

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

**FORM 10-K**

R ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended **DECEMBER 31, 2017**

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: **1-1463**

**UNION CARBIDE CORPORATION**

(Exact name of registrant as specified in its charter)

**New York**

State or other jurisdiction of incorporation or organization

**13-1421730**

(I.R.S. Employer Identification No.)

**7501 State Highway 185 North, Seadrift, Texas 77983**

(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: 361-553-2997

Securities registered pursuant to Section 12(b) of the Act: None

Securities registered pursuant to Section 12(g) of the Act: 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

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.

R Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files).

R Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company or an emerging growth company. See the 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  (Do not check if a smaller reporting company)

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 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

At February 15, 2018, 935.51 shares of common stock were outstanding, all of which were held by the registrant's parent, The Dow Chemical Company.

The registrant meets the conditions set forth in General Instructions I(1)(a) and (b) of Form 10-K and is therefore filing this Form with the reduced disclosure format.

DOCUMENTS INCORPORATED BY REFERENCE

None

# Union Carbide Corporation

ANNUAL REPORT ON FORM 10-K  
For the Fiscal Year Ended December 31, 2017

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## Union Carbide Corporation and Subsidiaries

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Throughout this Annual Report on Form 10-K, except as otherwise indicated by the context, the terms "Corporation" or "UCC" as used herein mean Union Carbide Corporation and its subsidiaries.

### **FORWARD-LOOKING STATEMENTS**

Certain statements in this report, other than purely historical information, including estimates, projections, statements relating to business plans, objectives, and expected operating results, and the assumptions upon which those statements are based, are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements may appear throughout this report, including without limitation, the following sections: "Item 1. Business," "Management's Discussion and Analysis," and "Risk Factors." These forward-looking statements are generally identified by the words "anticipate," "believe," "estimate," "expect," "future," "intend," "may," "opportunity," "outlook," "plan," "project," "should," "strategy," "will," "would," "will be," "will continue," "will likely result," and similar expressions. Forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties which may cause actual results to differ materially from the forward-looking statements. A detailed discussion of principal risks and uncertainties which may cause actual results and events to differ materially from such forward-looking statements is included in the section titled "Risk Factors" (Part I, Item 1A of this Form 10-K). Union Carbide Corporation undertakes no obligation to update or revise publicly any forward-looking statements whether because of new information, future events, or otherwise, except as required by securities and other applicable laws.

**Union Carbide Corporation and Subsidiaries**  
**PART I**

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**ITEM 1. BUSINESS**

**THE CORPORATION**

Union Carbide Corporation is a chemicals and polymers company that has been a wholly owned subsidiary of The Dow Chemical Company ("Dow") since 2001. Except as otherwise indicated by the context, the terms "Corporation" or "UCC" as used herein mean Union Carbide Corporation and its consolidated subsidiaries.

Effective August 31, 2017, pursuant to the merger of equals transaction contemplated by the Agreement and Plan of Merger, dated as of December 11, 2015, as amended on March 31, 2017, Dow and E. I. du Pont de Nemours and Company ("DuPont") each merged with subsidiaries of DowDuPont Inc. ("DowDuPont") and, as a result, Dow and DuPont became subsidiaries of DowDuPont (the "Merger"). See Note 3 to the Consolidated Financial Statements for additional information.

Dow conducts its worldwide operations through principal product groups, and the Corporation's business activities comprise components of Dow's principal product groups rather than stand-alone operations. Because there are no separable reportable business segments for UCC and no detailed business information is provided to a chief operating decision maker regarding the Corporation's stand-alone operations, the Corporation's results are reported as a single operating segment. In addition, in order to simplify the customer interface process, the Corporation sells substantially all its products to Dow. Products are sold to Dow at market-based prices, in accordance with the terms of Dow's intercompany pricing policies.

