction plus the Value of all other Sale and Leaseback Transactions of Principal Properties, entered into after the date of the first issuance of the debt securities under the indenture, permitted solely by this clause (c) and still in existence, plus the aggregate amount of all indebtedness secured by Liens permitted solely by clause (j) of Limitations on Liens does not exceed 10% of Consolidated Net Assets.

Business Activities. Thermo Fisher International will not engage in any activities or take any action that would be inconsistent with the definition of finance subsidiary within the meaning of Rule 3-10 of Regulation S-X under the Securities Act.

Certain Other Covenants. The indenture contains certain other covenants regarding, among other matters, corporate existence and reports to holders of debt securities. Unless indicated otherwise in a prospectus supplement, the debt securities will not contain any additional financial or restrictive covenants, including covenants relating to total indebtedness, interest coverage, stock repurchases, recapitalizations, dividends and distributions to shareholders or current ratios. The provisions of the indenture do not afford holders of debt securities issued thereunder protection in the event of a sudden or significant decline in the Issuer's credit quality or the credit quality of Thermo Fisher or in the event of a takeover, recapitalization or highly leveraged or similar transaction involving the Issuer, Thermo Fisher or any of its affiliates that may adversely affect such holders.

Consolidation, Merger and Sale of Assets. Unless indicated otherwise in a prospectus supplement, the Issuer will not consolidate with, merge with or into, or sell, convey, transfer, lease or otherwise dispose of all or substantially all of its or its subsidiaries' property and assets taken as a whole (in one transaction or a series of related transactions) to any Person, or permit any Person to merge with or into it, unless:

(1) the continuing Person is Thermo Fisher International or Thermo Fisher or (2) the continuing Person formed by such consolidation or into which the Issuer is merged or that acquired or leased such

property and assets (the *Surviving Person*), shall be a Person organized and validly existing under the laws of the United States of America or any jurisdiction thereof, or a Person validly existing under the laws of Switzerland, the United Kingdom, The Netherlands or any other member state of the European Union as of the date of the indenture, and shall expressly assume, by a supplemental indenture, executed and delivered to the trustee, all of the Issuer's obligations under the indenture and the debt securities;

immediately after giving effect to such transaction, no default or event of default (each as defined in the indenture) shall have occurred and be continuing; and

the Issuer delivers to the trustee an officer's certificate and opinion of counsel, in each case stating that such consolidation, merger or transfer and such supplemental indenture complies with this provision and that all conditions precedent provided for herein relating to such transaction have been complied with.

The Surviving Person will succeed to, and be substituted for, the Issuer under the indenture and the debt securities and, except in the case of a lease, the Issuer shall be released of all obligations under the indenture and the debt securities.

In addition, unless indicated otherwise in a prospectus supplement, Thermo Fisher will not consolidate with, merge with or into, or sell, convey, transfer, lease or otherwise dispose of all or substantially all of its or its subsidiaries property and assets taken as a whole (in one transaction or a series of related transactions) to any Person, or permit any Person to merge with or into it, unless:

(1) the continuing Person is Thermo Fisher or (2) the continuing Person formed by such consolidation or into which Thermo Fisher is merged or that acquired or leased such property and assets, shall be a Person validly existing under the laws of the United States of America or any jurisdiction thereof, or a jurisdiction outside of the United States, and shall expressly assume, by a supplemental indenture, executed and delivered to the trustee, all of Thermo Fisher's obligations under the indenture and the debt securities;

immediately after giving effect to such transaction, no default or event of default (each as defined in the indenture) shall have occurred and be continuing; and

Thermo Fisher delivers to the trustee an officer's certificate and opinion of counsel, in each case stating that such consolidation, merger or transfer and such supplemental indenture complies with this provision and that all conditions precedent provided for herein relating to such transaction have been complied with.

No Protection in the Event of a Change of Control. Unless indicated otherwise in a prospectus supplement with respect to a particular series of debt securities, the debt securities will not contain any provisions that may afford holders of the debt securities protection in the event the Issuer has or Thermo Fisher has a change of control or in the event of a highly leveraged transaction (whether or not such transaction results in a change of control).

Definition of Certain Terms. The following are the meanings of certain terms that are important in understanding the covenants described above.

Capital Lease Obligation means, at the time any determination thereof is to be made, the amount of the liability in respect of a capital lease that would at that time be required to be capitalized on a balance sheet in accordance with U.S. GAAP as in effect on the date of the indenture.

Consolidated Net Assets means the consolidated total assets of Thermo Fisher and its subsidiaries as reflected in the most recent balance sheet of Thermo Fisher prepared in accordance with U.S. GAAP as in effect at the time of such determination, less (a) all current liabilities (excluding any notes and loans payable, current

maturities of long-term debt, the current portion of deferred revenue and obligations under capital leases) and (b) acquisition-related intangible assets in accordance with U.S. GAAP as in effect at the time of such determination. Consolidated Net Assets includes the goodwill of Thermo Fisher and its subsidiaries.

Funded Debt means, as of any date of determination, Thermo Fisher's indebtedness or the indebtedness of a subsidiary of Thermo Fisher maturing by its terms more than one year after its creation and indebtedness classified as long-term debt under U.S. GAAP as in effect on the date of the indenture, and in each case ranking at least *pari passu* with the debt securities, the Thermo Fisher guarantee of the debt securities or the other senior indebtedness of such subsidiary of Thermo Fisher.

indebtedness means, with respect to any specified Person, any indebtedness of such Person, whether or not contingent:

- 1) in respect of borrowed money;
- 2) evidenced by bonds, notes, debentures or similar instruments or letters of credit (or reimbursement agreements in respect thereof); and
- 3) in respect of Capital Lease Obligations.

In addition, the term *indebtedness* includes (x) all indebtedness (as defined above) of others secured by a Lien on any asset of the specified Person (whether or not such indebtedness is assumed by the specified Person), *provided* that the amount of such indebtedness will be the lesser of (A) the fair market value of such asset at such date of determination and (B) the amount of such indebtedness, and (y) to the extent not otherwise included, the guarantee by the specified Person of any indebtedness (as defined above) of any other Person.

Lien means, with respect to any asset, any mortgage, lien, pledge, charge, security interest or encumbrance of any kind in respect of such asset, whether or not filed, recorded or otherwise perfected under applicable law, including any conditional sale or other title retention agreement.

Original Issue Discount Security means any debt security which provides for an amount less than the principal amount thereof to be due and payable upon a declaration of acceleration of maturity thereof pursuant to the indenture.

Person means any individual, corporation, limited liability company, partnership, joint venture, joint-stock company, association, trust, unincorporated organization or government or any agency or political subdivision of a government or governmental agency.

Principal Property means any single parcel of real property or any permanent improvement thereon (i) owned by Thermo Fisher or any of its subsidiaries located in the United States, including Thermo Fisher's principal corporate office, any manufacturing facility or plant or any portion thereof and (ii) having a book value, as of the date of determination, in excess of 3% of Thermo Fisher's most recently calculated Consolidated Net Assets. Principal Property does not include any property that Thermo Fisher's board of directors has determined not to be of material importance to the business conducted by Thermo Fisher and its subsidiaries, taken as a whole. As of the date of this prospectus, none of Thermo Fisher's current properties or those of its subsidiaries constitutes a Principal Property.

Principal Subsidiary means any direct or indirect subsidiary of Thermo Fisher that owns a Principal Property.

Sale and Leaseback Transaction means any arrangement with any Person providing for the leasing by Thermo Fisher or any subsidiary of any Principal Property which has been or is to be sold or transferred by Thermo Fisher or such subsidiary to such Person, excluding (1) temporary leases for a term, including renewals at the

option of the lessee, of not more than three years, (2) leases between Thermo Fisher and a subsidiary or between subsidiaries of Thermo Fisher, (3) leases of a Principal Property executed by the time of, or within 12 months after the latest of, the acquisition, the completion of construction or improvement, or the commencement of commercial operation of the property and (4) arrangements pursuant to any provision of law with an effect similar to the former Section 168(f)(8) of the Internal Revenue Code of 1954, as amended.

U.S. GAAP means generally accepted accounting principles set forth in the FASB Accounting Standards Codification or in such other statements by such other entity as have been approved by a significant segment of the accounting profession, which are in effect from time to time.

Value means, with respect to a Sale and Leaseback Transaction, an amount equal to the net present value of the lease payments (other than amounts required to be paid on account of property taxes, maintenance, repairs, insurance, water rates and other items that do not constitute payments for property rights) with respect to the term of the lease remaining on the date as of which the amount is being determined, without regard to any renewal or extension options contained in the lease, discounted at the weighted average interest rate on the debt securities of all series (including the yield to maturity on any Original Issue Discount Securities) which are outstanding on the effective date of such Sale and Leaseback Transaction.

