

CABOT CORP  
Form 10-K  
November 21, 2018  
UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended September 30, 2018

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF  
1934  
For the transition period from to

Commission File Number 1-5667

Cabot Corporation

(Exact name of Registrant as specified in its Charter)

Delaware (State or other jurisdiction of incorporation or organization)	04-2271897 (I.R.S. Employer Identification No.)
Two Seaport Lane, Suite 1300 Boston, Massachusetts (Address of Principal Executive Offices)	02210 (Zip Code)

Registrant's telephone number, including area code: (617) 345-0100

Securities registered pursuant to Section 12(b) of the Securities Exchange Act of 1934: Common Stock, Par Value \$1.00 per share, traded on the New York Stock Exchange.

Securities registered pursuant to Section 12(g) of the Securities Exchange Act of 1934: None.

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes No

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Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405) is not contained herein, and will not be contained, to the best of the Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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 definitions of "large accelerated filer," "accelerated filer", "smaller reporting company", and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by checkmark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes No

As of the last business day of the Registrant's most recently completed second fiscal quarter (March 31, 2018), the aggregate market value of the Registrant's common stock held by non-affiliates was \$3,409,628,603. As of November 15, 2018, there were 60,029,055 shares of the Registrant's common stock outstanding.

Portions of the Registrant's definitive proxy statement for its 2019 Annual Meeting of Shareholders are incorporated by reference into Part III of this report.

TABLE OF CONTENTS

PART I

ITEM 1. <u>Business</u>	3
ITEM 1A. <u>Risk Factors</u>	10
ITEM 1B. <u>Unresolved Staff Comments</u>	15
ITEM 2. <u>Properties</u>	16
ITEM 3. <u>Legal Proceedings</u>	18
ITEM 4. <u>Mine Safety Disclosures</u>	19

PART II

ITEM 5. <u>Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	21
ITEM 6. <u>Selected Financial Data</u>	21
ITEM 7. <u>Management’s Discussion and Analysis of Financial Condition and Results of Operations</u>	25
ITEM 7A. <u>Quantitative and Qualitative Disclosures About Market Risk</u>	41
ITEM 8. <u>Financial Statements and Supplementary Data</u>	43
ITEM 9. <u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>	94
ITEM 9A. <u>Controls and Procedures</u>	94
ITEM 9B. <u>Other Information</u>	94

PART III

ITEM 10. <u>Directors, Executive Officers and Corporate Governance</u>	95
ITEM 11. <u>Executive Compensation</u>	95
ITEM 12. <u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	95
ITEM 13. <u>Certain Relationships and Related Transactions, and Director Independence</u>	95
ITEM 14. <u>Principal Accounting Fees and Services</u>	95

PART IV

ITEM 15. <u>Exhibits, Financial Statement Schedules</u>	96
ITEM 16. <u>Form 10-K Summary</u>	98
<u>Signatures</u>	99

## Information Relating to Forward-Looking Statements

This annual report on Form 10-K contains “forward-looking statements” under the Federal securities laws. These forward-looking statements address expectations or projections about the future, including our expectations regarding our future business performance and overall prospects; segment growth; demand for our products; when we expect construction of our new fumed silica plants in Wuhai, China and Carrollton, Kentucky and the capacity expansion project at our Cilegon, Indonesia facility to be completed; when we expect production to begin at our new facility in Jiangsu Province, China; when we expect to receive cesium ore under our agreement with Pioneer Resources Limited; the sufficiency of our cash on hand, cash provided from operations and cash available under our credit and commercial paper facilities to fund our cash requirements; anticipated capital spending, including environmental-related capital expenditures; cash requirements and uses of available cash, including future cash outlays associated with repaying our debt that matures in December 2018, long-term contractual obligations, restructurings, contributions to employee benefit plans, environmental remediation costs and future respirator liabilities; exposure to interest rate and foreign exchange risk; future benefit plan payments we expect to make; future amortization expenses; the impact we expect tax reform legislation in the U.S. to have on our future after-tax earnings and liquidity position, and our expected tax rate for fiscal 2019; our ability to recover deferred tax assets; and the possible outcome of legal and environmental proceedings. From time to time, we also provide forward-looking statements in other materials we release to the public and in oral statements made by authorized officers.

Forward-looking statements are not guarantees of future performance and are subject to risks, uncertainties, potentially inaccurate assumptions, and other factors, some of which are beyond our control or difficult to predict. If known or unknown risks materialize, our actual results could differ materially from past results and from those expressed in the forward-looking statements. Important factors that could cause our actual results to differ materially from those expressed in our forward-looking statements are described in Item 1A in this report.

We undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. Investors are advised, however, to consult any further disclosures we make on related subjects in our 10-Q and 8-K reports filed with the Securities and Exchange Commission (the “SEC”).

## PART I

### Item 1. Business

#### General

Cabot is a global specialty chemicals and performance materials company headquartered in Boston, Massachusetts. Our principal products are rubber and specialty grade carbon blacks, specialty compounds, fumed metal oxides, activated carbons, inkjet colorants, aerogel, cesium formate drilling fluids, and fine cesium chemicals. Cabot and its affiliates have manufacturing facilities and operations in the United States (“U.S.”) and over 20 other countries. Cabot’s business was founded in 1882 and incorporated in the State of Delaware in 1960. The terms “Cabot”, “Company”, “we”, and “our” as used in this report refer to Cabot Corporation and its consolidated subsidiaries.

Our vision is to be the most innovative, respected and responsible leader in our markets – delivering performance that makes a difference. Our strategy is to extend our leadership in performance materials by investing for growth in our core businesses, driving application innovation with our customers, and generating strong cash flows through efficiency and optimization. Our products are generally based on technical expertise and innovation in one or more of our four core competencies: making and handling very fine particles; modifying the surfaces of very fine particles to

alter their functionality; designing particles to impart specific properties to a formulation; and combining particles with other ingredients to deliver a formulated performance intermediate or composite. We focus on creating particles, and formulations of those particles, with the composition, morphology, and surface functionalities to deliver the requisite performance to support our customers' existing and emerging applications.

Our four business segments are: Reinforcement Materials; Performance Chemicals; Purification Solutions; and Specialty Fluids. The business segments are discussed in more detail later in this section.

Our internet address is [www.cabotcorp.com](http://www.cabotcorp.com). We make available free of charge on or through our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as soon as reasonably practicable after electronically filing such material with, or furnishing it to, the SEC. Information appearing on our website is not a part of, and is not incorporated in, this Annual Report on Form 10-K.

## Reinforcement Materials

### Products

Carbon black is a form of elemental carbon that is manufactured in a highly controlled process to produce particles and aggregates of varied structure and surface chemistry, resulting in many different performance characteristics for a wide variety of applications. Rubber grade carbon blacks are used to enhance the physical properties of the systems and applications in which they are incorporated.

Our rubber blacks products are used in tires and industrial products. Rubber blacks have traditionally been used in the tire industry as a rubber reinforcing agent to increase tread durability and are also used as a performance additive to reduce rolling resistance and improve traction. In industrial products such as hoses, belts, extruded profiles and molded goods, rubber blacks are used to improve the physical performance of the product, including the product's physical strength, fluid resistance, conductivity and resistivity.

In addition to our rubber blacks products, we manufacture compounds of carbon black and rubber using our patented elastomer composites manufacturing process. These compounds improve abrasion/wear resistance, reduce fatigue of rubber parts and reduce rolling resistance compared to carbon black/rubber compounds made by conventional dry mix methods.

### Sales and Customers

Sales of rubber blacks products are made by Cabot employees and through distributors and sales representatives. Sales to three major tire customers represent a material portion of Reinforcement Materials' total net sales and operating revenues. The loss of any of these customers, or a significant reduction in volumes sold to them, could have a material adverse effect on the segment.

Under appropriate circumstances, we have entered into supply arrangements with certain customers, the typical duration of which is one to two years. Most of these arrangements provide for sales price adjustments to account for changes in relevant feedstock indices and, in some cases, changes in other relevant costs (such as the cost of natural gas). In fiscal 2018, approximately half of our rubber blacks volume was sold under these supply arrangements. The majority of the volumes sold under these arrangements are sold to customers in the Americas and Europe.

We licensed our patented elastomer composites manufacturing process to Manufacture Francaise des Pneumatiques Michelin for their exclusive use in tire applications through fiscal 2017, and for a period of limited exclusivity in tire applications through fiscal 2019. As consideration, we receive quarterly royalty payments extending through calendar year 2022.

Much of the rubber blacks we sell is used in tires and automotive products and, therefore, our financial results may be affected by the cyclical nature of the automotive industry. However, a large portion of the market for our products is in replacement tires that historically have been less subject to automotive industry cycles.

### Competition

We are one of the leading manufacturers of carbon black in the world. We compete in the sale of carbon black with two companies that operate globally and numerous other companies that operate regionally, a number of which export product outside their region. Competition for our Reinforcement Materials products is based on product performance, quality, reliability, price, service, technical innovation, and logistics. We believe our product differentiation, technological leadership, global manufacturing presence, operations and logistics excellence and customer service provide us with a competitive advantage.