**Available Information**

The Corporation's annual reports on Form 10-K, quarterly reports on Form 10-Q and 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, are available free of charge through the Financial Reports-SEC Filings section of the Corporation's website ([www.unioncarbide.com](http://www.unioncarbide.com)), as soon as reasonably practicable after the reports are electronically filed or furnished with the U.S. Securities and Exchange Commission ("SEC"). The SEC maintains a website that contains these reports as well as proxy statements and other information regarding issuers that file electronically. The SEC's website is at [www.sec.gov](http://www.sec.gov). The Corporation's website and its content are not deemed incorporated by reference into this report.

**PRODUCTS**

The following is a description of the Corporation's principal products:

**Electrical and Telecommunications** - polyolefin-based compounds for high-performance insulation, semiconductives and jacketing systems for power distribution, telecommunications, and flame-retardant wire and cable insulation. Key product lines include: REDI-LINK™ Polyethylene-Based Wire and Cable Compounds, SI-LINK™ Polyethylene-Based Low Voltage Insulation Compounds, UNIGARD™ HP High-Performance Flame-Retardant Compounds, UNIGARD™ RE Reduced Emissions Flame-Retardant Compounds, and UNIPURGE™ Purging Compounds.

**Ethylene Oxide/Ethylene Glycol ("EO/EG")** - ethylene oxide, a chemical intermediate primarily used in the manufacture of monoethylene glycol ("MEG"), polyethylene glycol, glycol ethers, ethanolamines, surfactants and other performance chemicals and polymers; di- and triethylene glycol, used in a variety of applications, including boat construction, shoe manufacturing, natural gas-drying and other moisture-removing applications, and plasticizers for safety glasses; and tetraethylene glycol, used predominantly in the production of plasticizers for automotive windows. MEG is used extensively in the production of polyester fiber, resin and film, automotive antifreeze and engine coolants, and aircraft anti-icing and deicing fluids.

**Hydrocarbons** - ethylene and propylene; internal feedstocks that are primarily consumed by downstream businesses to optimize integration benefits and drive low costs.

**Industrial Chemicals and Polymers** - broad range of products for specialty applications, including pharmaceutical, animal food supplements, personal care, industrial and household cleaning, coatings for beverage and food cans, industrial coatings and many other industrial uses. Product lines include acrolein and derivatives, glutaraldehydes, ethyleneamines, CARBOWAX™ and CARBOWAX™ SENTRY™ Polyethylene Glycols and Methoxypolyethylene Glycols, TERGITOL™ and TRITON™ Surfactants, UCAR™ Deicing Fluids, UCARTHERM™ Heat Transfer Fluids and UCON™ Fluids.

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**Polyethylene** - includes FLEXOMER™ Polyethylene, very low-density polyethylene resins used as impact modifiers in other polymers and to produce flexible hose and tubing, frozen-food bags and stretch wrap; TUFLIN™ Linear Low Density and UNIVAL™ High Density Polyethylene resins used in high-volume applications such as housewares; milk, water, bleach and detergent bottles; grocery sacks; trash bags; packaging; and water and gas pipe.

**Solvents and Intermediates** - includes oxo aldehydes, acids and alcohols used as chemical intermediates and industrial solvents and in herbicides, plasticizers, paint dryers, jet-turbine lubricants, lube oil additives, and food and feed preservatives; and esters, which serve as solvents in industrial coatings and printing inks and in the manufacturing processes for pharmaceuticals and polymers.

**Technology Licensing and Catalysts** - includes catalysts for supply and licensing of the METEOR™ Process for EO/EG and the LP OXO process for oxo alcohols; and licensing of the METEOR™ Process for EO/EG and the LP OXO process for oxo alcohols through Dow Technology Investments LLC, a 50:50 joint venture with Dow Global Technologies LLC, a Dow subsidiary.

**Vinyl Acetate Monomer** - a building block for the manufacture of a variety of polymers used in water-based emulsion paints, adhesives, paper coatings, textiles, safety glass and acrylic fibers.

**Water Soluble Polymers** - polymers used to enhance the physical and sensory properties of end-use products in a wide range of applications including food, paints and coatings, pharmaceuticals, oil and gas, home and personal care, building and construction, and other specialty applications. Key product lines include POLYOX™ Water-Soluble Resins, and products for hair and skin manufactured by Amerchol Corporation, a wholly owned subsidiary.