Events of Default

The indenture defines an Event of Default with respect to any series of debt securities issued pursuant to the indenture. Events of Default on the debt securities are any of the following:

Default in the payment of the principal or any premium on debt securities when due (whether at maturity, upon acceleration, redemption or otherwise);

Default for 30 days in the payment of interest on debt securities when due;

Failure by the Issuer or Thermo Fisher to observe or perform any other term of the indenture for a period of 90 days after the Issuer or Thermo Fisher, as applicable, receives a notice of default stating the Issuer or Thermo Fisher is in breach. The notice must be sent by either the trustee or holders of 25% of the principal amount of the debt securities of the affected series;

(1) Failure by the Issuer or Thermo Fisher to pay indebtedness for money the Issuer or Thermo Fisher borrowed or guaranteed the payment of in an aggregate principal amount of at least \$150 million at the later of final maturity and the expiration of any related applicable grace period and such defaulted payment shall not have been made, waived or extended within 30 days or (2) acceleration of the maturity of any indebtedness for money the Issuer or Thermo Fisher borrowed or guaranteed the payment of in an aggregate principal amount of at least \$150 million, if such indebtedness has not been discharged in full or such acceleration has not been rescinded or annulled within 30 days; *provided, however*, that, if the default under the instrument is cured by the Issuer or Thermo Fisher, or waived by the holders of the indebtedness, in each case as permitted by the governing instrument, then the Event of Default under the indenture governing the debt securities caused by such default will be deemed likewise to be cured or waived;

Certain events in bankruptcy, insolvency or reorganization with respect to the Issuer or Thermo Fisher;

The guarantee of the obligations under the debt securities is determined in a final, non-appealable judgment to be unenforceable or invalid or such guarantee is asserted in writing by Thermo Fisher International or Thermo Fisher to no longer be in full force and effect and enforceable in accordance with its terms; and

Any other Event of Default provided for in such series of debt securities as may be specified in the applicable prospectus supplement.

An Event of Default under one series of debt securities issued pursuant to the indenture does not necessarily constitute an Event of Default under any other series of debt securities. The indenture provides that the trustee

may withhold notice to the holders of any series of debt securities issued thereunder of any default if the trustee's board of directors, executive committee, or a trust committee of directors or trustees and/or certain officers of the trustee in good faith determine it in the interest of such holders to do so.

Remedies If an Event of Default Occurs. The indenture provides that if an Event of Default has occurred with respect to a series of debt securities and has not been cured, the trustee or the holders of not less than 25% in principal amount of the debt securities of that series may declare the entire principal amount of all the debt securities of that series to be due and immediately payable. This is called a declaration of acceleration of maturity. If an Event of Default occurs because of certain events in bankruptcy, insolvency or reorganization with respect to the Issuer or Thermo Fisher, the principal amount of all the debt securities will be automatically accelerated, without any action by the trustee or any holder. The holders of a majority in aggregate principal amount of the debt securities of the affected series may by written notice to the Issuer, Thermo Fisher and the trustee may, on behalf of the holders of the debt securities of the affected series, rescind an acceleration or waive any existing Default or Event of Default and its consequences under the indenture, if the rescission would not conflict with any judgment or decree, except a continuing Default or Event of Default in the payment of principal of, premium on, if any, or interest, if any, on, such debt securities.

Except as may otherwise be provided in the indenture in cases of default, where the trustee has some special duties, the trustee is not required to take any action under the indenture at the request of any holders unless the holders offer the trustee protection from expenses and liability (called an *indemnity*). If indemnity satisfactory to the trustee is provided, the holders of a majority in principal amount of the outstanding debt securities of the affected series may direct the time, method and place of conducting any lawsuit or other formal legal action seeking any remedy available to the trustee. Subject to certain exceptions contained in the indenture, these majority holders may also direct the trustee in performing any other action under the indenture.

Before you bypass the trustee and bring your own lawsuit or other formal legal action or take other steps to enforce your rights or protect your interests relating to the debt securities, the following must occur:

You must give the trustee written notice that an Event of Default has occurred and remains uncured.

The holders of 25% in principal amount of all outstanding debt securities of the affected series must make a written request that the trustee take action because of the Event of Default, and must offer reasonable indemnity to the trustee against the cost and other liabilities of taking that action.

The trustee must have failed to take action for 60 days after receipt of the above notice and offer of indemnity and during such 60-day period, the trustee has not received a contrary instruction from holders of a majority in principal amount of all outstanding debt securities of that series.

However, you are entitled at any time to bring a lawsuit for the payment of money due on your debt securities on or after the due date of that payment.

The Issuer will furnish to the trustee every year a written statement of one of its officers certifying that to such officer's knowledge the Issuer is in compliance with the indenture and the debt securities, or else specifying any default.

Satisfaction and Discharge

The indenture will cease to be of any further effect with respect to a series of debt securities and the related guarantee, and the trustee, upon the Issuer's demand and at its expense, will execute appropriate instruments acknowledging the

satisfaction and discharge of the indenture with respect to such debt securities and the related guarantee if:

the Issuer or Thermo Fisher have delivered to the trustee for cancellation all such debt securities theretofore authenticated under the indenture; or

all debt securities of that series not theretofore delivered to the trustee for cancellation shall have become due and payable or by their terms will become due and payable within one year or are to be called for redemption within one year and, in each such case, the Issuer or Thermo Fisher shall have deposited with the trustee sufficient cash or U.S. government or U.S. government agency notes or bonds (or equivalent government obligations in the case of debt securities denominated in a currency other than U.S. dollars) that will generate enough cash to pay, at maturity or upon redemption, all such debt securities; and

if, in either case, the Issuer or Thermo Fisher also pay or cause to be paid all sums payable under the indenture with respect to such debt securities, and the Issuer or Thermo Fisher delivers to the trustee an officer's certificate and an opinion of counsel, each stating that these conditions with respect to such debt securities have been satisfied.

Under current U.S. federal tax law, the deposit and the Issuer's legal release from the debt securities would be treated as though it took back your debt securities and gave you your share of the cash and debt securities or bonds deposited in trust. In that event, you could recognize gain or loss on the debt securities you give back to the Issuer. Purchasers of the debt securities should consult their own advisers with respect to the tax consequences to them of such deposit and discharge, including the applicability and effect of tax laws other than the U.S. income tax law.

Defeasance

Unless the applicable prospectus supplement provides otherwise, the following discussion of legal defeasance and discharge and covenant defeasance will apply to any series of debt securities and the related guarantee issued under the indenture.

Full Defeasance. The Issuer can legally release itself and Thermo Fisher from any payment or other obligations on the debt securities of any series and the related guarantee (called *full defeasance*) if the following conditions are met:

The Issuer deposits or Thermo Fisher deposits in trust for your benefit and the benefit of all other direct holders of the debt securities of the same series a combination of money and U.S. government or U.S. government agency notes or bonds (or equivalent government obligations in the case of debt securities denominated in a currency other than U.S. dollars) that will generate enough cash to make interest, principal, any premium and any other payments on the debt securities of that series on their various due dates.

There is a change in current U.S. federal tax law or an IRS ruling that lets the Issuer or Thermo Fisher make the above deposit without causing you to be taxed on the debt securities any differently than if the Issuer or Thermo Fisher did not make the deposit and instead repaid the debt securities themselves when due. Under current U.S. federal tax law, the deposit and the Issuer's and Thermo Fisher's legal release from the debt securities and the related guarantee would be treated as though the Issuer took back your debt securities and gave you your share of the cash and debt securities or bonds deposited in trust. In that event, you could recognize gain or loss on the debt securities you give back to the Issuer.

The Issuer delivers or Thermo Fisher delivers to the trustee a legal opinion of counsel confirming the tax law change or ruling described above.

If the Issuer ever did accomplish full defeasance, as described above, you would have to rely solely on the trust deposit for repayment of the debt securities. You could not look to the Issuer or Thermo Fisher for repayment in the event of any shortfall.

However, even if the Issuer makes or Thermo Fisher makes the deposit in trust and opinion delivery arrangements discussed above, a number of obligations relating to the debt securities will remain. These include the obligations:

to register the transfer and exchange of debt securities;

to replace mutilated, destroyed, lost or stolen debt securities;

to maintain paying agencies; and

to hold money for payment in trust.

Covenant Defeasance. Without any change of current U.S. federal tax law, the Issuer or Thermo Fisher can make the same type of deposit described above and be released from some of the covenants on the debt securities of any series and related guarantee. This is called *covenant defeasance*. In that event, you would lose the protection of those covenants but would gain the protection of having money and securities set aside in trust to repay the debt securities. In order to achieve covenant defeasance, the Issuer or Thermo Fisher must do the following:

The Issuer or Thermo Fisher must deposit in trust for your benefit and the benefit of all other direct holders of the debt securities of the same series a combination of money and U.S. government or U.S. government agency notes or bonds (or equivalent government obligations in the case of debt securities denominated in a currency other than U.S. dollars) that will generate enough cash to make interest, principal, any premium and any other payments on the debt securities of that series on their various due dates.

The Issuer or Thermo Fisher must deliver to the trustee a legal opinion of counsel confirming that under current U.S. federal income tax law the Issuer or Thermo Fisher may make the above deposit without causing you to be taxed on the debt securities any differently than if the Issuer or Thermo Fisher did not make the deposit and instead repaid the debt securities when due.

If the Issuer accomplishes covenant defeasance, you can still look to the Issuer or Thermo Fisher for repayment of the debt securities or the related guarantee if there were a shortfall in the trust deposit. In fact, if one of the Events of Default occurred (such as the Issuer's or Thermo Fisher's bankruptcy) and the debt securities become immediately due and payable, there may be such a shortfall. Depending on the event causing the default, you may not be able to obtain payment of the shortfall.

Modification and Waiver

There are three types of changes the Issuer can make to the indenture and the debt securities.

Changes Requiring Approval of the Holder. First, there are changes that cannot be made to the debt securities without specific approval of each holder. The following is a list of those types of changes:

change the stated maturity of the principal or interest on any debt securities of such series;

reduce any amounts due on any debt securities of such series;

reduce the amount of principal payable upon acceleration of the maturity of the debt securities following an Event of Default;

change the place or currency of payment for the debt securities;

impair the holder's right to sue for the enforcement of any payment on or with respect to the debt securities;

release Thermo Fisher from its obligations in respect of the guarantee of any series of debt securities or modify Thermo Fisher's obligations thereunder other than in accordance with the provisions of the indenture;

reduce the percentage in principal amount of the debt securities, the approval of whose holders is needed to modify or amend the indenture or the debt securities;

reduce the percentage in principal amount of the debt securities, the approval of whose holders is needed to waive compliance with certain provisions of the indenture or to waive certain defaults; and

modify any other aspect of the provisions dealing with modification and waiver of the indenture, except to increase the percentage required for any modification or to provide that other provisions of the indenture may not be modified or waived without consent of the holder of each debt security of such series affected by the modification.