## Raw Materials

The principal raw material used in the manufacture of carbon black is a portion of the residual heavy oils derived from petroleum refining operations, the distillation of coal tars, and the production of ethylene throughout the world. Natural gas is also used in the production of carbon black. Raw materials are, in general, readily available and in adequate supply. Raw material costs generally are influenced by the availability of various types of carbon black feedstock and natural gas, supply and demand of such raw materials and related transportation costs.

## Operations

We own, or have a controlling interest in, and operate plants that produce rubber blacks in Argentina, Brazil, Canada, China, Colombia, the Czech Republic, France, Indonesia, Italy, Japan, Mexico, the Netherlands and the U.S. An equity affiliate operates a carbon black plant in Venezuela.



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The following table shows our ownership interest as of September 30, 2018 in rubber blacks operations in which we own less than 100%:

Location	Percentage Interest
Shanghai, China	70% (consolidated subsidiary)
Tianjin, China	70% (consolidated subsidiary)
Xingtai City, China	60% (consolidated subsidiary)
Valasske Mezirici (Valmez), Czech Republic	52% (consolidated subsidiary)
Cilegon, Indonesia	98% (consolidated subsidiary)
Valencia, Venezuela	49% (equity affiliate)

In connection with our acquisition of our former joint venture partner's interest in our plant in Altamira, Mexico, we issued the former partner shares of redeemable preferred stock in the Altamira entity. We repurchased the preferred stock in November 2018.

During fiscal 2018, we announced that we will add approximately 160,000 metric tons of capacity through an expansion of our facility in Cilegon, Indonesia. We anticipate that product from this expansion will be available for sale starting in 2021.

### Performance Chemicals

Performance Chemicals is composed of two businesses: (i) our Specialty Carbons and Formulations business, which manufactures and sells specialty grades of carbon black, specialty compounds and inkjet colorants and inks, and (ii) our Metal Oxides business, which manufactures and sells fumed silica, fumed alumina and dispersions thereof and aerogel. Beginning October 1, 2018, we will combine the specialty carbons, fumed metal oxides and aerogel product lines into our Performance Additives business, and our specialty compounds and inkjet product lines into our Formulated Solutions business.

In Performance Chemicals, we design, manufacture and sell materials that deliver performance in a broad range of customer applications across the automotive, construction, infrastructure, energy, inkjet printing, electronics, and consumer products sectors.

### Products

#### Specialty Carbons and Formulations Business

Carbon black is a form of elemental carbon that is manufactured in a highly controlled process to produce particles and aggregates of varied structure and surface chemistry, resulting in many different performance characteristics for a wide variety of applications.

Our specialty grades of carbon black are used to impart color, provide rheology control, enhance conductivity and static charge control, provide UV protection, enhance mechanical properties, and provide formulation flexibility through surface treatment. These specialty carbon products are used in a wide variety of applications, such as inks, coatings, plastics, adhesives, toners, batteries, and displays.

Our masterbatch and conductive compound products, which we refer to as "specialty compounds", are formulations derived from specialty grades of carbon black mixed with polymers and other additives. These products are generally used by plastic resin producers and converters in applications for the automotive, industrial, packaging, consumer

products, and electronics industries. As an alternative to directly mixing specialty carbon blacks, these formulations offer greater ease of handling and help customers achieve their desired levels of dispersion and color and manage the addition of small doses of additives. In addition, our electrically conductive compound products generally are used to reduce risks associated with electrostatic discharge in plastics applications.

Our inkjet colorants are high-quality pigment-based black and color dispersions based on our patented carbon black surface modification technology. The dispersions are used in aqueous inkjet inks to impart color, sharp print characteristics and durability, while maintaining high printhead reliability. These products are used in various inkjet printing applications, including commercial printing, small office/home office and corporate office, and niche applications that require a high level of dispersibility and colloidal stability. Our inkjet inks, which utilize our pigment-based colorant dispersions, are used in the commercial printing segment for digital print.

#### Metal Oxides Business

Fumed silica is an ultra-fine, high-purity particle used as a reinforcing, thickening, abrasive, thixotropic, suspending or anti-caking agent in a wide variety of products for the automotive, construction, microelectronics, batteries, and consumer products industries. These products include adhesives, sealants, cosmetics, batteries, inks, toners, silicone elastomers, coatings, polishing slurries and pharmaceuticals. Fumed alumina, also an ultra-fine, high-purity particle, is used as an abrasive, absorbent or barrier agent in a variety of products, such as inkjet media, lighting, coatings, cosmetics and polishing slurries.

Aerogel is a hydrophobic, silica-based particle with a high surface area that is used in a variety of thermal insulation and specialty chemical applications. In the building and construction industry, the product is used in insulative sprayable plasters and composite building products, as well as translucent skylight, window, wall and roof systems for insulating eco-daylighting applications. In the specialty chemicals industry, the product is used to provide matte finishing, insulating and thickening properties for use in a variety of applications.

#### Sales and Customers

Sales of these products are made by Cabot employees and through distributors and sales representatives. In our Specialty Carbons and Formulations business, sales are generally to a broad number of customers. In our Metal Oxides business, sales under contracts with two customers have accounted for a substantial portion of the revenue.

#### Competition

We are a leading producer of the products we sell in this segment. We compete in the sale of carbon black with two companies that operate globally and numerous other companies that operate regionally, a number of which export product outside their region. For fumed silica, we compete primarily with two companies with a global presence and several other companies which have a regional presence. For aerogel, we compete principally with one other company that produces aerogel products. We also compete with non-aerogel insulation products manufactured by regional companies throughout the world. We compete with several companies that produce specialty compounds. Our inkjet colorants and inks are designed to replace traditional pigment dispersions and dyes used in inkjet printing applications. Competitive products for inkjet colorants are organic dyes and other dispersed pigments manufactured and marketed by large chemical companies and small independent producers.

Competition for our Performance Chemicals products is based on product performance, quality, reliability, service, technical innovation and price. We believe our product differentiation, technological leadership, operations excellence and customer service provide us with a competitive advantage.

#### Raw Materials

Raw materials for our products are, in general, readily available and in adequate supply. The principal raw material used in the manufacture of carbon black is a portion of the residual heavy oils derived from petroleum refining operations, the distillation of coal tars, and the production of ethylene throughout the world. Natural gas is also used in the production of carbon black. These raw material costs generally are influenced by the availability of various types of carbon black feedstock and natural gas, supply and demand of such raw materials and related transportation costs.

Raw materials for the production of fumed silica are various chlorosilane feedstocks. We purchase feedstocks and for some customers convert their feedstock to product on a fee-basis (so called "toll conversion"). We also purchase aluminum chloride as feedstock for the production of fumed alumina. We have long-term procurement contracts or arrangements in place for the purchase of fumed silica feedstock, which we believe will enable us to meet our raw material requirements for the foreseeable future. In addition, we buy some raw materials in the spot market to help ensure flexibility and minimize costs. The principal raw materials for the production of aerogel are silica sol and/or sodium silicate.

The primary raw materials used for our specialty compounds include carbon black, primarily sourced from our carbon black plants, thermoplastic resins and mineral fillers supplied from various sources. Raw materials for inkjet colorants include carbon black sourced from our carbon black plants, organic pigments and other treating agents available from various sources. Raw materials for inkjet inks include pigment dispersions, solvents and other additives.

#### Operations

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We own, or have a controlling interest in, and operate plants that produce specialty grades of carbon black primarily in China, the Netherlands and the U.S. We also own, or have a controlling interest in, manufacturing plants that produce fumed metal oxides in China, Germany, the United Kingdom (“U.K”), and the U.S. and a manufacturing plant that produces aerogel in Frankfurt, Germany. An equity affiliate operates a fumed metal oxides plant in India. Our specialty compounds are produced in facilities that we own, or have a controlling interest in, located in Belgium, Canada, China and the United Arab Emirates. Our inkjet colorants and inks are manufactured at our facility in Haverhill, Massachusetts.

The following table shows our ownership interest as of September 30, 2018 in these segment operations in which we own less than 100%:

Location	Percentage Interest
Tianjin, China	90% (consolidated subsidiary)
Jiangxi Province, China	90% (consolidated subsidiary)
Mettur Dam, India	50% (equity affiliate)

As part of our strategy to invest for growth in our core businesses, we have announced a number of capacity expansions. In September 2018, we acquired NSCC Carbon (Jiangsu) Co., Ltd. from Nippon Steel Carbon Co., Ltd., a subsidiary of Nippon Steel Chemical & Material Co., Ltd. We plan to modify this 50,000-metric ton manufacturing facility in Pizhou, Jiangsu Province, China to produce specialty carbons, and expect production to begin in 2021. In addition, during fiscal 2018, we purchased Tech Blend, a leading North American producer of black masterbatches, extending our geographic footprint in black masterbatch and compounds. The acquisition added a manufacturing facility in Saint-Jean-sur-Richelieu, Québec, Canada to our manufacturing network.