#### COMPETITION

The chemical industry has been historically competitive and this competitive environment is expected to continue. Large, multinational chemical firms, as well as the chemical divisions of the major national and international oil companies, provide substantial competition both in the United States and abroad.

#### RESEARCH AND DEVELOPMENT

The Corporation is engaged in a continuous program of basic and applied research to develop new products and processes, to improve and refine existing products and processes, and to develop new applications for existing products. Research and development expenses were \$19 million in 2017, \$18 million in 2016 and \$20 million in 2015.

#### PATENTS, LICENSES AND TRADEMARKS

The Corporation continually applies for and obtains U.S. and foreign patents that relate to a wide variety of products and processes, has a substantial number of pending patent applications throughout the world, and is licensed under a number of patents. At December 31, 2017, the Corporation owned 121 active U.S. patents and 597 active foreign patents related to a wide variety of products and processes. These patents expire as follows:

Remaining Life of Patents Owned at Dec 31, 2017	United States	Foreign
Within 5 years	56	202
6 to 10 years	14	135
11 to 15 years	51	260
Total	121	597

The Corporation also has a large number of trademarks. Although the Corporation considers that its patents, licenses and trademarks in the aggregate constitute a valuable asset, it does not regard its business as being materially dependent on any single or group of related patents, licenses or trademarks.

#### FINANCIAL INFORMATION ABOUT FOREIGN AND DOMESTIC OPERATIONS AND EXPORT SALES

In 2017, the Corporation derived 23 percent of its trade sales to external customers outside the United States and had 3 percent of its property investment located outside the United States. See Note 19 to the Consolidated Financial Statements for information on sales to external customers and long-lived assets by geographic region.

#### PROTECTION OF THE ENVIRONMENT

Matters pertaining to the environment are discussed in Management's Discussion and Analysis of Financial Condition and Results of Operations, and Notes 1 and 14 to the Consolidated Financial Statements.

## OTHER ACTIVITIES

### Divestiture

On November 1, 2015, UCC completed the sale of its assets related to the production of methylmercapto propionaldehyde ("MMP") at the St. Charles Operations site in Taft, Louisiana to MMP SCO, LLC ("Novus"), a subsidiary of Novus International, Inc., for net proceeds of \$31 million. Included in the divestiture was the Corporation's MMP manufacturing facility, as well as inventory. The Corporation will continue to operate and provide services to the MMP facility under separate agreements with Novus. In addition, a pretax gain of \$10 million was recorded for the sale of two related patents. See Note 4 to the Consolidated Financial Statements for additional information.

### Dividends

On a quarterly basis, the Corporation's Board of Directors reviews and determines if there will be a dividend distribution to its parent company and sole shareholder, Dow. The Board takes into consideration the level of earnings and cash flows, among other factors, in determining the amount of the dividend distribution. The Corporation declared and paid cash dividends of \$603 million to Dow in 2017; dividends paid to Dow were \$500 million in 2016.

## ITEM 1A. RISK FACTORS

The factors described below represent the Corporation's principal risks.

### **Global Economic Considerations: The Corporation operates in a global, competitive environment, which gives rise to operating and market risk exposure.**

The Corporation sells substantially all of its products to Dow, which operates in a competitive, global environment, and competes worldwide for sales. Increased levels of competition could result in lower prices or lower sales volume, which could have a negative impact on the Corporation's results of operations. Sales of Dow's products are also subject to extensive federal, state, local and foreign laws and regulations, trade agreements, import and export controls, and duties and tariffs. The imposition by foreign governments and regional trade agreements could result in lower sales volume which could negatively impact the Corporation's results of operations.

Economic conditions around the world and in certain industries in which the Corporation does business also impact sales price and volume. As a result, market uncertainty or an economic downturn in the geographic regions or industries in which UCC sells its products could reduce demand for these products and result in decreased sales volume, which could have a negative impact on UCC's results of operations.