Changes Not Requiring Approval. The second type of change does not require any vote by holders of the debt securities. This following is a list of those types of changes:

cure any ambiguity, defect or inconsistency;

evidence the succession of another entity to the Issuer's obligations or the obligations of Thermo Fisher under the indenture;

provide for uncertificated debt securities in addition to or in place of certificated debt securities;

add to the Issuer's covenants or Thermo Fisher's covenants for the benefit of holders of outstanding debt securities or to surrender any right or power the Issuer has or Thermo Fisher has under the indenture;

add additional events of default;

secure debt securities of any series;

make any change that does not adversely affect the rights of any holder of debt securities in any material respect;

issue additional debt securities of any series;

evidence and provide for a successor trustee and add to or change the provisions of the indenture to provide for or facilitate the administration of the trusts under the indenture; or

comply with requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act.

Nor does the Issuer need any approval to make changes that affect only debt securities to be issued under the indenture after the changes take effect. The Issuer may also make changes or obtain waivers that do not adversely affect the debt securities, even if they affect other debt securities issued under the indenture. In those cases, the Issuer needs only obtain any required approvals from the holders of the affected debt securities.

Changes Requiring a Majority Vote. Any other change to the indenture and the debt securities would require the following approval:

If the change affects only debt securities of one series, it must be approved by the holders of a majority in principal amount of the debt securities of that series.

If the change affects the debt securities as well as the debt securities of one or more other series issued under the indenture, it must be approved by the holders of a majority in principal amount of the debt securities and each other series of debt securities affected by the change.

In each case, the required approval must be given by written consent.

The same vote would be required for the Issuer to obtain a waiver of a past default. However, the Issuer cannot obtain a waiver of a payment default or a waiver with respect to any other aspect of the indenture and the debt securities listed in the first category described previously under *Changes Requiring Approval of the Holder* unless the Issuer obtains your individual consent to the waiver.

Further Details Concerning Voting

The debt securities will not be considered outstanding, and therefore not eligible to vote, if the Issuer has or Thermo Fisher has deposited or set aside in trust for you money for their payment or redemption. The debt securities will also not be eligible to vote if they have been fully defeased as described above under Full Defeasance.

The Issuer will generally be entitled to set any day as a record date for the purpose of determining the holders of outstanding debt securities that are entitled to vote or take other action under the indenture. In certain limited circumstances, the trustee will be entitled to set a record date for action by holders. If the Issuer or the trustee sets a record date for a vote or other action to be taken by holders of debt securities, that vote or action may be taken only by persons who are holders of outstanding debt securities on the record date and must be taken within 180 days following the record date or another period that the Issuer may specify (or as the trustee may specify, if it sets the record date). The Issuer may shorten or lengthen (but not beyond 180 days) this period from time to time.

No Personal Liability of Incorporators, Stockholders, Officers or Directors

The indenture provides that no recourse shall be had under any obligation, covenant or agreement of the Issuer or Thermo Fisher in the indenture or in any of the debt securities or guarantees or because of the creation of any indebtedness represented thereby, against any of the Issuer's or Thermo Fisher's respective incorporators, stockholders, officers or directors, past, present or future, or of any predecessor or successor entity thereof under any law, statute or constitutional provision or by the enforcement of any assessment or by any legal or equitable proceeding or otherwise. Each holder, by accepting the debt securities, waives and releases all such liability.

Concerning the Trustee

The Bank of New York Mellon Trust Company, N.A., as trustee under the indenture, has been appointed by the Issuer as paying agent, registrar and custodian with regard to the debt securities. The trustee or its affiliates may from time to time in the future provide banking and other services to the Issuer in the ordinary course of their business. The trustee also serves as senior trustee under the senior indenture of Thermo Fisher.

The indenture provides that, prior to the occurrence of an Event of Default with respect to the debt securities of a series and after the curing or waiving of all such Events of Default with respect to that series, the trustee will not be liable except for the performance of such duties as are specifically set forth in the indenture. If an event of default has occurred and has not been cured or waived, the trustee will exercise such rights and powers vested in it under the indenture and will use the same degree of care and skill in its exercise as a prudent person would exercise under the circumstances in the conduct of such person's own affairs.

The indenture and the provisions of the Trust Indenture Act incorporated by reference therein contain limitations on the rights of the trustee thereunder, should it become a creditor of the Issuer or Thermo Fisher or any of its subsidiaries, to obtain payment of claims in certain cases or to realize on certain property received by it in respect of any such claims, as security or otherwise. The trustee is permitted to engage in other transactions, provided that if it acquires any conflicting interest (as defined in the Trust Indenture Act), it must eliminate such conflict or resign.

Unclaimed Funds

All funds deposited with the trustee or any paying agent for the payment of principal, interest, premium or additional amounts in respect of the debt securities that remain unclaimed for one year after the date upon which the principal of, premium, if any, or interest on such debt securities shall have become due and payable will be repaid to the Issuer or Thermo Fisher. Thereafter, any right of any holder of debt securities to such funds shall be enforceable only against the Issuer or Thermo Fisher, and the trustee and paying agents will have no liability therefor.

Governing Law

The indenture, the guarantees and the debt securities will be governed by, and construed in accordance with, the laws of the State of New York.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock is intended as a summary only. This description is based upon, and is qualified by reference to, our third amended and restated certificate of incorporation, as amended by the amendment to our third amended and restated certificate of incorporation (as amended, the *certificate of incorporation*), our bylaws and applicable provisions of Delaware corporate law. This summary is not complete. You should read our certificate of incorporation and bylaws, which are filed as exhibits to the registration statement of which this prospectus forms a part, for the provisions that are important to you. When we refer to *we*, *our*, and *us* in this Description of Capital Stock, we mean Thermo Fisher Scientific Inc. excluding, unless the context otherwise requires or as otherwise expressly stated, our subsidiaries.

Our authorized capital stock consists of 1.2 billion shares of common stock, \$1.00 par value per share, and 50,000 shares of preferred stock, \$100 par value per share. As of February 2, 2019, 399,003,681 shares of common stock and no shares of preferred stock were outstanding.

Common Stock

General

Annual Meeting. Annual meetings of our stockholders are held on the date designated in accordance with our bylaws. Written notice must be mailed to each stockholder entitled to vote not less than ten nor more than 60 days before the date of the meeting. The presence in person or by proxy of the holders of record of a majority of our issued and outstanding shares entitled to vote at such meeting constitutes a quorum for the transaction of business at meetings of the stockholders, unless or except to the extent that the presence of a larger number may be required by our certificate of incorporation or the Delaware General Corporation Law, which we refer to as the DGCL. Special meetings of the stockholders may only be called by the board of directors, the chairman of the board of directors or the chief executive officer. Except as may be otherwise provided by applicable law, our certificate of incorporation or our bylaws, all matters shall be decided by a majority of the votes cast by stockholders entitled to vote thereon at a duly held meeting of stockholders at which a quorum is present. Except as may be otherwise provided by our certificate of incorporation, a nominee shall be elected to the board of directors if the votes cast for such nominee's election exceed the votes cast against, provided that if, on the tenth business day before we mail our notice of meeting to the stockholders, the number of nominees exceeds the number of directors to be elected, the election shall be decided by a plurality.

Voting Rights. Each holder of common stock is entitled to one vote for each share held on all matters to be voted upon by stockholders.

Dividends. The holders of common stock, after any preferences of holders of any preferred stock, are entitled to receive dividends when and if declared by the board of directors out of legally available funds.

Liquidation and Dissolution. If we are liquidated or dissolved, the holders of the common stock will be entitled to share in our assets available for distribution to stockholders in proportion to the amount of common stock they own. The amount available for common stockholders is calculated after payment of liabilities. Holders of any preferred stock will receive a preferential share of our assets before the holders of the common stock receive any assets.

Other Rights. Holders of the common stock have no right to:

convert the stock into any other security;

have the stock redeemed; or

purchase additional stock or to maintain their proportionate ownership interest.

The common stock does not have cumulative voting rights. Holders of shares of the common stock are not required to make additional capital contributions.

Directors Liability

Our certificate of incorporation provides that a member of the board of directors will not be personally liable to us or our stockholders for monetary damages for breaches of their legal duties to us or our stockholders as a director, except to the extent that the DGCL prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Our certificate of incorporation also allows us to indemnify directors and officers to the fullest extent authorized by Delaware law.

Transfer Agent and Registrar

American Stock Transfer & Trust Company is transfer agent and registrar for the common stock.

Provisions of Our Certificate of Incorporation and Bylaws and Delaware Law That May Have Anti-Takeover Effects

Removal of Directors by Stockholders. Our bylaws provide that, except as otherwise provided by our certificate of incorporation or the DGCL, any one or more or all of the members of our board of directors may be removed, with or without cause, by the holders of a majority of the voting power of the shares entitled to vote thereon.

Stockholder Nomination of Directors. Our bylaws provide that a stockholder must notify us in writing of any stockholder nomination of a director not less than 60 days and not more than 75 days prior to the first anniversary of the date on which we first mailed our proxy materials for the preceding year's annual meeting; provided, that if the date of the annual meeting is advanced or delayed by more than 30 days from such anniversary date, notice by the stockholder to be timely must be so delivered not later than the close of business on the later of (x) the 90th day prior to the date of such meeting or (y) the 10th day following the day on which public announcement of the date of such annual meeting is first made by us.