We also continue to expand our fumed silica manufacturing capacity. During fiscal 2016, we entered into an agreement with Inner Mongolia Hengyecheng Silicone Co., Ltd (“HYC”) to build a fumed silica manufacturing facility in Wuhai, China in which we will hold an 80% interest and HYC will hold the remaining 20% interest. Construction of the plant began in June 2017, and we expect the plant to be completed in 2019. In addition, in fiscal 2017, we entered into an agreement with DowDuPont (“Dow”) to build a fumed silica manufacturing facility in Carrollton, Kentucky, U.S. adjacent to the existing Dow silicone monomer plant. Construction of the plant began in September 2017, and we expect the plant to be completed in 2020.

## Purification Solutions

### Products

Activated carbon is a porous material consisting mainly of elemental carbon treated with heat, steam and/or chemicals to create high internal porosity, resulting in a large internal surface area that resembles a sponge. It is generally produced in two forms, powdered and granular, and is manufactured in different sizes, shapes and levels of purity and using a variety of raw materials for a wide variety of applications. Activated carbon is used to remove contaminants from liquids and gases using a process called adsorption, whereby the interconnected pores of activated carbon trap contaminants.

Our activated carbon products are used for the purification of water, air, food and beverages, pharmaceuticals and other liquids and gases, as either a colorant or a decolorizing agent in the manufacture of products for food and beverage applications and as a chemical carrier in slow release applications. In gas and air applications, one of the uses of activated carbon is for the removal of mercury in flue gas streams. In certain applications, used activated carbon can be reactivated for further use by removing the contaminants from the pores of the activated carbon product. The most common applications for our reactivated carbon are water treatment and food and beverage purification. In addition to our activated carbon production and reactivation, we also provide activated carbon solutions through on-site equipment and services, including delivery systems for activated carbon injection in coal-fired utilities, mobile water filter units and carbon reactivation services.

### Sales and Customers

Sales of activated carbon are made by Cabot employees and through distributors and sales representatives to a broad range of customers, including coal-fired utilities, food and beverage processors, water treatment plants, pharmaceutical companies and catalyst producers. Some of our sales of activated carbon are made under annual contracts or longer-term agreements, particularly in mercury removal applications.

### Competition

We are one of the leading manufacturers of activated carbon in the world. We compete in the manufacture of activated carbon with a number of companies, some of which have a global presence and others that have a regional or local presence, although not all of these companies manufacture activated carbon for the range of applications for which we sell our products.

Competition for activated carbon and activated carbon equipment and services is based on quality, price, performance, and supply-chain stability. We believe our commercial strengths include our product and application diversity, product differentiation, technological leadership, quality, cost-effective access to raw materials and scalable manufacturing capabilities.

#### Raw Materials

The principal raw materials we use in the manufacture of activated carbon are various forms of coal, including lignite, wood and other carbonaceous materials, which are, in general, readily available and we believe we have in adequate supply. We also own a lignite mine that is operated by Caddo Creek Resources Company, LLC, a subsidiary of the North American Coal Company, which supplies our Marshall, Texas facility.

## Operations

We own, or have a controlling interest in, and operate plants that produce activated carbon in Italy, the Netherlands, the U.K. and the U.S. Our affiliates operate activated carbon plants in Canada and Mexico, and during fiscal 2018 we entered into a joint venture with Eco Industrial Environmental Engineering Pte. Ltd. to construct and operate a reactivation manufacturing plant in Singapore for the manufacture and sale of reactivated carbon. The following table shows our ownership interest as of September 30, 2018 in activated carbon operations in which we own less than 100%:

Location	Percentage Interest
Estevan, Saskatchewan, Canada	50% (contractual joint venture)
Atitalaquia, Hidalgo, Mexico	49% (equity affiliate)
Republic of Singapore	35% (equity affiliate)

## Specialty Fluids

### Products

Our Specialty Fluids segment produces and markets a range of cesium products that include cesium formate brines and other fine cesium chemicals.

Cesium formate brines are used as a drilling and completion fluid primarily in high pressure and high temperature oil and gas well construction. Cesium formate products are solids-free, high-density fluids that have a low viscosity, enabling safe and efficient well construction and workover operations. The fluid is resistant to high temperatures, minimizes damage to producing reservoirs and is readily biodegradable in accordance with the testing guidelines set by the Organization for Economic Cooperation and Development. In a majority of applications, cesium formate is blended with other formates or products.

Fine cesium chemicals are used across a wide range of industries and applications that include catalysts, doping agents and brazing fluxes. Fine cesium chemicals enable process performance benefits and yield improvements, and help prevent or mitigate pollution in the applications they serve.

### Sales, Rental and Customers

Sales of our cesium formate products are made to oil and gas operating companies directly by Cabot employees and sales representatives and indirectly through oil field service companies. We generally rent cesium formate to our customers for use in drilling operations on a short-term basis and on occasion make direct sales of cesium formate outside of the rental process. After completion of a job under our rental process, the customer returns the remaining fluid to Cabot and it is reprocessed for use in subsequent well operations. Any fluid that is not returned to Cabot is paid for by the customer.

In prior years, a large portion of our fluids has been used for drilling and completion of wells in the North Sea with a limited number of customers, where we have supplied cesium formate-based fluids for both reservoir drilling and completion activities on large gas and condensate field projects in the Norwegian Continental Shelf. In fiscal 2018 we expanded the use of our fluids to drilling operations outside of the North Sea, particularly in Asia/the Middle East.

Sales of our fine cesium chemicals are made by Cabot employees and through distributors and sales representatives.

## Competition

Formate fluids compete mainly with traditional drilling fluid technologies. Competition in the well fluids business is based on product performance, quality, reliability, service, technical innovation, price, and proximity of inventory to customers' drilling operations. We believe our commercial strengths include our unique product offerings and their performance, and our customer service.

We are one of the leading manufacturers of fine cesium chemicals in the world and compete in the manufacture of fine cesium chemicals with multiple companies. We also compete with other technical solutions, which differ by application.

## Raw Materials

The principal raw material used in this business is pollucite (cesium ore), of which we own, at our mine in Manitoba, Canada, a substantial portion of the world's known reserves. In November 2015 we completed a development project at the mine, and in fiscal 2018 we completed an additional infrastructure improvement and mining project. We are continuing to assess options to access additional reserves in the mine, various technologies to augment our cesium supply and alternative sources of ore as demand for our cesium products warrants. In addition, during fiscal 2018, we entered into an offtake agreement with Pioneer Resources Limited to purchase 100% of the cesium ore extracted from the Sinclair Zone Cesium Deposit in Australia. We expect to receive this cesium ore in fiscal 2019. We believe we have sufficient raw material to enable us to continue to supply cesium products for the foreseeable future, based on our anticipated consumption.



Most oil and gas well construction jobs for which cesium formate is used require a large volume of the product. Accordingly, the Specialty Fluids business maintains a large supply of fluid.

### Operations

Our mine and cesium formate and fine cesium chemical manufacturing facility are located in Manitoba, Canada, and we have fluid blending and reclamation facilities in Aberdeen, Scotland and in Bergen, Norway. In addition, we warehouse fluid and fine cesium chemical products at various locations around the world to support existing and potential operations.

### Patents and Trademarks

We own and are a licensee of various patents, which expire at different times, covering many of our products as well as processes and product uses. Although the products made and sold under these patents and licenses are important to Cabot, the loss of any particular patent or license would not materially affect our business, taken as a whole. We sell our products under a variety of trademarks we own and take reasonable measures to protect them. While our trademarks are important to Cabot, the loss of any one of our trademarks would not materially affect our business, taken as a whole.

### Seasonality

Our businesses are generally not seasonal in nature, although we may experience some regional seasonal declines during holiday periods and some weather-related seasonality in Purification Solutions.

### Backlog

We do not consider backlog to be a significant indicator of the level of future sales activity. In general, we do not manufacture our products against a backlog of orders. Production and inventory levels are based on the level of incoming orders as well as projections of future demand. Therefore, we believe that backlog information is not material to understanding our overall business and is not a reliable indicator of our ability to achieve any particular level of revenue or financial performance.

### Employees

As of September 30, 2018, we had approximately 4,600 employees. Some of our employees in the U.S. and abroad are covered by collective bargaining or similar agreements. We believe that our relations with our employees are generally satisfactory.

### Safety, Health and Environment (“SH&E”)

Cabot has been named as a potentially responsible party under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (the “Superfund law”) and comparable state statutes with respect to several sites primarily associated with our divested businesses. (See “Legal Proceedings” below.) During the next several years, as remediation of various environmental sites is carried out, we expect to spend against our \$15 million environmental reserve for costs associated with such remediation. Adjustments are made to the reserve based on our continuing analysis of our share of costs likely to be incurred at each site. Inherent uncertainties exist in these estimates due to unknown conditions at the various sites, changing governmental regulations and legal standards regarding liability, and changing technologies for handling site investigation and remediation. While the reserve represents our best estimate of the costs we expect to incur, the actual costs to investigate and remediate these sites may exceed the amounts accrued in the environmental reserve. While it is always possible that an unusual event may occur with respect to a given site and have a material adverse effect on our results of operations in a particular period, we do not

believe that the costs relating to these sites, in the aggregate, are likely to have a material adverse effect on our consolidated financial position. Furthermore, it is possible that we may also incur future costs relating to environmental liabilities not currently known to us or as to which it is currently not possible to make an estimate.