### **Raw Materials: Availability of purchased feedstocks and energy, and the volatility of these costs, impact the Corporation's operating costs and add variability to earnings.**

Purchased feedstock and energy costs account for a substantial portion of the Corporation's total production costs and operating expenses. The Corporation purchases hydrocarbon raw materials including ethane, propane, butane and naphtha as feedstocks. The Corporation also purchases certain monomers, primarily ethylene and propylene, to supplement internal production, as well as other raw materials. The Corporation purchases natural gas, primarily to generate electricity, and purchases electric power.

Feedstock and energy costs generally follow price trends in crude oil and natural gas, which are sometimes volatile. Ultimately, the ability to pass on underlying cost increases is dependent on market conditions. Conversely, when feedstock and energy costs decline, selling prices generally decline as well. As a result, volatility in these costs could impact the Corporation's results of operations.

While the Corporation expects abundant and cost-advantaged supplies of natural gas liquids ("NGLs") in the United States to persist for the foreseeable future, if NGLs were to become significantly less advantaged than crude oil-based feedstocks, it could have a negative impact on the Corporation's results of operations and future investments. Also, if the Corporation's key suppliers of feedstocks and energy are unable to provide the raw materials required for production, it could have a negative impact on the Corporation's results of operations.

### **Supply/Demand Balance: Earnings generated by the Corporation vary based in part on the balance of supply relative to demand within the industry.**

The balance of supply relative to demand within the industry may be significantly impacted by the addition of new capacity, especially for basic commodities where capacity is generally added in large increments as world-scale facilities are built. This may disrupt industry balances and result in downward pressure on prices due to the increase in supply, which could negatively impact the Corporation's results of operations.

**Financial Flexibility: Market conditions could reduce Dow's financial flexibility, which could impact the financial flexibility of the Corporation.**

Adverse economic conditions could reduce Dow's flexibility to respond to changing business and economic conditions or to fund capital expenditures or working capital needs. The economic environment could result in a contraction in the availability of credit in the marketplace and reduce sources of liquidity for Dow and could result in higher borrowing costs. Since Dow is a service provider, material debtor, and the major customer of the Corporation, reduced financial flexibility for Dow could potentially impact the financial flexibility of the Corporation.

**Environmental Compliance: The costs of complying with evolving regulatory requirements could negatively impact the Corporation's financial results. Actual or alleged violations of environmental laws or permit requirements could result in restrictions or prohibitions on plant operations, substantial civil or criminal sanctions, as well as the assessment of strict liability and/or joint and several liability.**

The Corporation is subject to extensive federal, state, local and foreign laws, regulations, rules and ordinances relating to pollution, protection of the environment, greenhouse gas emissions and the generation, storage, handling, transportation, treatment, disposal and remediation of hazardous substances and waste materials. At December 31, 2017, the Corporation had accrued obligations of \$114 million (\$145 million at December 31, 2016) for probable environmental remediation and restoration costs, including \$19 million (\$20 million at December 31, 2016) for the remediation of Superfund sites. This is management's best estimate of the costs for remediation and restoration with respect to environmental matters for which the Corporation has accrued liabilities, although it is reasonably possible that the ultimate cost with respect to these particular matters could range up to approximately three times that amount. Costs and capital expenditures relating to environmental, health or safety matters are subject to evolving regulatory requirements and depend on the timing of the promulgation and enforcement of specific standards which impose the requirements. Moreover, changes in environmental regulations could inhibit or interrupt the Corporation's operations, or require modifications to its facilities. Accordingly, environmental, health or safety regulatory matters could result in significant unanticipated costs or liabilities.

**Litigation: The Corporation is party to a number of claims and lawsuits arising out of the normal course of business with respect to commercial matters, including product liability, governmental regulation and other actions.**

The Corporation is involved in a number of legal proceedings and claims with both private and governmental parties. These cover a wide range of matters, including, but not limited to: product liability; trade regulation; governmental regulatory proceedings; health, safety and environmental matters; employment; patents; contracts; taxes; and commercial disputes. With the exception of the possible effect of the asbestos-related liability described below, it is the opinion of the Corporation's management that the possibility is remote that the aggregate of all such claims and lawsuits will have a material adverse impact on the Corporation's consolidated financial statements.