Proxy Access. Our bylaws provide for proxy access, which permits a stockholder, or a group of up to 20 stockholders, owning 3% or more of our outstanding common stock continuously for at least three years, to nominate and include in our proxy materials qualifying director nominees constituting up to the greater of (i) 20% of the board of directors or (ii) two directors. To be timely, any proxy access notice must be delivered in writing to our secretary not less than 120 days and not more than 150 days prior to the first anniversary of the preceding year's annual meeting; provided that in the event that the date of the annual meeting is advanced by more than 30 days or delayed (other than as a result of adjournment) by more than 60 days from the first anniversary of the preceding year's annual meeting, or if no annual meeting was held in the preceding year, a stockholder's notice must be received not earlier than 150 days prior to such annual meeting and not later than the close of business on the later of (a) the 120th day prior to such annual meeting and (b) the 10th day following the day on which notice of the date of such annual meeting was mailed or publicly announced. The complete proxy access provisions for director nominations are set forth in our bylaws.

Delaware Business Combination Statute. Section 203 of the DGCL, is applicable to us. Section 203 of the DGCL restricts some types of transactions and business combinations between a corporation and a 15% stockholder. A 15% stockholder is generally considered by Section 203 to be a person owning 15% or more of the corporation's outstanding voting stock. Section 203 refers to a 15% stockholder as an interested stockholder. Section 203 restricts these transactions for a period of three years from the date the stockholder acquires 15% or more of our outstanding voting stock. With some exceptions, unless the transaction is approved by the board of directors and

the holders of at least two-thirds of the outstanding voting stock of the corporation, Section 203 prohibits significant business transactions such as:

a merger with, disposition of significant assets to or receipt of disproportionate financial benefits by the interested stockholder, and

any other transaction that would increase the interested stockholder's proportionate ownership of any class or series of our capital stock.

The shares held by the interested stockholder are not counted as outstanding when calculating the two-thirds of the outstanding voting stock needed for approval.

The prohibition against these transactions does not apply if:

prior to the time that any stockholder became an interested stockholder, the board of directors approved either the business combination or the transaction in which such stockholder acquired 15% or more of our outstanding voting stock, or

the interested stockholder owns at least 85% of our outstanding voting stock as a result of a transaction in which such stockholder acquired 15% or more of our outstanding voting stock. Shares held by persons who are both directors and officers or by some types of employee stock plans are not counted as outstanding when making this calculation.

Preferred Stock

General

Under our charter, we have authority to issue 50,000 shares of preferred stock, \$100 par value per share. The terms of any series of preferred stock will be described in the prospectus supplement relating to that series of preferred stock. The terms of any series of preferred stock may differ from the terms described below. Certain provisions of the preferred stock described below and in any applicable prospectus supplement are not complete.

We are authorized to issue blank check preferred stock, which may be issued in one or more series upon authorization of our board of directors. Our board of directors is authorized to fix the designation of the series, the number of authorized shares of the series, dividend rights and terms, conversion rights, voting rights, redemption rights and terms, liquidation preferences and any other rights, powers, preferences and limitations applicable to each series of preferred stock. The authorized shares of our preferred stock are available for issuance without further action by our stockholders, unless such action is required by applicable law or the rules of any stock exchange on which our securities may be listed. If the approval of our stockholders is not required for the issuance of shares of our preferred stock, our board may determine not to seek stockholder approval.

A series of our preferred stock could, depending on the terms of such series, impede the completion of a merger, tender offer or other takeover attempt. Our board of directors will make any determination to issue such shares based upon its judgment as to the best interests of our stockholders. Our directors, in so acting, could issue our preferred stock having terms that could discourage an acquisition attempt through which an acquirer may be able to change the composition of our board of directors, including a tender offer or other transaction that some, or a majority, of our

stockholders might believe to be in their best interests or in which stockholders might receive a premium for their stock over the then-current market price of the stock.

The preferred stock has the terms described below unless otherwise provided in the prospectus supplement relating to a particular series of preferred stock. You should read the prospectus supplement relating to the particular series of preferred stock being offered for specific terms, including:

the designation and stated value per share of the preferred stock and the number of shares offered;

the amount of liquidation preference per share;

the price at which the preferred stock will be issued;

the dividend rate, or method of calculation of dividends, the dates on which dividends will be payable, whether dividends will be cumulative or noncumulative and, if cumulative, the dates from which dividends will commence to accumulate;

any redemption or sinking fund provisions;

if other than the currency of the United States, the currency or currencies including composite currencies in which the preferred stock is denominated and/or in which payments will or may be payable;

any conversion provisions;

whether we have elected to offer depositary shares as described under Description of Depositary Shares; and

any other rights, preferences, privileges, limitations and restrictions on the preferred stock.

The preferred stock will, when issued, be fully paid and nonassessable. Unless otherwise specified in the prospectus supplement, each series of preferred stock will rank equally as to dividends and liquidation rights in all respects with each other series of preferred stock. The rights of holders of shares of each series of preferred stock will be subordinate to those of our general creditors.

As described under Description of Depositary Shares, we may, at our option, with respect to any series of preferred stock, elect to offer fractional interests in shares of preferred stock and provide for the issuance of depositary receipts representing depositary shares, each of which will represent a fractional interest in a share of the series of preferred stock. The fractional interest will be specified in the prospectus supplement relating to a particular series of preferred stock.

Rank

Unless otherwise specified in the prospectus supplement, the preferred stock will, with respect to dividend rights and rights upon our liquidation, dissolution or winding up of its affairs, rank:

senior to our common stock and to all equity securities ranking junior to such preferred stock with respect to dividend rights or rights upon our liquidation, dissolution or winding up of our affairs;

on a parity with all equity securities issued by us, the terms of which specifically provide that such equity securities rank on a parity with the preferred stock with respect to dividend rights or rights upon our liquidation, dissolution or winding up of our affairs; and

junior to all equity securities issued by us, the terms of which specifically provide that such equity securities rank senior to the preferred stock with respect to dividend rights or rights upon our liquidation, dissolution or winding up of our affairs.

The term "equity securities" does not include convertible debt securities.

Dividends

Holders of the preferred stock of each series will be entitled to receive, when, as and if declared by our board of directors, cash dividends at such rates and on such dates described in the prospectus supplement. Different series of preferred stock may be entitled to dividends at different rates or based on different methods of calculation. The dividend rate may be fixed or variable or both. Dividends will be payable to the holders of record as they appear on our stock books on record dates fixed by our board of directors, as specified in the applicable prospectus supplement.

Dividends on any series of preferred stock may be cumulative or noncumulative, as described in the applicable prospectus supplement. If our board of directors does not declare a dividend payable on a dividend payment date on any series of noncumulative preferred stock, then the holders of that noncumulative preferred stock will have no right to receive a dividend for that dividend payment date, and we will have no obligation to pay the dividend accrued for that period, whether or not dividends on that series are declared payable on any future dividend payment dates. Dividends on any series of cumulative preferred stock will accrue from the date we initially issue shares of such series or such other date specified in the applicable prospectus supplement.

No dividends may be declared or paid or funds set apart for the payment of any dividends on any parity securities unless full dividends have been paid or set apart for payment on the preferred stock. If full dividends are not paid, the preferred stock will share dividends pro rata with the parity securities.

No dividends may be declared or paid or funds set apart for the payment of dividends on any junior securities unless we have paid in full, or set apart for payment, such accumulated but unpaid dividends on the preferred stock.

Liquidation Preference

Upon any voluntary or involuntary liquidation, dissolution or winding up of our affairs, then, before we make any distribution or payment to the holders of any common stock or any other class or series of our capital stock ranking junior to the preferred stock in the distribution of assets upon any liquidation, dissolution or winding up of our affairs, the holders of each series of preferred stock shall be entitled to receive, out of assets legally available for distribution to stockholders, liquidating distributions in the amount of the liquidation preference per share set forth in the prospectus supplement, plus any accrued and unpaid dividends thereon. Such dividends will not include any accumulation in respect of unpaid noncumulative dividends for prior dividend periods. Unless otherwise specified in the prospectus supplement, after payment of the full amount of their liquidating distributions, the holders of preferred stock will have no right or claim to any of our remaining assets. Upon any such voluntary or involuntary liquidation, dissolution or winding up, if our available assets are insufficient to pay the amount of the liquidating distributions on all outstanding preferred stock and the corresponding amounts payable on all other classes or series of our capital stock ranking on parity with the preferred stock and all other such classes or series of shares of capital stock ranking on parity with the preferred stock in the distribution of assets, then the holders of the preferred stock and all other such classes or series of capital stock will share ratably in any such distribution of assets in proportion to the full liquidating distributions to which they would otherwise be entitled.

Upon any such liquidation, dissolution or winding up and if we have made liquidating distributions in full to all holders of preferred stock, we will distribute our remaining assets among the holders of any other classes or series of capital stock ranking junior to the preferred stock according to their respective rights and preferences and, in each case, according to their respective number of shares. For such purposes, our consolidation or merger with or into any other corporation, trust or entity, or the sale, lease or conveyance of all or substantially all of our property or assets will not be deemed to constitute a liquidation, dissolution or winding up of our affairs.

Redemption

If so provided in the applicable prospectus supplement, the preferred stock will be subject to mandatory redemption or redemption at our option, as a whole or in part, in each case upon the terms, at the times and at the redemption prices set forth in such prospectus supplement.