Our ongoing operations are subject to extensive federal, state, local, and foreign laws, regulations, rules, and ordinances relating to safety, health, and environmental matters (“SH&E Requirements”). These SH&E Requirements include requirements to obtain and comply with various environmental-related permits for constructing any new facilities and operating all of our existing facilities and for product registrations. We have expended and will continue to expend considerable sums to construct, maintain, operate, and improve facilities for safety, health and environmental protection and to comply with SH&E Requirements. We spent approximately \$45 million in environmental-related capital expenditures at existing facilities in fiscal 2018. We anticipate spending approximately \$46 million for such matters in fiscal 2019, a significant portion of which will be for the installation of air pollution control equipment and wastewater infrastructure improvements at certain of our plants.

In recognition of the importance of compliance with SH&E Requirements to Cabot, our Board of Directors has a Safety, Health, Environmental, and Sustainability Committee. The Committee, which is comprised of a majority of independent directors, generally meets four times a year and oversees aspects of our sustainability program, including safety, health, and environmental performance, process safety, security, product stewardship, community engagement and governmental affairs. In particular, the Committee reviews metrics, audit results, emerging trends, overall performance, risks and opportunity assessments and management processes related to our safety, health, environmental and sustainability program.

The International Agency for Research on Cancer (“IARC”) classifies carbon black as a Group 2B substance (known animal carcinogen, possible human carcinogen). We have communicated IARC’s classification of carbon black to our customers and employees and have included that information in our safety data sheets and elsewhere, as appropriate. We continue to believe that the available evidence, taken as a whole, indicates that carbon black is not carcinogenic to humans, and does not present a health hazard when handled in accordance with good housekeeping and safe workplace practices as described in our safety data sheets.

REACH (Registration, Evaluation and Authorization of Chemicals), the European Union (“EU”) regulatory framework for chemicals developed by the European Commission (“EC”), applies to all chemical substances produced or imported into the EU in quantities greater than one metric ton a year. Manufacturers or importers of these chemical substances are required to submit specified health, safety, risk and use information about the substance to the European Chemical Agency. We have completed all required registrations under REACH to date and will continue to complete the registrations under REACH for our products in accordance with future registration deadlines. In addition, the EC recommended definition of nanomaterial is under review and an updated definition may be included in existing and future regulations. This definition, which may be used in the EU to identify materials for which special provisions such as risk assessment and ingredient labeling may be required, could apply to many of our existing products including carbon black, fumed silica, inkjet pigments and fumed alumina. Country-specific nanomaterial reporting programs have been implemented in some countries and are being developed by others. We will continue to monitor and address these requirements.

Environmental agencies worldwide are increasingly implementing regulations and other requirements resulting in more restrictive air emission limits globally, particularly as they relate to nitrogen oxide, sulphur dioxide and particulate matter emissions. In addition, global efforts to reduce greenhouse gas emissions impact the carbon black and activated carbon industries as carbon dioxide is emitted from those manufacturing processes. In Europe, the EU Emission Trading Scheme applies to our four carbon black facilities and one activated carbon facility. In China, two of our carbon black facilities participate in regional pilot greenhouse gas emissions trading programs associated with the development of a national trading program. The national program was implemented on a limited scale in 2018, with broader applicability expected in 2020. In Canada, our carbon black manufacturing facility was subject to the Province of Ontario’s emissions trading program, which was eliminated in 2018. That facility will be subject to the backstop Canadian carbon tax program beginning in 2019, which is still being determined. In Mexico, our carbon black facility will be subject to the recently announced cap and trade pilot program. In other regions where we operate, some of our facilities are required to report their greenhouse gas emissions, but are not currently subject to programs requiring trading or emission controls. We generally expect to purchase emission credits where necessary to respond to allocation shortfalls. In addition, air emission regulations may be adopted in the future in other regions and countries where we operate, which could have an impact on our operations. Increasing regulatory programs associated with greenhouse gas emissions and concerns regarding climate change could increase operational costs in the future.

A number of organizations and regulatory agencies have become increasingly focused on the issue of water scarcity and water quality, particularly in certain geographic regions. We are engaged in various activities to promote water conservation and wastewater recycling. The costs associated with these activities are not expected to have a material adverse effect on our operations.

Various U.S. agencies and international bodies have adopted security requirements applicable to certain manufacturing and industrial facilities and marine port locations. These security-related requirements involve the preparation of security assessments and security plans in some cases, and in other cases the registration of certain facilities with specified governmental authorities. We closely monitor all security-related regulatory developments and believe we are in compliance with all existing requirements. Compliance with such requirements is not expected to have a material adverse effect on our operations.

#### Item 1A. Risk Factors

In addition to factors described elsewhere in this report, the following are important factors that could adversely affect our business. The risks described below are not the only risks we face. Additional risks not presently known to us or that we currently deem immaterial may also impair our business operations and financial results.

Negative or uncertain worldwide or regional economic conditions or trade relations may adversely impact our business.

Our operations and performance are affected by worldwide and regional economic conditions. Uncertainty or a deterioration in the economic conditions affecting the businesses to which, or geographic areas in which, we sell products could reduce demand for our products. We may also experience pricing pressure on products and services, which could decrease our revenues and have an adverse effect on our financial condition and cash flows. In addition, during periods of economic uncertainty, our customers may temporarily pursue inventory reduction measures that exceed declines in the actual underlying demand. Our businesses are sensitive to industry capacity utilization, particularly Reinforcement Materials and Purification Solutions. As a result, pricing tends to fluctuate when capacity utilization changes occur, which could affect our financial performance.

In addition, current tensions in the U.S.-China trade relationship have led to the implementation by both countries of higher tariffs on imported goods from the other. If there is no satisfactory progress on trade negotiations between the countries, there could be adverse implications on our businesses and operating results in both the U.S. and China if, as a result, we encounter unexpected operating difficulties in China, more restrictive investment opportunities in China, greater difficulty transferring funds, or negative currency impacts. Further, the cost of our capital projects may be higher than anticipated because of these trade tariffs.

As the U.K. has committed to a withdrawal from the EU, the future structure of trade between the U.K. and the rest of Europe is uncertain. We have production facilities within the U.K. that supply customers in the EU and customers within the U.K. that are supplied by production facilities in the EU and any future tariffs or other disruptions to these trade flows could negatively impact our business.

As a chemical manufacturing company, our operations are subject to operational risks and have the potential to cause environmental or other damage as well as personal injury, which could adversely affect our business, results of operations and cash flows.

The operation of a chemical manufacturing business as well as the sale and distribution of chemical products are subject to operational as well as safety, health and environmental risks. For example, the production and/or processing of carbon black, specialty compounds, fumed metal oxides, aerogel, activated carbon and other chemicals involve the handling, transportation, manufacture or use of certain substances or components that may be considered toxic or hazardous. Our manufacturing processes and the transportation of our chemical products and/or the raw materials used to manufacture our products are subject to risks inherent in chemical manufacturing, including leaks, fires, explosions, toxic releases, mechanical failures or unscheduled downtime. If operational risks materialize, they could result in injury or loss of life, damage to the environment, or damage to property. In addition, the occurrence of material operating problems at our facilities or a disruption in our supply chain or distribution operations may result in loss of production, which, in turn, may make it difficult for us to meet customer needs. Accordingly, these events and their consequences could negatively impact the Company's results of operations and cash flows, both during and after the period of operational difficulties, and could harm our reputation.

A significant adverse change in a customer relationship or the failure of a customer to perform its obligations under agreements with us could harm our business or cash flows.

Our success in strengthening relationships and growing business with our largest customers and retaining their business over extended time periods is important to our future results. We have a group of key customers across our businesses that together represent a significant portion of our total net sales and operating revenues. The loss of any of our important customers, or a significant reduction in volumes sold to them, could adversely affect our results of operations until such business is replaced or any temporary disruption ends. Further, in our Reinforcement Materials segment we enter into supply arrangements with a number of key customers, that have a duration of at least one year, which account for approximately half of our total rubber blacks volumes. Our success in negotiating the price and volume terms under these arrangements could have a material effect on our results. In addition, any deterioration in the financial condition of any of our customers that impairs our customers' ability to make payments to us also could increase our uncollectible receivables and could affect our future results and financial condition.

Volatility in the price and availability of raw materials and energy could impact our margins and working capital.