The Corporation is and has been involved in a large number of asbestos-related suits filed primarily in state courts during the past four decades. At December 31, 2017, the Corporation's total asbestos-related liability for pending and future claims, including future defense and processing costs, was \$1,369 million (\$1,490 million at December 31, 2016). See Notes 1 and 14 to the Consolidated Financial Statements for more information on asbestos-related matters.

**Health and Safety: Increased concerns regarding the safe use of chemicals in commerce and their potential impact on the environment have resulted in more restrictive regulations and could lead to new regulations.**

Concerns regarding the safe use of chemicals in commerce and their potential impact on health and the environment reflect a growing trend in societal demands for increasing levels of product safety and environmental protection. These concerns could manifest themselves in stockholder proposals, preferred purchasing and continued pressure for more stringent regulatory intervention. These concerns could also influence public perceptions, the viability of the Corporation's products, the Corporation's reputation and the cost to comply with regulations. In addition, terrorist attacks and natural disasters have increased concerns about the security and safety of chemical production and distribution. These concerns could have a negative impact on the Corporation's results of operations.

Local, state, federal and foreign governments continue to propose new regulations related to the security of chemical plant locations and the transportation of hazardous chemicals, which could result in higher operating costs.

**Operational Event: A significant operational event could negatively impact the Corporation's results of operations.**

As a diversified chemical manufacturing company, the Corporation's operations, the transportation of products, cyber-attacks or severe weather conditions and other natural phenomena (such as drought, hurricanes, earthquakes, tsunamis, floods, etc.) could result in an unplanned event that could be significant in scale and could negatively impact operations, neighbors or the public at large, which could have a negative impact on the Corporation's results of operations.

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Major hurricanes have caused significant disruption in UCC's operations on the U.S. Gulf Coast, logistics across the region, and the supply of certain raw materials, which had an adverse impact on volume and cost for some of UCC's products. Due to the Corporation's substantial presence on the U.S. Gulf Coast, similar severe weather conditions or other natural phenomena in the future could negatively affect UCC's results of operations.

**Pension and Other Postretirement Benefits: Increased obligations and expenses related to the Corporation's defined benefit pension plans and other postretirement benefit plan could negatively affect UCC's financial condition and results of operations.**

The Corporation has defined benefit pension plans and an other postretirement benefit plan (the "plans") in the United States. The assets of the Corporation's funded plans are primarily invested in fixed income securities, equity securities and alternative investments in real estate and private equity of U.S. and foreign issuers. Changes in the market value of plan assets, investment returns, discount rates, mortality rates, the rate of increase in compensation levels, regulations and health care cost trends may affect the funded status of the Corporation's plans and could cause volatility in the net periodic benefit cost, future funding requirements of the plans and the funded status of the plans. A significant increase in the Corporation's obligations or future funding requirements could have a negative impact on the Corporation's results of operations and cash flows for a particular period and on the consolidated financial position of the Corporation.

**Cyber Threat: The risk of loss of the Corporation's intellectual property, trade secrets or other sensitive business information or disruption of operations could negatively impact the Corporation's financial results.**

Cyber-attacks or security breaches could compromise confidential, business critical information, cause a disruption in the Corporation's operations or harm the Corporation's reputation. The Corporation has attractive information assets, including intellectual property, trade secrets and other sensitive, business critical information. While the Corporation has a comprehensive cyber-security program that is continuously reviewed, maintained and upgraded, a significant cyber-attack could result in the loss of critical business information and/or could negatively impact operations, which could have a negative impact on the Corporation's financial results.

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

None.

**ITEM 2. PROPERTIES**

The Corporation operates eight manufacturing sites in three countries. The Corporation considers its properties to be in good operating condition and that its machinery and equipment have been well maintained. The following are the major production sites:

*United States:* Hahnville (St. Charles), Louisiana; Seadrift and Texas City, Texas.