The prospectus supplement relating to a series of preferred stock that is subject to mandatory redemption will specify the number of shares of preferred stock that shall be redeemed by us in each year commencing after a date to be specified, at a redemption price per share to be specified, together with an amount equal to all accrued and unpaid dividends thereon to the date of redemption. Unless the shares have a cumulative dividend, such

accrued dividends will not include any accumulation in respect of unpaid dividends for prior dividend periods. We may pay the redemption price in cash or other property, as specified in the applicable prospectus supplement. If the redemption price for preferred stock of any series is payable only from the net proceeds of the issuance of shares of our capital stock, the terms of such preferred stock may provide that, if no such shares of our capital stock shall have been issued or to the extent the net proceeds from any issuance are insufficient to pay in full the aggregate redemption price then due, such preferred stock shall automatically and mandatorily be converted into the applicable shares of our capital stock pursuant to conversion provisions specified in the applicable prospectus supplement. Notwithstanding the foregoing, we will not redeem any preferred stock of a series unless:

if that series of preferred stock has a cumulative dividend, we have declared and paid or contemporaneously declare and pay or set aside funds to pay full cumulative dividends on the preferred stock for all past dividend periods and the then current dividend period; or

if such series of preferred stock does not have a cumulative dividend, we have declared and paid or contemporaneously declare and pay or set aside funds to pay full dividends for the then current dividend period.

In addition, we will not acquire any preferred stock of a series unless:

if that series of preferred stock has a cumulative dividend, we have declared and paid or contemporaneously declare and pay or set aside funds to pay full cumulative dividends on all outstanding shares of such series of preferred stock for all past dividend periods and the then current dividend period; or

if that series of preferred stock does not have a cumulative dividend, we have declared and paid or contemporaneously declare and pay or set aside funds to pay full dividends on the preferred stock of such series for the then current dividend period.

However, at any time we may purchase or acquire preferred stock of that series (1) pursuant to a purchase or exchange offer made on the same terms to holders of all outstanding preferred stock of such series or (2) by conversion into or exchange for shares of our capital stock ranking junior to the preferred stock of such series as to dividends and upon liquidation.

If fewer than all of the outstanding shares of preferred stock of any series are to be redeemed, we will determine the number of shares that may be redeemed pro rata from the holders of record of such shares in proportion to the number of such shares held or for which redemption is requested by such holder or by any other equitable manner that we determine. Such determination will reflect adjustments to avoid redemption of fractional shares.

Unless otherwise specified in the prospectus supplement, we will mail notice of redemption at least 30 days but not more than 60 days before the redemption date to each holder of record of preferred stock to be redeemed at the address shown on our stock transfer books. Each notice shall state:

the redemption date;

the number of shares and series of preferred stock to be redeemed;

the redemption price;

the place or places where certificates for such preferred stock are to be surrendered for payment of the redemption price;

that dividends on the shares to be redeemed will cease to accrue on such redemption date;

the date upon which the holder's conversion rights, if any, as to such shares shall terminate; and

the specific number of shares to be redeemed from each such holder if fewer than all the shares of any series are to be redeemed.

If notice of redemption has been given and we have set aside the funds necessary for such redemption in trust for the benefit of the holders of any shares called for redemption, then from and after the redemption date, dividends will cease to accrue on such shares and all rights of the holders of such shares will terminate, except the right to receive the redemption price.

Voting Rights

Holders of preferred stock will not have any voting rights, except as required by law or as indicated in the applicable prospectus supplement.

Unless otherwise provided for under the terms of any series of preferred stock, no consent or vote of the holders of shares of preferred stock or any series thereof shall be required for any amendment to our certificate of incorporation that would increase the number of authorized shares of preferred stock or the number of authorized shares of any series thereof or decrease the number of authorized shares of preferred stock or the number of authorized shares of any series thereof (but not below the number of authorized shares of preferred stock or such series, as the case may be, then outstanding).

Conversion Rights

The terms and conditions, if any, upon which any series of preferred stock is convertible into our common stock will be set forth in the applicable prospectus supplement relating thereto. Such terms will include the number of shares of common stock into which the shares of preferred stock are convertible, the conversion price, rate or manner of calculation thereof, the conversion period, provisions as to whether conversion will be at our option or at the option of the holders of the preferred stock, the events requiring an adjustment of the conversion price and provisions affecting conversion in the event of the redemption.

Transfer Agent and Registrar

The transfer agent and registrar for the preferred stock will be set forth in the applicable prospectus supplement.

DESCRIPTION OF DEPOSITARY SHARES

General

We may, at our option, elect to offer fractional shares of preferred stock, which we call depositary shares, rather than full shares of preferred stock. If we do, we will issue to the public receipts, called depositary receipts, for depositary shares, each of which will represent a fraction, to be described in the applicable prospectus supplement, of a share of a particular series of preferred stock. Unless otherwise provided in the prospectus supplement, each owner of a depositary share will be entitled, in proportion to the applicable fractional interest in a share of preferred stock represented by the depositary share, to all the rights and preferences of the preferred stock represented by the depositary share. Those rights include dividend, voting, redemption, conversion and liquidation rights.

The shares of preferred stock underlying the depositary shares will be deposited with a bank or trust company selected by us to act as depositary under a deposit agreement between us, the depositary and the holders of the depositary receipts. The depositary will be the transfer agent, registrar and dividend disbursing agent for the depositary shares.

The depositary shares will be evidenced by depositary receipts issued pursuant to the deposit agreement. Holders of depositary receipts agree to be bound by the deposit agreement, which requires holders to take certain actions such as filing proof of residence and paying certain charges.

The summary of terms of the depositary shares contained in this prospectus is not a complete description of the terms of the depositary shares. You should refer to the form of the deposit agreement, our certificate of incorporation and the certificate of designation for the applicable series of preferred stock that are, or will be, filed with the SEC. When we refer to we, our, and us in this Description of Depositary Shares, we mean Thermo Fisher Scientific Inc. excluding, unless the context otherwise requires or as otherwise expressly stated, our subsidiaries.

Dividends and Other Distributions

The depositary will distribute all cash dividends or other cash distributions, if any, received in respect of the preferred stock underlying the depositary shares to the record holders of depositary shares in proportion to the numbers of depositary shares owned by those holders on the relevant record date. The relevant record date for depositary shares will be the same date as the record date for the underlying preferred stock.

If there is a distribution other than in cash, the depositary will distribute property (including securities) received by it to the record holders of depositary shares, unless the depositary determines that it is not feasible to make the distribution. If this occurs, the depositary may, with our approval, adopt another method for the distribution, including selling the property and distributing the net proceeds from the sale to the holders.

Liquidation Preference

If a series of preferred stock underlying the depositary shares has a liquidation preference, in the event of the voluntary or involuntary liquidation, dissolution or winding up of us, holders of depositary shares will be entitled to receive the fraction of the liquidation preference accorded each share of the applicable series of preferred stock, as set forth in the applicable prospectus supplement.

Withdrawal of Stock

Unless the related depositary shares have been previously called for redemption, upon surrender of the depositary receipts at the office of the depositary, the holder of the depositary shares will be entitled to delivery, at the office

of the depositary to or upon his or her order, of the number of whole shares of the preferred stock and any money or other property represented by the depositary shares. If the depositary receipts delivered by the holder evidence a number of depositary shares in excess of the number of depositary shares representing the number of whole shares of preferred stock to be withdrawn, the depositary will deliver to the holder at the same time a new depositary receipt evidencing the excess number of depositary shares. In no event will the depositary deliver fractional shares of preferred stock upon surrender of depositary receipts. Holders of preferred stock thus withdrawn may not thereafter deposit those shares under the deposit agreement or receive depositary receipts evidencing depositary shares therefor.

Redemption of Depositary Shares

Whenever we redeem shares of preferred stock held by the depositary, the depositary will redeem as of the same redemption date the number of depositary shares representing shares of the preferred stock so redeemed, so long as we have paid in full to the depositary the redemption price of the preferred stock to be redeemed plus an amount equal to any accumulated and unpaid dividends on the preferred stock to the date fixed for redemption. The redemption price per depositary share will be equal to the redemption price and any other amounts per share payable on the preferred stock multiplied by the fraction of a share of preferred stock represented by one depositary share. If less than all the depositary shares are to be redeemed, the depositary shares to be redeemed will be selected by lot or pro rata or by any other equitable method as may be determined by the depositary.

After the date fixed for redemption, depositary shares called for redemption will no longer be deemed to be outstanding and all rights of the holders of depositary shares will cease, except the right to receive the monies payable upon redemption and any money or other property to which the holders of the depositary shares were entitled upon redemption upon surrender to the depositary of the depositary receipts evidencing the depositary shares.

Voting the Preferred Stock

Upon receipt of notice of any meeting at which the holders of the preferred stock are entitled to vote, the depositary will mail the information contained in the notice of meeting to the record holders of the depositary receipts relating to that preferred stock. The record date for the depositary receipts relating to the preferred stock will be the same date as the record date for the preferred stock. Each record holder of the depositary shares on the record date will be entitled to instruct the depositary as to the exercise of the voting rights pertaining to the number of shares of preferred stock represented by that holder's depositary shares. The depositary will endeavor, insofar as practicable, to vote the number of shares of preferred stock represented by the depositary shares in accordance with those instructions, and we will agree to take all action that may be deemed necessary by the depositary in order to enable the depositary to do so. The depositary will not vote any shares of preferred stock except to the extent it receives specific instructions from the holders of depositary shares representing that number of shares of preferred stock.