Our manufacturing processes consume significant amounts of energy and raw materials, the costs of which are subject to worldwide supply and demand as well as other factors beyond our control. Our carbon black businesses use a variety of feedstocks as raw material including high sulfur fuel oils, low sulfur fuel oils, coal tar distillates, and ethylene cracker residue, the cost and availability of which vary, based in part on geography. Significant movements or volatility in our carbon black feedstock costs could have an adverse effect on our working capital and results of operations. In addition, regulatory changes may impact the prices of our feedstocks. For example, the International

Maritime Organization regulation known as MARPOL will restrict the type of marine fuels that can be used for the shipping industry beginning January 1, 2020, which may impact the prices and availability of the feedstocks we purchase. Certain of our carbon black supply arrangements contain provisions that adjust prices to account for changes in relevant feedstock and natural gas price indices. We also attempt to offset the effects of increases in raw material and energy costs through selling price increases in our non-contract sales, productivity improvements and cost reduction efforts. Success in offsetting increased raw material and energy costs with price increases is largely influenced by competitive and economic conditions and could vary significantly depending on the segment served. Such increases may not be accepted by our customers, may not be sufficient to compensate for increased raw material and energy costs or may decrease demand for our products and our volume of sales. If we are not able to fully offset the effects of increased raw material or energy costs, it could have a significant impact on our financial results. Rapid declines in energy and raw material costs can also negatively impact our financial results, as such changes can negatively affect the returns we receive on our energy centers and yield improvement investments, and may negatively impact our contract pricing adjustments. In addition, we use a variety of feedstock indices in our supply arrangements to adjust our prices for changes in raw materials costs. Depending on feedstock markets and our choice of feedstocks, the indices we use in our supply arrangements may not precisely track our actual costs. This could result in an incongruity between our pricing adjustments and changes in our actual feedstock costs, which can affect our margins.

In addition, we obtain certain of our raw materials from selected key suppliers. Although we maintain raw material inventory, if any of these suppliers is unable to meet its obligations under supply agreements with us on a timely basis or at all, we may be forced to incur higher costs to obtain the necessary raw materials elsewhere or, in certain limited cases, may not be able to obtain the required raw materials.

We may not be successful achieving our growth expectations from new products, new applications and technology developments, and money we spend on these efforts may not result in a proportional increase in our revenues or profits.

We may not be successful achieving our growth expectations from developing new products or product applications. Moreover, we cannot be certain that the costs we incur investing in new product and technology development will result in a proportional increase in our revenues or profits. In addition, the timely commercialization of products that we are developing may be disrupted or delayed by manufacturing or other technical difficulties, market acceptance or insufficient market size to support a new product, competitors' new products, and difficulties in moving from the experimental stage to the production stage. These disruptions or delays could affect our future business results.

Information technology systems failures, data security breaches or network disruptions could compromise our information, disrupt our operations and expose us to liability, which may adversely impact our operations.

In the ordinary course of our business, we store sensitive data, including intellectual property, our proprietary business information and certain information of our customers, suppliers, business partners, and employees in our information technology systems. The secure processing, maintenance and transmission of this data is critical to our operations. Information technology systems failures, including risks associated with upgrading our systems or in successfully integrating information technology and other systems in connection with the integration of businesses we acquire, network disruptions or unauthorized access could disrupt our operations by impeding our processing of transactions and our financial reporting, and our ability to protect our customer or company information, which could have a material adverse effect on our business or results of operations. In addition, as with all enterprise information systems, our information technology systems could be penetrated by outside parties intent on extracting information, corrupting information, or disrupting business processes. Breaches of our security measures or the accidental loss, inadvertent disclosure, or unapproved dissemination of proprietary information or sensitive or confidential information about the Company, our employees, our vendors, or our customers, could result in legal claims or proceedings and potential liability for us, and damage to our reputation, and could otherwise harm our business and our results of operations.

Any failure to realize benefits from acquisitions, alliances or joint ventures could adversely affect future financial results.

In achieving our strategic plan objectives, we may pursue acquisitions, alliances or joint ventures intended to complement or expand our existing businesses globally or add product technology, or both. The success of acquisitions of businesses, new technologies and products, or arrangements with third parties is not always predictable and we may not be successful in realizing our objectives as anticipated. We may not be able to integrate any acquired businesses successfully into our existing businesses, make such businesses profitable, or realize anticipated cost savings or synergies, if any, from these acquisitions, which could adversely affect our business results.

Plant capacity expansions and site development projects may impact existing plant operations, be delayed and/or not achieve the expected benefits.

Our ability to complete capacity expansions and site development projects as planned may be delayed or interrupted by the need to obtain environmental and other regulatory approvals, unexpected cost increases, availability of labor and materials, unforeseen hazards such as weather conditions, and other risks customarily associated with construction projects. These risks include the risk that existing plant operations are disrupted, which could make it difficult for us to meet our customer needs. Moreover, in the case of capacity expansions, the cost of these activities could have a

negative impact on the financial performance of the relevant business until capacity utilization at the particular facility is sufficient to absorb the incremental costs associated with an expansion. In addition, our ability to expand capacity in emerging regions depends in part on economic and political conditions in these regions and, in some cases, on our ability to establish operations, construct additional manufacturing capacity or form strategic business alliances.

An interruption in our operations as a result of fence-line arrangements could disrupt our manufacturing operations and adversely affect our financial results.

At certain of our facilities we have fence-line arrangements with adjacent third party manufacturing operations (“fence-line partners”), who provide raw materials for our manufacturing operations and/or take by-products generated from our operations. Accordingly, any disruptions or curtailments in a fence-line partner’s production facilities that impacts their ability to supply us with raw materials or to take our manufacturing by-products could disrupt our manufacturing operations or cause us to incur increased operating costs to mitigate such disruption.



We are exposed to political or country risk inherent in doing business in some countries.

Sales outside of the U.S. constituted a majority of our revenues in fiscal 2018. We conduct business in several countries that have less stable legal systems and financial markets, and potentially more corrupt business environments than the U.S. Our operations in some countries are subject to the following risks: changes in the rate of economic growth; unsettled political or economic conditions; non-renewal of operating permits or licenses; possible expropriation or other governmental actions; corruption by government officials and other third parties; social unrest, war, terrorist activities or other armed conflict; confiscatory taxation or other adverse tax policies; deprivation of contract rights; trade regulations affecting production, pricing and marketing of products; reduced protection of intellectual property rights; restrictions or additional costs associated with repatriating cash; exchange controls; inflation; currency fluctuations and devaluation; the effect of global health, safety and environmental matters on economic conditions and market opportunities; and changes in financial policy and availability of credit.

The Chinese government has, from time to time, curtailed manufacturing operations, without notice, in industrial regions out of growing concern over air quality. The timing and length of these curtailments are difficult to predict and, at times, are applied to manufacturing operations without regard to whether the operations being curtailed comply with environmental regulations in the area. Accordingly, although we believe our operations are in compliance with applicable regulations, our manufacturing operations in China may be subject to these curtailments. These events could negatively impact the Company's results of operations and cash flows both during and after the period of any curtailment affecting the Company's operations.

We face competition from other specialty chemical companies.

We operate in a highly competitive marketplace. Our ability to compete successfully depends in part upon our ability to maintain a superior technological capability and to continue to identify, develop and commercialize new and innovative, high value-added products for existing and future customers. Increased competition from existing or newly developed products offered by our competitors or companies whose products offer a similar functionality as our products and could be substituted for our products, may negatively affect demand for our products. In addition, actions by our competitors could impair our ability to maintain or raise prices, successfully enter new markets or maintain or grow our market position.

Litigation or legal proceedings could expose us to significant liabilities and thus negatively affect our financial results.

As more fully described in "Legal Proceedings" in Item 3 below, we are a party to or the subject of lawsuits, claims, and proceedings, including, but not limited to, those involving environmental, and health and safety matters as well as product liability and personal injury claims relating to asbestosis, silicosis, and coal worker's pneumoconiosis. We are also a potentially responsible party in various environmental proceedings and remediation matters wherein substantial amounts are at issue. Adverse rulings, judgments or settlements in pending or future litigation (including liabilities associated with respirator claims) or in connection with environmental remediation activities could adversely affect our financial results or cause our results to differ materially from those expressed or forecasted in any forward-looking statements.

Fluctuations in foreign currency exchange and interest rates affect our financial results.

We earn revenues, pay expenses, own assets and incur liabilities in countries using currencies other than the U.S. dollar. In fiscal 2018, we derived a majority of our revenues from sales outside the U.S. Because our consolidated financial statements are presented in U.S. dollars, we must translate revenues and expenses, as well as assets and liabilities, into U.S. dollars at exchange rates in effect during or at the end of each reporting period. Therefore, increases or decreases in the value of the U.S. dollar against other currencies in countries where we operate will affect our results of operations and the value of balance sheet items denominated in foreign currencies. Due to the geographic diversity of our operations, weaknesses in some currencies might be offset by strengths in others over

time. In addition, we are exposed to adverse changes in interest rates. We manage both these risks through normal operating and financing activities and, when deemed appropriate, through the use of derivative instruments as well as foreign currency debt. We cannot be certain, however, that we will be successful in reducing the risks inherent in exposures to foreign currency and interest rate fluctuations.

Further, we have exposure to foreign currency movements because certain foreign currency transactions need to be converted to a different currency for settlement. These conversions can have a direct impact on our cash flows.