All of UCC's plants are owned or leased, subject to certain easements of other persons that, in the opinion of management, do not substantially interfere with the continued use of such properties or materially affect their value.

A summary of property, classified by type, is contained in Note 9 to the Consolidated Financial Statements.

**ITEM 3. LEGAL PROCEEDINGS**

**Asbestos-Related Matters**

The Corporation is and has been involved in a large number of asbestos-related suits filed primarily in state courts during the past four decades. These suits principally allege personal injury resulting from exposure to asbestos-containing products and frequently seek both actual and punitive damages. The alleged claims primarily relate to products that UCC sold in the past, alleged exposure to asbestos-containing products located on UCC's premises, and UCC's responsibility for asbestos suits filed against a former subsidiary, Amchem Products, Inc.

For additional information, see Asbestos-Related Matters in Management's Discussion and Analysis of Financial Condition and Results of Operations, and Notes 1 and 14 to the Consolidated Financial Statements.

**ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

**Union Carbide Corporation and Subsidiaries**  
**PART II**

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**ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES**

The Corporation is a wholly owned subsidiary of Dow; therefore, there is no public trading market for the Corporation's common stock.

**ITEM 6. SELECTED FINANCIAL DATA**

Omitted pursuant to General Instruction I of Form 10-K.

**ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

Pursuant to General Instruction I of Form 10-K "Omission of Information by Certain Wholly-Owned Subsidiaries," this section includes only management's narrative analysis of the results of operations for the year ended December 31, 2017, the most recent fiscal year, compared with the year ended December 31, 2016, the fiscal year immediately preceding it.

Union Carbide Corporation (the "Corporation" or "UCC") is a chemicals and polymers company that has been a wholly owned subsidiary of The Dow Chemical Company ("Dow") since 2001. Effective August 31, 2017, pursuant to the merger of equals transaction contemplated by the Agreement and Plan of Merger, dated as of December 11, 2015, as amended on March 31, 2017, Dow and E. I. du Pont de Nemours and Company ("DuPont") each merged with subsidiaries of DowDuPont Inc. ("DowDuPont") and, as a result, Dow and DuPont became subsidiaries of DowDuPont (the "Merger"). See Note 3 to the Consolidated Financial Statements for additional information.

References below to "Dow" refer to The Dow Chemical Company and its consolidated subsidiaries, except as otherwise indicated by the context. References to "DowDuPont" refer to DowDuPont Inc. and its consolidated subsidiaries, except as otherwise indicated by the context.

Dow conducts its worldwide operations through principal product groups, and the Corporation's business activities comprise components of Dow's global operations rather than stand-alone operations. Because there are no separable reportable business segments for UCC and no detailed business information is provided to a chief operating decision maker regarding the Corporation's stand-alone operations, the Corporation's results are reported as a single operating segment.

**RESULTS OF OPERATIONS**

**Net Sales**

Total net sales for 2017 were \$5,165 million, compared with net sales of \$4,919 million in 2016, an increase of 5 percent. Net sales to related companies, principally to Dow, were \$5,022 million for 2017, compared with \$4,811 million for 2016, an increase of 4 percent. Selling prices to Dow are based on market prices for the related products, in accordance with the terms of Dow's intercompany pricing policies.

Total net sales were up from the previous year driven by an increase in price. Average selling prices increased 5 percent in 2017 compared with 2016. Prices were up across most products, primarily driven by higher feedstock, energy and other raw material costs and tight market supply as a result of hurricane-related supply disruptions in the last half of 2017, with the largest increases in polyethylene, ethylene oxide/ethylene glycol ("EO/EG"), oxo alcohols and vinyl acetate monomers. Sales volume was flat in 2017 compared with 2016 as sales volume increases in glutaraldehydes, vinyl acetate monomers and polyglycols were offset by volume declines in electrical and telecommunications, oxo alcohols and EO/EG.