Charges of Depositary

We will pay all transfer and other taxes and governmental charges arising solely from the existence of the depositary arrangements. We will pay charges of the depositary in connection with the initial deposit of the preferred stock and any redemption of the preferred stock. Holders of depositary receipts will pay transfer, income and other taxes and governmental charges and such other charges (including those in connection with the receipt and distribution of dividends, the sale or exercise of rights, the withdrawal of the preferred stock and the transferring, splitting or grouping of depositary receipts) as are expressly provided in the deposit agreement to be for their accounts. If these charges have not been paid by the holders of depositary receipts, the depositary may refuse to transfer depositary shares, withhold dividends and distributions and sell the depositary shares evidenced by the depositary receipt.

Amendment and Termination of the Deposit Agreement

The form of depositary receipt evidencing the depositary shares and any provision of the deposit agreement may be amended by agreement between us and the depositary. However, any amendment that materially and adversely alters the rights of the holders of depositary shares, other than fee changes, will not be effective unless the amendment has been approved by the holders of a majority of the outstanding depositary shares. The deposit agreement may be terminated by the depositary or us only if:

all outstanding depositary shares have been redeemed; or

there has been a final distribution of the preferred stock in connection with our dissolution and such distribution has been made to all the holders of depositary shares.

Resignation and Removal of Depositary

The depositary may resign at any time by delivering to us notice of its election to do so, and we may remove the depositary at any time. Any resignation or removal of the depositary will take effect upon our appointment of a successor depositary and its acceptance of such appointment. The successor depositary must be appointed within 60 days after delivery of the notice of resignation or removal and must be a bank or trust company having its principal office in the United States and having the requisite combined capital and surplus as set forth in the applicable agreement.

Notices

The depositary will forward to holders of depositary receipts all notices, reports and other communications, including proxy solicitation materials received from us, that are delivered to the depositary and that we are required to furnish to the holders of the preferred stock. In addition, the depositary will make available for inspection by holders of depositary receipts at the principal office of the depositary, and at such other places as it may from time to time deem advisable, any reports and communications we deliver to the depositary as the holder of preferred stock.

Limitation of Liability

Neither we nor the depositary will be liable if either we or it is prevented or delayed by law or any circumstance beyond its control in performing its obligations. Our obligations and those of the depositary will be limited to performance in good faith of our and their duties thereunder. We and the depositary will not be obligated to prosecute or defend any legal proceeding in respect of any depositary shares or preferred stock unless satisfactory indemnity is furnished. We and the depositary may rely upon written advice of counsel or accountants, on information provided by persons presenting preferred stock for deposit, holders of depositary receipts or other persons believed to be competent to give such information and on documents believed to be genuine and to have been signed or presented by the proper party or parties.

DESCRIPTION OF PURCHASE CONTRACTS AND PURCHASE UNITS

We may issue purchase contracts, including contracts obligating holders to purchase from or sell to us, and obligating us to sell to or purchase from the holders, a specified number of shares of our common stock, preferred stock or depositary shares at a future date or dates, which we refer to in this prospectus as purchase contracts. When we refer to we, our, and us in this Description of Capital Stock, we mean Thermo Fisher Scientific Inc. excluding, unless the context otherwise requires or as otherwise expressly stated, our subsidiaries.

The price per share of common stock, preferred stock or depositary shares and the number of shares of each may be fixed at the time the purchase contracts are issued or may be determined by reference to a specific formula set forth in the purchase contracts. The purchase contracts may be issued separately or as part of units, often known as purchase units, consisting of one or more purchase contracts and beneficial interests in:

debt securities issued by us or Thermo Fisher International,

debt obligations of third parties, including U.S. treasury securities, or

any other securities described in the applicable prospectus supplement or any combination of the foregoing, securing the holders' obligations to purchase the common stock, preferred stock or depositary shares under the purchase contracts.

The purchase contracts may require us to make periodic payments to the holders of the purchase units or vice versa, and these payments may be unsecured or prefunded on some basis. The purchase contracts may require holders to secure their obligations under those contracts in a specified manner, including pledging their interest in another purchase contract.

The applicable prospectus supplement will describe the terms of the purchase contracts and purchase units, including, if applicable, collateral or depositary arrangements.

DESCRIPTION OF WARRANTS

We may issue warrants to purchase debt securities, preferred stock, depositary shares or common stock. We may offer warrants separately or together with one or more additional warrants, debt securities, preferred stock, depositary shares or common stock, or any combination of those securities in the form of units, as described in the applicable prospectus supplement. If we issue warrants as part of a unit, the accompanying prospectus supplement will specify whether those warrants may be separated from the other securities in the unit prior to the expiration date of the warrants. The applicable prospectus supplement will also describe the following terms of any warrants:

the specific designation and aggregate number of, and the offering price at which we will issue, the warrants;

the currency or currency units in which the offering price, if any, and the exercise price are payable;

the date on which the right to exercise the warrants will begin and the date on which that right will expire or, if you may not continuously exercise the warrants throughout that period, the specific date or dates on which you may exercise the warrants;

whether the warrants are to be sold separately or with other securities as parts of units;

whether the warrants will be issued in definitive or global form or in any combination of these forms, although, in any case, the form of a warrant included in a unit will correspond to the form of the unit and of any security included in that unit;

any applicable material U.S. federal income tax consequences;

the identity of the warrant agent for the warrants and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;

the proposed listing, if any, of the warrants or any securities purchasable upon exercise of the warrants on any securities exchange;

the designation and terms of any equity securities purchasable upon exercise of the warrants;

the designation, aggregate principal amount, currency and terms of any debt securities that may be purchased upon exercise of the warrants;

if applicable, the designation and terms of the debt securities, preferred stock, depositary shares or common stock with which the warrants are issued and the number of warrants issued with each security;

if applicable, the date from and after which any warrants issued as part of a unit and the related debt securities, preferred stock, depositary shares or common stock will be separately transferable;

the number of shares of preferred stock, the number of depositary shares or the number of shares of common stock purchasable upon exercise of a warrant and the price at which those shares may be purchased;

if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;

information with respect to book-entry procedures, if any;

the antidilution provisions of, and other provisions for changes to or adjustment in the exercise price of, the warrants, if any;

any redemption or call provisions; and

any additional terms of the warrants, including terms, procedures and limitations relating to the exchange or exercise of the warrants.

FORMS OF SECURITIES

Each debt security, depositary share, purchase contract, purchase unit and warrant of Thermo Fisher and each debt security of Thermo Fisher International will be represented either by a certificate issued in definitive form to a particular investor or by one or more global securities representing the entire issuance of securities. Unless the applicable prospectus supplement provides otherwise, certificated securities in definitive form and global securities will be issued in registered form. Definitive securities name you or your nominee as the owner of the security, and in order to transfer or exchange these securities or to receive payments other than interest or other interim payments, you or your nominee must physically deliver the securities to the trustee, registrar, paying agent or other agent, as applicable. Global securities name a depositary or its nominee as the owner of the debt securities, depositary shares, purchase contracts, purchase units or warrants represented by these global securities. The depositary maintains a computerized system that will reflect each investor's beneficial ownership of the securities through an account maintained by the investor with its broker/dealer, bank, trust company or other representative, as we explain more fully below.

Global Securities

Thermo Fisher may issue the debt securities, depositary shares, purchase contracts, purchase units and warrants and Thermo Fisher International may issue debt, in each case, in the form of one or more fully registered global securities that will be deposited with a depositary or its nominee identified in the applicable prospectus supplement and registered in the name of that depositary or nominee. In those cases, one or more global securities will be issued in a denomination or aggregate denominations equal to the portion of the aggregate principal or face amount of the securities to be represented by global securities. Unless and until it is exchanged in whole for securities in definitive registered form, a global security may not be transferred except as a whole by and among the depositary for the global security, the nominees of the depositary or any successors of the depositary or those nominees.

If not described below, any specific terms of the depositary arrangement with respect to any securities to be represented by a global security will be described in the prospectus supplement relating to those securities. We anticipate that the following provisions will apply to all depositary arrangements.

Ownership of beneficial interests in a global security will be limited to persons, called participants, that have accounts with the depositary or persons that may hold interests through participants. Upon the issuance of a global security, the depositary will credit, on its book-entry registration and transfer system, the participants' accounts with the respective principal or face amounts of the securities beneficially owned by the participants. Any dealers, underwriters or agents participating in the distribution of the securities will designate the accounts to be credited. Ownership of beneficial interests in a global security will be shown on, and the transfer of ownership interests will be effected only through, records maintained by the depositary, with respect to interests of participants, and on the records of participants, with respect to interests of persons holding through participants. The laws of some states may require that some purchasers of securities take physical delivery of these securities in definitive form. These laws may impair your ability to own, transfer or pledge beneficial interests in global securities.

So long as the depositary, or its nominee, is the registered owner of a global security, that depositary or its nominee, as the case may be, will be considered the sole owner or holder of the securities represented by the global security for all purposes under the applicable indenture, deposit agreement, purchase contract, warrant agreement or purchase unit agreement. Except as described below, owners of beneficial interests in a global security will not be entitled to have the securities represented by the global security registered in their names, will not receive or be entitled to receive physical delivery of the securities in definitive form and will not be considered the owners or holders of the securities under the applicable indenture, deposit agreement, purchase contract, purchase unit agreement or warrant agreement. Accordingly, each person owning a beneficial interest in a global security must rely on the procedures of the depositary for that global security and, if that person is not a

participant, on the procedures of the participant through which the person owns its interest, to exercise any rights of a holder under the applicable indenture, deposit agreement, purchase contract, purchase unit agreement or warrant agreement. We understand that under existing industry practices, if we request any action of holders or if an owner of a beneficial interest in a global security desires to give or take any action that a holder is entitled to give or take under the applicable indenture, deposit agreement, purchase contract, purchase unit agreement or warrant agreement, the depositary for the global security would authorize the participants holding the relevant beneficial interests to give or take that action, and the participants would authorize beneficial owners owning through them to give or take that action or would otherwise act upon the instructions of beneficial owners holding through them.