Our tax rate is dependent upon a number of factors, a change in any of which could impact our future tax rates and net income.

Our future tax rates may be adversely affected by a number of factors, including: future changes in the jurisdictions in which our profits are determined to be earned and taxed; changes in the estimated realization of our net deferred tax assets; the repatriation of non-U.S. earnings for which we have not previously provided for non-U.S. withholding taxes; adjustments to estimated taxes upon finalization of various tax returns; increases in expenses that are not deductible for tax purposes; changes in available tax credits; the resolution of issues arising from tax audits with various tax authorities; and changes in tax laws or the interpretation of such tax laws. Losses for which no tax benefits can be recorded could materially impact our tax rate and its volatility from one quarter to another.

We face operational risks inherent in mining operations and our mining operations have the potential to cause safety issues, including those that could result in significant personal injury.

We own two mines, a cesium mine in Manitoba, Canada, a portion of which is located under Bernic Lake, and an above-ground lignite mine, which is located close to our Marshall, Texas facility and operated by a subsidiary of The North American Coal Company. Mining operations by their nature involve a high level of uncertainty and are often affected by risks and hazards outside of our control. At our lignite mine, the risks are primarily operational risks associated with the maintenance and operation of the heavy equipment required to dig and haul the lignite, and risks relating to lower than expected lignite quality or recovery rates. Our underground mine in Manitoba is subject to a number of risks, including industrial accidents, unexpected geological conditions, fall of ground accidents or structural collapses, which, in the case of our cesium mine, could lead to flooding. Following a fall of ground incident in 2013, we implemented additional safety measures and several types of monitoring devices in the mine that have indicated good structural stability in the mine since that time. However, the structural stability may change at any time and there remains a possibility of deterioration and flooding of this mine. The failure to adequately manage these risks could result in significant personal injury, loss of life, damage to mineral properties, production facilities or mining equipment, damage to the environment, delays in or reduced production, and potential legal liabilities.

Our operations and products are subject to extensive safety, health and environmental requirements, which could increase our costs and/or impair our ability to manufacture and sell certain products.

Our ongoing operations are subject to extensive federal, state, local and foreign laws, regulations, rules and ordinances relating to safety, health and environmental matters, many of which provide for substantial monetary fines and criminal sanctions for violations. These include requirements to obtain and comply with various environmental-related permits for constructing any new facilities and operating all of our existing facilities. In addition, in certain geographic areas, our carbon black and activated carbon facilities are or may become subject to greenhouse gas emission trading schemes under which we may be required to purchase emission credits if our emission levels exceed our allocations. Greenhouse gas regulatory programs that have been adopted, such as cap-and-trade programs, have not had a significant impact on our businesses to date. Costs of complying with regulations could increase as concerns related to greenhouse gases and climate change continue to emerge. The enactment of new environmental laws and regulations and/or the more aggressive interpretation of existing requirements could require us to incur significant costs for compliance or capital improvements or limit our current or planned operations, any of which could have a material adverse effect on our earnings or cash flow. We attempt to offset the effects of these compliance costs through price increases, productivity improvements and cost reduction efforts. Success in offsetting any such increased regulatory costs is largely influenced by competitive and economic conditions and could vary significantly depending on the segment served. Such increases may not be accepted by our customers, may not be sufficient to compensate for increased regulatory costs or may decrease demand for our products and our volume of sales. (See “Legal Proceedings” in Item 3 below).

In order to secure and maintain the right to produce or sell our products, we must satisfy product related regulatory requirements in different jurisdictions. Obtaining and maintaining these approvals requires a significant amount of product testing and data, and there is no certainty these approvals will be obtained.

Certain national and international health organizations have classified carbon black as a possible or suspected human carcinogen. To the extent that, in the future, (i) these organizations re-classify carbon black as a known or confirmed carcinogen, (ii) other organizations or government authorities in other jurisdictions classify carbon black or any of our other finished products, raw materials or intermediates as suspected or known carcinogens or otherwise hazardous, or (iii) there is discovery of adverse health effects attributable to production or use of carbon black or any of our other finished products, raw materials or intermediates, we could be required to incur significantly higher costs to comply with environmental, health and safety laws, or to comply with restrictions on sales of our products, be subject to legal claims, and our reputation and business could be adversely affected. In addition, chemicals that are currently classified as non-hazardous may be classified as hazardous in the future, and our products may have characteristics that are not

recognized today but may be found in the future to impair human health or to be carcinogenic.

Action by the U.S. Environmental Protection Agency (“EPA”) related to its Mercury and Air Toxics Standards (“MATS”) that decreases demand for our mercury removal products, and/or the failure of tariffs placed on U.S. imports of Chinese activated carbon to adequately address the impact of low-priced imports from China, could have a material adverse effect on our Purification Solutions segment.

Growth in the environmental portion of our Purification Solutions business depends on stable demand in the mercury removal related portion of the business, which is largely dependent on the amount of coal-based power generation used in the U.S. and the continued regulation of utilities under MATS. In August 2018, the EPA announced that it intends to reconsider the MATS rule and in September submitted its proposal to the White House Office of Management and Budget. Any action that the EPA takes related to MATS that decreases demand for our products for mercury removal will have a negative effect on the financial results of the Purification Solutions segment.

In addition, Purification Solutions faces competition in the U.S. from low-priced imports of activated carbon products. If the amounts of these low-priced imports increase, especially if they are sold at less than fair value, our sales of competing products could decline, which could have an adverse effect on the earnings of Purification Solutions. In addition, sales of these low-priced imports may negatively impact our pricing. To limit these activities, regulators in the U.S. have enacted an antidumping duty order on steam activated carbon products from China. In fiscal 2018, the order was extended for an additional five years. The amount of antidumping duties collected on imports of steam activated carbon from China is reviewed annually by the U.S. Department of Commerce. To the extent the antidumping margins do not adequately address the degree to which imports are unfairly traded, the antidumping order may be less effective in reducing the volume of these low-priced activated carbon imports in the U.S., which could negatively affect demand and/or pricing for our products.

We have entered into a number of derivative contracts with financial counterparties. The effectiveness of these contracts is dependent on the ability of these financial counterparties to perform their obligations and their nonperformance could harm our financial condition.

We have entered into forward foreign currency contracts and cross-currency swaps as part of our financial risk management strategy. The effectiveness of our risk management program using these instruments is dependent, in part, upon the counterparties to these contracts honoring their financial obligations. If any of our counterparties are unable to perform their obligations in the future, we could be exposed to increased earnings and cash flow volatility due to an instrument's failure to hedge or adequately address a financial risk.

The continued protection of our patents, trade secrets and other proprietary intellectual property rights are important to our success.

Our patents, trade secrets and other intellectual property rights are important to our success and competitive position. We own various patents and other intellectual property rights in the U.S. and other countries covering many of our products, as well as processes and product uses. Where we believe patent protection is not appropriate or obtainable, we rely on trade secret laws and practices to protect our proprietary technology and processes, such as physical security, limited dissemination and access and confidentiality agreements with our employees, customers, consultants, business partners, potential licensees and others to protect our trade secrets and other proprietary information. However, trade secrets can be difficult to protect and the protective measures we have put in place may not prevent disclosure or unauthorized use of our proprietary information or provide an adequate remedy in the event of misappropriation or other violations of our proprietary rights. In addition, we are a licensee of various patents and intellectual property rights belonging to others in the U.S. and other countries. Because the laws and enforcement mechanisms of some countries may not allow us to protect our proprietary rights to the same extent as we are able to do in the U.S., the strength of our intellectual property rights will vary from country to country.

Irrespective of our proprietary intellectual property rights, we may be subject to claims that our products, processes or product uses infringe the intellectual property rights of others. These claims, even if they are without merit, could be expensive and time consuming to defend and if we were to lose such claims, we could be enjoined from selling our products or using our processes and/or be subject to damages, or be required to enter into licensing agreements requiring royalty payments and/or use restrictions. Licensing agreements may not be available to us, or if available, may not be available on acceptable terms.

Natural disasters could affect our operations and financial results.

We operate facilities in areas of the world that are exposed to natural hazards, such as floods, windstorms, hurricanes, and earthquakes. Extreme weather events present physical risks that may become more frequent as a result of factors related to climate change. Such events could disrupt our supply of raw materials or otherwise affect production, transportation and delivery of our products or affect demand for our products.

Item 1B. Unresolved Staff Comments

None.

15

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## Item 2. Properties

Cabot's corporate headquarters are in leased office space in Boston, Massachusetts. We also own or lease office, manufacturing, storage, distribution, marketing and research and development facilities in the U.S. and in foreign countries. The locations of our principal manufacturing and/or administrative facilities are set forth in the table below. Unless otherwise indicated, all the properties are owned.