**Cost of Sales**

Cost of sales were \$4,176 million, up 12 percent from \$3,713 million in 2016, due to higher feedstock, energy and other raw material costs, increased planned maintenance turnaround spending, as well as hurricane-related production and supply disruptions and repair costs in the last half of 2017, partially offset by a decrease in accruals for environmental remediation and restoration projects compared with the previous year.

#### **Research and Development, Selling, General and Administrative Expenses**

Research and development expenses were \$19 million in 2017, compared with \$18 million in 2016. Selling, general and administrative expenses were \$6 million in 2017 compared with \$7 million in 2016.

#### **Restructuring and Asset Related Charges - Net**

In September 2017, the Corporation approved restructuring actions that are aligned with DowDuPont's synergy targets. As a result of these actions, the Corporation recorded a pretax restructuring charge for severance and related benefit costs of \$8 million in the third quarter of 2017. In November 2017, the Corporation approved additional restructuring actions in connection with the restructuring program. A pretax restructuring charge for severance and related benefit costs of \$2 million was recorded in the fourth quarter of 2017, as well as charges of \$62 million for the write-off and write-down of manufacturing and facility assets at multiple UCC sites. The impact of these charges is shown as "Restructuring and asset related charges - net" in the consolidated statements of income. These actions are expected to be complete by the end of 2019.

In the second quarter of 2016, the Corporation approved actions to further improve cost effectiveness with additional workforce reductions. As a result of these actions, the Corporation recorded a pretax restructuring charge for severance and related benefit costs of \$1 million for the separation of approximately 5 positions. In the fourth quarter of 2016, the Corporation recorded an additional charge of \$2 million related to the separation of an additional 16 positions, and in the second quarter of 2017, an additional charge of \$2 million was recorded to adjust the charge for severance and related benefit costs. At December 31, 2017, the liability for severance and related benefit costs associated with the 2016 restructuring was zero, substantially completing the program.

In addition, in the second quarter of 2016, the Corporation recorded an unfavorable adjustment to the 2015 restructuring charge related to additional accruals for exit and disposal activities of \$1 million. See Note 5 to the Consolidated Financial Statements for additional information on the Corporation's restructuring activities.

#### **Asbestos-Related Charge**

In the fourth quarter of 2016, the Corporation elected to change its method of accounting for asbestos-related defense and processing costs from expensing as incurred to estimating and accruing a liability. As a result of this accounting policy change, the Corporation recorded a pretax charge of \$1,009 million for asbestos-related defense and processing costs through the terminal date of 2049. The Corporation also recorded a pretax charge of \$104 million to increase the asbestos-related liability for pending and future claims through the terminal date of 2049. These charges were included in "Asbestos-related charge" in the consolidated statements of income. See Notes 1 and 14 to the Consolidated Financial Statements for details on the asbestos-related charge.

#### **Equity in Earnings of a Nonconsolidated Affiliate**

Equity in earnings of a nonconsolidated affiliate were zero in 2017, down from \$2 million in 2016. In the second quarter of 2017, UCC completed the sale of its ownership interest in Asian Acetyls Co., Ltd. ("ASACCO"), a nonconsolidated affiliate accounted for under the equity method of accounting. ASACCO agreed to purchase all the shares of registered common stock owned by UCC resulting in a pretax gain of \$4 million on the sale, included in "Sundry income (expense) - net" in the consolidated statements of income. For additional information on the nonconsolidated affiliate, see Note 10 to the Consolidated Financial Statements.

#### **Sundry Income (Expense) - Net**

Sundry income (expense) - net includes a variety of income and expense items such as the gain or loss on foreign currency exchange, commissions, charges for management services provided by Dow, interest income and gains and losses on sales of investments and assets. Sundry income (expense) - net for 2017 was net expense of \$11 million compared with net income of \$16 million in 2016. Sundry income (expense) - net included the pretax gain on the sales of land and terminal assets at the Corporation's Texas City, Texas site in the second quarters of 2016 and 2017 described below and other asset sales. See Note 6 to the Consolidated Financial Statements for additional information.