Principal, premium, if any, and interest payments on debt securities, and any payments to holders with respect to depositary shares, warrants, purchase agreements or purchase units, represented by a global security registered in the name of a depositary or its nominee will be made to the depositary or its nominee, as the case may be, as the registered owner of the global security. None of us, or any trustee, warrant agent, unit agent or other agent of ours, or any agent of any trustee, warrant agent or unit agent will have any responsibility or liability for any aspect of the records relating to payments made on account of beneficial ownership interests in the global security or for maintaining, supervising or reviewing any records relating to those beneficial ownership interests.

We expect that the depositary for any of the securities represented by a global security, upon receipt of any payment to holders of principal, premium, interest or other distribution of underlying securities or other property on that registered global security, will immediately credit participants' accounts in amounts proportionate to their respective beneficial interests in that global security as shown on the records of the depositary. We also expect that payments by participants to owners of beneficial interests in a global security held through participants will be governed by standing customer instructions and customary practices, as is now the case with the securities held for the accounts of customers or registered in street name, and will be the responsibility of those participants.

If the depositary for any of the securities represented by a global security is at any time unwilling or unable to continue as depositary or ceases to be a clearing agency registered under the Exchange Act, and a successor depositary registered as a clearing agency under the Exchange Act is not appointed by us within 90 days, we will issue securities in definitive form in exchange for the global security that had been held by the depositary. Any securities issued in definitive form in exchange for a global security will be registered in the name or names that the depositary gives to the relevant trustee, warrant agent, unit agent or other relevant agent of ours or theirs. It is expected that the depositary's instructions will be based upon directions received by the depositary from participants with respect to ownership of beneficial interests in the global security that had been held by the depositary.

PLAN OF DISTRIBUTION

We may sell securities:

through underwriters;

through agents;

directly to purchasers; or

through a combination of any of these methods of sale.

In addition, we may issue the securities as a dividend or distribution or in a subscription rights offering to our existing security holders.

We may directly solicit offers to purchase securities or agents may be designated to solicit such offers. We will, in the prospectus supplement relating to such offering, name any agent that could be viewed as an underwriter under the Securities Act and describe any commissions that we must pay. Any such agent will be acting on a best efforts basis for the period of its appointment or, if indicated in the applicable prospectus supplement, on a firm commitment basis. This prospectus may be used in connection with any offering of our securities through any of these methods or other methods described in the applicable prospectus supplement.

The distribution of the securities may be effected from time to time in one or more transactions:

at a fixed price, or prices, which may be changed from time to time;

at market prices prevailing at the time of sale;

at prices related to such prevailing market prices; or

at negotiated prices.

Each prospectus supplement will describe the method of distribution of the securities and any applicable restrictions.

The prospectus supplement with respect to the securities of a particular series will describe the terms of the offering of the securities, including the following:

the name of the agent or any underwriters;

the public offering or purchase price;

any discounts and commissions to be allowed or paid to the agent or underwriters;

all other items constituting underwriting compensation;

any discounts and commissions to be allowed or paid to dealers; and

any exchanges on which the securities will be listed.

If any underwriters or agents are utilized in the sale of the securities in respect of which this prospectus is delivered, we will enter into an underwriting agreement or other agreement with them at the time of sale to them, and we will set forth in the prospectus supplement relating to such offering the names of the underwriters or agents and the terms of the related agreement with them.

If a dealer is utilized in the sale of the securities in respect of which the prospectus is delivered, we will sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale.

If we offer securities in a subscription rights offering to our existing security holders, we may enter into a standby underwriting agreement with dealers, acting as standby underwriters. We may pay the standby underwriters a commitment fee for the securities they commit to purchase on a standby basis. If we do not enter into a standby underwriting arrangement, we may retain a dealer-manager to manage a subscription rights offering for us.

Agents, underwriters, dealers and other persons may be entitled under agreements which they may enter into with us to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, and may be customers of, engage in transactions with or perform services for us in the ordinary course of business.

If so indicated in the applicable prospectus supplement, we will authorize underwriters or other persons acting as our agents to solicit offers by certain institutions to purchase securities from us pursuant to delayed delivery contracts providing for payment and delivery on the date stated in the prospectus supplement. Each contract will be for an amount not less than, and the aggregate amount of securities sold pursuant to such contracts shall not be less nor more than, the respective amounts stated in the prospectus supplement. Institutions with whom the contracts, when authorized, may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and other institutions, but shall in all cases be subject to our approval. Delayed delivery contracts will not be subject to any conditions except that:

the purchase by an institution of the securities covered under that contract shall not at the time of delivery be prohibited under the laws of the jurisdiction to which that institution is subject; and

if the securities are also being sold to underwriters acting as principals for their own account, the underwriters shall have purchased such securities not sold for delayed delivery. The underwriters and other persons acting as our agents will not have any responsibility in respect of the validity or performance of delayed delivery contracts.

Certain agents, underwriters and dealers, and their associates and affiliates may be customers of, have borrowing relationships with, engage in other transactions with, and/or perform services, including investment banking services, for us or one or more of our respective affiliates in the ordinary course of business.

In order to facilitate the offering of the securities, any underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the securities or any other securities the prices of which may be used to determine payments on such securities. Specifically, any underwriters may overallocate in connection with the offering, creating a short position for their own accounts. In addition, to cover overallocations or to stabilize the price of the securities or of any such other securities, the underwriters may bid for, and purchase, the securities or any such other securities in the open market. Finally, in any offering of the securities through a syndicate of underwriters, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the securities in the offering if the syndicate repurchases previously distributed securities in transactions to cover syndicate short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of the securities above independent market levels. Any such underwriters are not required to engage in these activities and may end any of these activities at any time.

Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. The applicable prospectus supplement may provide that the original issue date for your securities may be more than two scheduled business days after the trade date for your securities. Accordingly, in such a case, if you wish to trade securities on any date prior to the second business day before the original issue date for your securities, you will be required, by virtue of the fact that your securities initially are expected to settle in more than three scheduled business days after the trade date for your

securities, to make alternative settlement arrangements to prevent a failed settlement.

The securities may be new issues of securities and may have no established trading market. The securities may or may not be listed on a national securities exchange. We can make no assurance as to the liquidity of or the existence of trading markets for any of the securities.

LEGAL MATTERS

Unless the applicable prospectus supplement indicates otherwise, the validity of the securities in respect of which this prospectus is being delivered will be passed upon by Wilmer Cutler Pickering Hale and Dorr LLP and particular matters with respect to Dutch law will be passed upon by Linklaters LLP.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2018 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

THERMO FISHER SCIENTIFIC INC.

Debt Securities

Common Stock

Preferred Stock

Depository Shares

Purchase Contracts

Purchase Units

Warrants

Guarantees

THERMO FISHER SCIENTIFIC (FINANCE I) B.V.

Debt Securities

PROSPECTUS

February 28, 2019

PART II**INFORMATION NOT REQUIRED IN PROSPECTUS****Item 14. Other Expenses of Issuance and Distribution.**

The following table sets forth the fees and expenses payable by us in connection with the sale of the offered securities being registered hereby, other than underwriting discounts and commissions.

SEC registration fee	\$(1)
Printing and engraving	
Accounting services	
Legal fees of registrants counsel	
Trustee s fees and expenses	
Rating agency fees	
Miscellaneous	
Total	\$(2)

- (1) Deferred in reliance upon Rules 456(b) and 457(r).
- (2) These fees and expenses are calculated based on the securities offered and the number of issuances and accordingly are not estimated at this time and will be reflected in the applicable prospectus supplement

Item 15. Indemnification of Directors and Officers.

Thermo Fisher Scientific Inc.

The following summary is qualified in its entirety by reference to the complete Delaware General Corporation Law (DGCL), Thermo Fisher Scientific Inc. s (Thermo Fisher) Third Amended and Restated Certificate of Incorporation, as amended to date (Charter) and Thermo Fisher s Bylaws, as amended to date.

Section 145 of the DGCL provides, generally, that a corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding (except actions by or in the right of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of the corporation against all expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. A corporation may similarly indemnify such person for expenses actually and reasonably incurred by such person in connection with the defense or settlement of any action or suit by or in the right of the corporation, *provided* that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in the case of claims, issues and matters as to which such person shall have been adjudged liable to the corporation, *provided* that a court shall have determined, upon application, that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which such court shall deem proper.

Section 102(b)(7) of the DGCL provides, generally, that the certificate of incorporation may contain a provision eliminating or limiting the personal liability of a director to the corporation or its shareholders for monetary damages for breach of fiduciary duty as a director, *provided* that such provision may not eliminate or limit the liability of a director (i) for any breach of the director's duty of loyalty to the corporation or its shareholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under section 174 of the DCGL, or (iv) for any transaction from which the director derived an improper personal benefit. No such provision may eliminate or limit the liability of a director for any act or omission occurring prior to the date when such provision became effective.

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Thermo Fisher is governed by the provisions of the DGCL permitting Thermo Fisher to purchase director's and officer's insurance to protect itself and any director, officer, employee or agent of Thermo Fisher. Thermo Fisher has an insurance policy which insures the directors and officers of Thermo Fisher and its subsidiaries against certain liabilities which might be incurred in connection with the performance of their duties. Thermo Fisher also has indemnification agreements with its directors and officers that provide for the maximum indemnification allowed by law.