Location by Region	Reinforcement Performance Purification			
	Materials	Chemicals	Solutions	Specialty Fluids
<b>Americas Region</b>				
Alpharetta, Georgia <sup>*(1)</sup>	X	X	X	X
Tuscola, Illinois		X		
Canal, Louisiana	X	X		
Ville Platte, Louisiana	X			
Billerica, Massachusetts	X	X	X	X
Haverhill, Massachusetts		X		
Midland, Michigan		X		
Pryor, Oklahoma			X	
Marshall, Texas			X	
Pampa, Texas	X	X		
Campana, Argentina	X			
Maua, Brazil	X	X		
Sao Paulo, Brazil <sup>*(1)</sup>	X	X	X	X
Lac du Bonnet, Manitoba, Canada <sup>**</sup>				X
Saint-Jean-sur-Richelieu, Québec, Canada		X		
Sarnia, Ontario, Canada	X	X		
Cartagena, Colombia	X			
Altamira, Mexico	X			
<b>Europe, Middle East and Africa Region</b>				
Loncin, Belgium		X		
Pepinster, Belgium		X		
Valasske Mezirici (Valmez), Czech Republic <sup>**</sup>	X			
Port Jerome, France <sup>**</sup>	X			
Frankfurt, Germany <sup>*</sup>		X		
Rheinfelden, Germany		X		
Ravenna, Italy (2 plants)	X		X	
Riga, Latvia <sup>*(1)</sup>	X	X	X	X
Bergen, Norway <sup>*</sup>				X
Schaffhausen, Switzerland <sup>*</sup>	X	X	X	X
Botlek, Netherlands <sup>**</sup>	X	X		
Amersfoort, Netherlands <sup>*</sup>			X	
Klazienaveen, Netherlands			X	
Zaandam, Netherlands			X	
Dubai, United Arab Emirates <sup>*</sup>		X		
Purton, United Kingdom (England)			X	
Aberdeen, United Kingdom (Scotland) <sup>*</sup>				X
Glasgow, United Kingdom (Scotland)			X	
Barry, United Kingdom (Wales) <sup>**</sup>		X		





## Reinforcement Performance Purification

Location by Region	Materials	Chemicals	Solutions	Specialty Fluids
Asia Pacific Region				
Jiangsu Province, China**		X		
Jiangxi Province, China**		X		
Tianjin, China**	X	X		
Shanghai, China*(1)	X	X	X	X
Shanghai, China** (plant)	X			
Xingtai City, China**	X			
Mumbai, India*	X	X	X	
Cilegon, Indonesia**	X			
Jakarta, Indonesia*(1)	X	X	X	X
Chiba, Japan	X			
Shimonoseki, Japan**	X			
Tokyo, Japan*(1)	X	X	X	X
Port Dickson, Malaysia**	X			

(1) Business service center

\* Leased premises

\*\* Building(s) owned by Cabot on leased land

We conduct research and development for our various businesses primarily at facilities in Billerica, Massachusetts; Amersfoort, Netherlands; Pampa, Texas; Pepinster, Belgium; Frankfurt, Germany; and Shanghai, China.

With our existing manufacturing plants and planned expansions, we generally have sufficient production capacity to meet current requirements and expected near-term growth. These plants are generally well maintained, in good operating condition and suitable and adequate for their intended use. Our administrative offices and other facilities are suitable and adequate for their intended purposes.

### Item 3. Legal Proceedings

Cabot is a party in various lawsuits and environmental proceedings wherein substantial amounts are claimed. The following is a description of the significant proceedings pending on September 30, 2018, unless otherwise specified.

#### Environmental Proceedings

In November 2013, Cabot entered into a Consent Decree with the EPA and the Louisiana Department of Environmental Quality (“LDEQ”) regarding Cabot’s three carbon black manufacturing facilities in the U.S. This settlement is related to the EPA’s national enforcement initiative focused on the U.S. carbon black manufacturing sector alleging non-compliance with certain regulatory and permitting requirements under The Clean Air Act, including the New Source Review (“NSR”) construction permitting requirements. Pursuant to this settlement, Cabot is in the process of installing technology controls for sulfur dioxide and nitrogen oxide. We expect that the total capital costs to install these controls will be between \$100 million and \$150 million and will be incurred through calendar year 2022. All carbon black manufacturers have settled with the EPA and will be installing similar technology controls.

We continue to perform certain sampling and remediation activities at a former pine tar manufacturing site in Gainesville, Florida that we sold in the 1960s. Those activities are pursuant to a formal Record of Decision and 1991 Consent Decree with the EPA under which we installed a groundwater treatment system at the site in the early 1990s, which remains in operation. More recently, we have been requested by the EPA and other stakeholders to carry out various other additional work at the site, the scope of which has yet to be fully determined. We continue to work cooperatively with the EPA, the Florida Department of Environmental Protection and the local authorities on this matter.

As of September 30, 2018, we had a \$15 million reserve for environmental remediation costs at various sites. The operation and maintenance component of this reserve was \$3 million. The \$15 million reserve represents our current best estimate of costs likely to be incurred for remediation based on our analysis of the extent of cleanup required, alternative cleanup methods available, the ability of other responsible parties to contribute and our interpretation of laws and regulations applicable to each of our sites.

#### Other Proceedings

#### Respirator Liabilities

We have exposure in connection with a safety respiratory products business that a subsidiary acquired from American Optical Corporation (“AO”) in an April 1990 asset purchase transaction. The subsidiary manufactured respirators under the AO brand and disposed of that business in July 1995. In connection with its acquisition of the business, the subsidiary agreed, in certain circumstances, to assume a portion of AO’s liabilities, including costs of legal fees together with amounts paid in settlements and judgments, allocable to AO respiratory products used prior to the 1990 purchase by the Cabot subsidiary. In exchange for the subsidiary’s assumption of certain of AO’s respirator liabilities, AO agreed to provide to the subsidiary the benefits of: (i) AO’s insurance coverage for the period prior to the 1990 acquisition and (ii) a former owner’s indemnity of AO holding it harmless from any liability allocable to AO respiratory products used prior to May 1982.

Generally, these respirator liabilities involve claims for personal injury, including asbestosis, silicosis and coal worker’s pneumoconiosis, allegedly resulting from the use of respirators that are alleged to have been negligently designed and/or labeled. Neither Cabot, nor its past or present subsidiaries, at any time manufactured asbestos or asbestos-containing products. At no time did this respiratory product line represent a significant portion of the respirator market.

The subsidiary transferred the business to Aearo Corporation (“Aearo”) in July 1995. Cabot agreed to have the subsidiary retain certain liabilities associated with exposure to asbestos and silica while using respirators prior to the 1995 transaction so long as Aearo paid, and continues to pay, Cabot an annual fee of \$400,000. Aearo can discontinue payment of the fee at any time, in which case it will assume the responsibility for and indemnify Cabot against those liabilities which Cabot’s subsidiary had agreed to retain. We anticipate that we will continue to receive payment of the \$400,000 fee from Aearo and thereby retain these liabilities for the foreseeable future. We have no liability in connection with any products manufactured by Aearo after 1995.

In addition to Cabot’s subsidiary and as described above, other parties are responsible for significant portions of the costs of respirator liabilities, leaving Cabot’s subsidiary with a portion of the liability in only some of the pending cases. These parties include Aearo, AO, AO’s insurers, another former owner and its insurers, and a third-party manufacturer of respirators formerly sold under the AO brand and its insurers (collectively, with Cabot’s subsidiary, the “Payor Group”).

As of September 30, 2018 and 2017, there were approximately 35,000 and 37,000 claimants, respectively, in pending cases asserting claims against AO in connection with respiratory products. Cabot has contributed to the Payor Group's defense and settlement costs with respect to a percentage of pending claims depending on several factors, including the period of alleged product use. In order to quantify our estimated share of liability for pending and future respirator liability claims, we have engaged, through counsel, the assistance of Nathan Associates, Inc. ("Nathan"), a leading consulting firm in the field of tort liability valuation. The methodology used by Nathan addresses the complexities surrounding our potential liability by making assumptions about future claimants with respect to periods of asbestos, silica and coal mine dust exposure and respirator use. Using those and other assumptions, Nathan estimates the number of future asbestos, silica and coal mine dust claims that will be filed and the related costs that would be incurred in resolving both currently pending and future claims. On this basis, Nathan then estimates the value of the share of these liabilities that reflect our period of direct manufacture and our contractual obligations. During the three months ended September 30, 2018, Nathan updated this estimate. Based on the Nathan estimates, as of September 30, 2018, we increased our reserve for our estimated share of the liability for pending and future respirator claims by \$10 million to \$25 million. The increase reflects higher costs of defending and resolving these claims. We made payments related to our respirator liability of \$3 million in each of fiscal 2018, fiscal 2017 and fiscal 2016.