Thermo Fisher's Charter and Bylaws provide that each person who was or is made a party or is threatened to be made a party to or is involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he or she is or was a director or officer of Thermo Fisher is indemnified and held harmless by Thermo Fisher to the fullest extent authorized by the DGCL against all expense, liability and loss (including attorneys fees, judgments, fines and amounts paid or to be paid in settlement) actually and reasonably incurred or suffered by such person in connection with such proceeding.

Thermo Fisher Scientific (Finance I) B.V.

The articles of association of Thermo Fisher International contain no provisions under which any member of the management board or officers are indemnified in any manner against any liability that he or she may incur in his or her capacity as such. The annual accounts are adopted by the general meeting of Thermo Fisher International. Adoption of the annual accounts does not release the members of the management board from liability for their management of the company (discharge *decharge verlenen*). A separate resolution to discharge the members of the management board can be put before the general meeting. Such resolution if adopted in principle extends to the management by the board in the financial year, to the extent that this is reflected in the annual accounts or has otherwise been disclosed to the general meeting before the discharge was granted. Under Dutch law, this discharge is not absolute and without prejudice to, inter alia, the provisions of Section 2:248 of the Dutch Civil Code.

Item 16. Exhibits.

Exhibit

No.	Description
1**	Form of Underwriting Agreement.
3.1	<u>Amended and Restated Certificate of Incorporation of Thermo Fisher Scientific Inc. (filed as Exhibit 3.1 to Thermo Fisher's Annual Report on Form 10-K for the fiscal year ended December 31, 2005 filed with the SEC on March 2, 2006 [File No. 1-8002] and incorporated in this document by reference).</u>
3.2	<u>Amendment to Thermo Fisher's Third Amended and Restated Certificate of Incorporation (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed with the SEC on November 14, 2006 [File No. 1-8002] and incorporated in this document by reference).</u>
3.3	<u>By-laws of Thermo Fisher, as amended and effective as of March 1, 2017 (filed as Exhibit 3.1 to Thermo Fisher's Current Report on Form 8-K filed March 2, 2017 [File No. 1-8002] and incorporated in this document by reference).</u>
3.4	<u>Certificate of Elimination of the Series B Junior Participating Preferred Stock of Thermo Fisher, dated November 13, 2015 filed as Exhibit 3.1 to Thermo Fisher's Current Report on Form 8-K filed November 16, 2015 [File No.1-8002] and incorporated in this document by reference).</u>

- 4.1 Senior Indenture dated as of November 20, 2009 between Thermo Fisher and The Bank of New York Mellon Trust Company, N.A., as Trustee (filed as Exhibit 99.1 to Thermo Fisher's Current Report on Form 8-K filed with the SEC on November 20, 2009 [File No. 1-8002] and incorporated in this document by reference).

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Exhibit

No.	Description
4.2	<u>Form of Thermo Fisher Subordinated Indenture (filed as Exhibit 4.2 to Thermo Fisher's Registration Statement on Form S-3 filed with the SEC on April 20, 2010 [File No. 333-166176] and incorporated in this document by reference).</u>
4.3	<u>Indenture dated as of August 9, 2016, among Thermo Fisher International, Thermo Fisher and The Bank of New York Mellon Trust Company, N.A., as trustee (filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed August 9, 2016 [File No. 1-8002] and incorporated in this document by reference).</u>
4.4**	Form of Thermo Fisher Senior Note
4.5**	Form of Thermo Fisher Subordinated Note
4.6**	Form of Thermo Fisher International Senior Note
4.7**	Form of Depositary Agreement
4.8**	Form of Warrant Agreement
4.9**	Form of Purchase Contract Agreement
4.10**	Form of Unit Agreement
5.1*	<u>Opinion of Wilmer Cutler Pickering Hale and Dorr LLP</u>
5.2*	<u>Opinion of Linklaters LLP</u>
23.1*	<u>Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm for the Registrant</u>
23.2*	<u>Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1)</u>
23.3*	<u>Consent of Linklaters LLP (included in Exhibit 5.2)</u>
24.1*	<u>Powers of Attorney (included in the signature pages to the Registration Statement)</u>
25.1*	<u>The Statement of Eligibility on Form T-1 under the Trust Indenture Act of 1939, as amended, of The Bank of New York Mellon Trust Company, N.A. with respect to the Thermo Fisher Senior Indenture dated as of November 20, 2009</u>
25.2***	The Statement of Eligibility on Form T-1 under the Trust Indenture Act of 1939, as amended, of the Trustee with respect to the Thermo Fisher Subordinated Indenture
25.3*	<u>The Statement of Eligibility on Form T-1 under the Trust Indenture Act of 1939, as amended, of The Bank of New York Mellon Trust Company, N.A. with respect to the Thermo Fisher International Senior Indenture dated as of August 9, 2016</u>

* Filed herewith.

** To be filed by amendment or as an exhibit to a Current Report on Form 8-K.

*** To be subsequently filed pursuant to Section 305(b)(2) of the Trust Indenture Act of 1939.

Item 17. Undertakings.

Each of the undersigned registrants hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended (the Securities Act of 1933);

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- (ii) To reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement; *provided, however*, that paragraphs (1)(i), (1)(ii) and (1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the Exchange Act) that are incorporated by reference in this registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of this registration statement.

- (2) That, for the purposes of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

- (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

- (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration

statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

- (5) That, for the purpose of determining liability of a registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, each of the undersigned registrants undertakes that in a primary offering of securities of such undersigned registrant pursuant to this registration statement,

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regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, such undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of such undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of such undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about such undersigned registrant or its securities provided by or on behalf of such undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by such undersigned registrant to the purchaser.
- (6) That, for purposes of determining any liability under the Securities Act of 1933, each filing of a registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (7) That, for purposes of determining any liability under the Securities Act of 1933:
- (i) the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act of 1933 shall be deemed to be part of this registration statement as of the time it was declared effective; and
 - (ii) each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (8) To file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act in accordance with the rules and regulations prescribed by the Commission under Section 305(b)(2) of the Trust Indenture Act.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the indemnification provisions described herein, or otherwise, the registrants have been advised that in the opinion of the Securities and Exchange Commission such

indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by a registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, such registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Waltham, Massachusetts, on February 28, 2019.

THERMO FISHER SCIENTIFIC INC.

By: /s/ Michael A. Boxer
Name: Michael A. Boxer
Title: Senior Vice President and General
Counsel

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned officers and directors of Thermo Fisher Scientific Inc., hereby severally constitute and appoint Stephen Williamson, Anthony H. Smith and Michael A. Boxer, and each of them singly, our true and lawful attorneys with full power to any of them, and to each of them singly, to sign for us and in our names in the capacities indicated below the Registration Statement on Form S-3 filed herewith and any and all amendments (including post-effective amendments) to said Registration Statement and any Registration Statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, in connection with said Registration Statement and generally to do all such things in our name and behalf in our capacities as officers and directors to enable Thermo Fisher Scientific Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said Registration Statement and any and all amendments thereto.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Marc N. Casper Marc N. Casper	President and Chief Executive Officer and Director (Principal Executive Officer)	February 28, 2019
/s/ Stephen Williamson Stephen Williamson	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	February 28, 2019
/s/ Peter E. Hornstra Peter E. Hornstra	Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 28, 2019
/s/ Jim P. Manzi Jim P. Manzi	Chairman of the Board and Director	February 28, 2019
/s/ Nelson J. Chai Nelson J. Chai	Director	February 28, 2019
/s/ C. Martin Harris, M.D. C. Martin Harris, M.D.	Director	February 28, 2019
/s/ Tyler E. Jacks, Ph.D. Tyler E. Jacks, Ph.D.	Director	February 28, 2019
/s/ Judy C. Lewent Judy C. Lewent	Director	February 28, 2019
/s/ Thomas J. Lynch Thomas J. Lynch	Director	February 28, 2019
/s/ James C. Mullen James C. Mullen	Director	February 28, 2019
/s/ Lars R. Sørensen Lars R. Sørensen	Director	February 28, 2019
/s/ Scott M. Sperling Scott M. Sperling	Director	February 28, 2019
/s/ Elaine S. Ullian Elaine S. Ullian	Director	February 28, 2019

/s/ Dion J. Weisler
Dion J. Weisler

Director

February 28, 2019

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, Thermo Fisher Scientific (Finance I) B.V. certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Waltham, Massachusetts, on February 28, 2019.

THERMO FISHER SCIENTIFIC (FINANCE
I) B.V.

By: /s/ Anthony H. Smith
Name: Anthony H. Smith
Title: Managing Director

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned officers and directors of, and acting on behalf of, Thermo Fisher Scientific (Finance I) B.V., and on our own behalf, as appropriate, hereby severally constitute and appoint Stephen Williamson, Anthony H. Smith and Michael A. Boxer, and each of them singly, our true and lawful attorneys with full power to any of them, and to each of them singly, to sign for us and in our names in the capacities indicated below the Registration Statement on Form S-3 filed herewith and any and all amendments (including post-effective amendments) to said Registration Statement and any Registration Statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, in connection with said Registration Statement and generally to do all such things in our name and behalf in our capacities as officers and directors to enable Thermo Fisher Scientific (Finance I) B.V. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said Registration Statement and any and all amendments thereto.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Anthony H. Smith	Managing Director and Authorized Representative in the United States	February 28, 2019
Anthony H. Smith	(Principal Executive Officer)	
/s/ Petrus Thomas Adrianus van der Zande	Managing Director	February 28, 2019
Petrus Thomas Adrianus van der Zande	(Principal Financial and Accounting Officer)	