Our current estimate of the cost of our share of existing and future respirator liability claims is based on facts and circumstances existing at this time. Developments that could affect our estimate include, but are not limited to, (i) significant changes in the number of future claims, (ii) changes in the rate of dismissals without payment of pending claims, (iii) significant changes in the average cost of resolving claims, (iv) significant changes in the legal costs of defending these claims, (v) changes in the nature of claims received, (vi) changes in the law and procedure applicable to these claims, (vii) the financial viability of members of the Payor Group, (viii) a change in the availability of the insurance coverage of the members of the Payor Group or the indemnity provided by AO's former owner, (ix) changes in the allocation of costs among the Payor Group, and (x) a determination that the assumptions that were used to estimate our share of liability are no longer reasonable. We cannot determine the impact of these potential developments on our current estimate of our share of liability for these existing and future claims. Accordingly, the actual amount of these liabilities for existing and future claims could be different than the reserved amount.

#### Other Matters

We have various other lawsuits, claims and contingent liabilities arising in the ordinary course of our business and with respect to our divested businesses. We do not believe that any of these matters will have a material adverse effect on our financial position; however, litigation is inherently unpredictable. We could incur judgments, enter into settlements or revise our expectations regarding the outcome of certain matters, and such developments could have a material impact on our results of operations in the period in which the amounts are accrued or our cash flows in the period in which the amounts are paid.

#### Item 4. Mine Safety Disclosures

Not applicable.

#### Executive Officers of the Registrant

Set forth below is certain information about Cabot's executive officers as of November 21, 2018.

Sean D. Keohane, age 51, is President and Chief Executive Officer and a member of Cabot's Board of Directors, positions he has held since March 2016. Mr. Keohane joined Cabot in 2002. From November 2014 until March 2016 he was Executive Vice President and President of Reinforcement Materials. From March 2012 until November 2014, he was Senior Vice President and President of Performance Chemicals, and from May 2008 until March 2012, he was General Manager of Performance Chemicals. He was appointed Vice President in March 2005, Senior Vice President in March 2012 and Executive Vice President in November 2014. He was a member of the Interim Office of the Chief

Executive Officer (the “CEO Office”), which was in place from December 2015 until March 2016.

Erica J. McLaughlin, age 42, is Senior Vice President and Chief Financial Officer. Ms. McLaughlin joined Cabot in 2002, and was appointed Senior Vice President and Chief Financial Officer in May 2018. From June 2016 until May 2018 she was Vice President of Business Operations for Reinforcement Materials and General Manager of the tire business, and from July 2011 until June 2016, she was Vice President of Investor Relations and Corporate Communications. Prior to July 2011, she held a variety of leadership positions in Finance and Corporate Planning. Ms. McLaughlin assumed interim responsibility for Corporate Strategy and Development in October 2018.

Brian A. Berube, age 56, is Senior Vice President and General Counsel. Mr. Berube joined Cabot in 1994. He was appointed General Counsel in March 2003. He was Business General Counsel from March 2002 to March 2003, Deputy General Counsel from June 2001 to March 2002, and an attorney in Cabot's law department from 1994 until June 2001. In addition, he was interim Chief Human Resources Officer from July 2016 until March 2017. Mr. Berube was appointed Vice President in March 2002 and Senior Vice President in March 2012. He was a member of the CEO Office, which was in place from December 2015 until March 2016.

John R. Doubman, age 47, is Senior Vice President, and, effective October 1, 2018, President of Performance Additives, Performance Chemicals. Mr. Doubman joined Cabot in 2006. Prior to assuming his current position in October 2018, he was Senior Vice President, Corporate Strategy and Development from April 2016 until September 2018 and President of Specialty Fluids from January 2017 until September 2018, Vice President and General Manager of the tire business from April 2015 until April 2016, Vice President Global Business Operation and Strategy, Reinforcement Materials from August 2014 until April 2015, and General Manager for the rubber blacks business in the Europe, Middle East and Africa region from February 2010 until August 2014. In addition, Mr. Doubman was Vice President and General Manager of the elastomer composites business from January 2013 until March 2016. Prior to 2010, he held a variety of leadership positions in Reinforcement Materials and Corporate Strategy.

Hobart C. Kalkstein, age 48, is Senior Vice President and President of Reinforcement Materials. Mr. Kalkstein joined Cabot in 2005. Prior to assuming his current role in April 2016, he was Vice President of Corporate Strategy and Development from December 2015 to April 2016. From October 2013 to December 2015, he served as Vice President of Global Business Operations for Purification Solutions and from November 2012 to December 2015 as General Manager of Global Emission Control Solutions for Purification Solutions, and from January 2012 to November 2012 he served as Vice President of Business Operations and Executive Director of Marketing and Business Strategy for Performance Chemicals. Prior to that, he served as General Manager of the Aerogel business from October 2007 to February 2010.

Friedrich von Gottberg, age 50, is Senior Vice President and President of Purification Solutions. Mr. von Gottberg joined Cabot in 1997. Prior to assuming his current role in January 2013, he was Senior Vice President and President of Advanced Technologies from March 2012 until January 2013, and Vice President of the New Business Group from March 2008 until March 2012. In addition, he was interim Chief Technology Officer from May 2017 until February 2018. Prior to 2008, Mr. von Gottberg held a variety of leadership positions in Research and Development and Finance. He was appointed Vice President in March 2005 and Senior Vice President in March 2012.

## PART II

## Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Cabot's common stock is listed for trading (symbol CBT) on the New York Stock Exchange. As of November 15, 2018, there were 662 holders of record of Cabot's common stock.

## Issuer Purchases of Equity Securities

The table below sets forth information regarding Cabot's purchases of its equity securities during the quarter ended September 30, 2018:

Period	Total Number of Shares Purchased <sup>(1)</sup>	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs <sup>(1)</sup>	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs <sup>(1)</sup>
July 1, 2018 — July 31, 2018	—	\$ —	—	10,828,198
August 1, 2018 — August 31, 2018	630,000	\$ 65.02	630,000	10,198,198
September 1, 2018 — September 30, 2018	665,000	\$ 63.95	665,000	9,533,198
Total	1,295,000		1,295,000	

<sup>(1)</sup>On July 13, 2018, Cabot publicly announced that the Board of Directors authorized the Company to repurchase up to an additional ten million shares of its common stock on the open market or in privately negotiated transactions, increasing the current balance of shares available for repurchase at that time to approximately eleven million shares. The current authorization does not have a set expiration date.

## Item 6. Selected Financial Data

On November 18, 2013, Cabot purchased all of its joint venture partner's common stock in NHUMO, S.A. de C.V. ("NHUMO"), which represented approximately 60% of the outstanding common stock of the joint venture. Prior to this transaction, the Company owned approximately 40% of the outstanding common stock of NHUMO, and the NHUMO entity was accounted for as an equity affiliate of the Company. The results of fiscal 2014 in the table below include 11 months of results at 100% consolidation and one month of results accounted for under the equity method at 40%.

The Company completed the sale of its Security Materials business on July 31, 2014. The results of operations for this business for all periods presented are reflected as discontinued operations in the Consolidated Statements of Operations.

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	Years Ended September 30				
	2018	2017	2016	2015	2014
	(In millions, except per share amounts and ratios)				
<b>Consolidated Net Income (Loss)</b>					
Net sales and other operating revenues	\$3,242	\$2,717	\$2,411	\$2,871	\$3,647
Gross profit <sup>(1)</sup>	781	663	575	585	721
Selling and administrative expenses	305	260	275	282	326
Research and technical expenses	66	56	53	58	60
Purification Solutions long-lived assets impairment charge	162	—	—	210	—
Purification Solutions goodwill impairment charge	92	—	—	352	—
Income (loss) from operations	156	347	247	(317 )	335
Net interest expense and other charges <sup>(2)</sup>	(39 )	(48 )	(56 )	(60 )	(27 )
Income (loss) from continuing operations before income taxes and equity in earnings of affiliated companies <sup>(1)(3)</sup>	117	299	191	(377 )	308
(Provision) benefit for income taxes <sup>(1)(4)</sup>	(193 )	(33 )	(33 )	45	(92 )
Equity in earnings of affiliated companies	2	7	3	4	—
Income (loss) from discontinued operations, net of tax	—	—	1	2	2
Net income (loss) <sup>(1)</sup>	(74 )	273	162	(326 )	218
<b>Net income attributable to noncontrolling interests, net</b>					
of tax	39	25	15	8	19
Net income (loss) attributable to Cabot Corporation <sup>(1)</sup>	\$(113 )	\$248	\$147	\$(334 )	\$199
<b>Common Share Data</b>					
<b>Diluted net income (loss) attributable to Cabot Corporation:</b>					
Income (loss) from continuing operations <sup>(1)</sup>	\$(1.85 )	\$3.91	\$2.30	\$(5.29 )	\$3.01
Income (loss) from discontinued operations	—	—	0.02	0.02	0.02
Net income (loss) attributable to Cabot Corporation	\$(1.85 )	\$3.91	\$2.32	\$(5.27 )	\$3.03
Dividends	\$1.29	\$1.23	\$1.04	\$0.88	\$0.84
Closing prices	\$62.72	\$55.80	\$52.41	\$31.56	\$50.77
<b>Weighted-average diluted shares outstanding—</b>					
millions	61.7	62.7	62.9	63.4	65.1
Shares outstanding at year end—millions	60.4	61.9	62.2	62.5	64.4
<b>Consolidated Financial Position</b>					