#### *Texas City, Texas, Land Sale*

On June 27, 2016, UCC signed agreements for the sale of excess land at the Texas City, Texas, manufacturing site. In the second quarter of 2016, UCC recorded a pretax gain of \$46 million on the sale of one parcel of land. On April 3, 2017, the sale of the second parcel of land was completed which also included terminal assets and ancillary agreements for the supply of energy and site and terminal services, and a pretax gain of \$23 million was recorded in the second quarter 2017.

#### **Interest Expense and Amortization of Debt Discount**

Net interest expense (interest expense less capitalized interest) and amortization of debt discount for 2017 was \$28 million, compared with \$25 million in 2016, primarily driven by a decrease in capitalized interest in 2017 due to the reduction in capital spending. See Notes 9 and 13 to the Consolidated Financial Statements for additional information.

### **Provision (Credit) for Income Taxes**

On December 22, 2017, the Tax Cuts and Jobs Act ("The Act") was enacted. The Act reduces the U.S. federal corporate tax rate from 35 percent to 21 percent, requires companies to pay a one-time transition tax on earnings of foreign subsidiaries that were previously deferred, creates new provisions related to foreign sourced earnings, eliminates the domestic manufacturing deduction and moves to a territorial system. At December 31, 2017, the Corporation had not completed its accounting for the tax effects of The Act; however, the Corporation made a reasonable estimate of the effects on its existing deferred tax balances and the one-time transition tax, which resulted in a provisional charge of \$250 million, included in "Provision (Credit) for income taxes."

The Corporation reported \$645 million for the tax provision in 2017, which resulted in an overall effective tax rate of 75.9 percent. The tax rate for 2017 was unfavorably impacted by the enactment of The Act and the recognition of a deferred gain related to the sale of stock between Dow and UCC in 2014. This compares with a tax benefit of \$32 million in 2016, which resulted in an overall effective tax rate of negative 56.1 percent. In 2016, the tax rate was favorably impacted by the release of a reserve in excess of the settlement of an uncertain tax position and the impact from the asbestos-related charge. The underlying factors affecting UCC's overall effective tax rates are summarized in Note 7 to the Consolidated Financial Statements.

### **Net Income Attributable to UCC**

The Corporation reported net income of \$205 million in 2017, compared with net income of \$89 million for 2016.

### **Capital Expenditures**

Capital spending in 2017 was \$223 million compared with \$267 million in 2016, reflecting spending on U.S. Gulf Coast projects and site infrastructure projects in both years.

### **OTHER MATTERS**

#### **Recent Accounting Guidance**

See Note 2 to the Consolidated Financial Statements for a summary of recent accounting guidance.

#### **Critical Accounting Estimates**

The preparation of financial statements and related disclosures in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") requires management to make judgments, assumptions and estimates that affect the amounts reported in the consolidated financial statements and accompanying notes. Note 1 to the Consolidated Financial Statements describes the significant accounting policies and methods used in preparation of the consolidated financial statements. Following are the Corporation's accounting policies impacted by judgments, assumptions and estimates:

#### ***Litigation***

The Corporation is subject to legal proceedings and claims arising out of the normal course of business. The Corporation routinely assesses the likelihood of any adverse judgments or outcomes to these matters, as well as ranges of probable losses. A determination of the amount of the reserves required, if any, for these contingencies is made after thoughtful analysis of each known claim. The Corporation has an active risk management program consisting of numerous insurance policies secured from many carriers. These policies provide coverage that is utilized to minimize the financial impact, if any, of the legal proceedings. The required reserves may change in the future due to new developments in each matter. For further discussion, see Note 14 to the Consolidated Financial Statements.

#### ***Asbestos-Related Matters***

The Corporation is and has been involved in a large number of asbestos-related suits filed primarily in state courts during the past four decades. These suits principally allege personal injury resulting from exposure to asbestos-containing products and frequently seek both actual and punitive damages. The alleged claims primarily relate to products that UCC sold in the past, alleged exposure to asbestos-containing products located on UCC's premises, and UCC's responsibility for asbestos suits filed against a former subsidiary, Amchem Products, Inc. ("Amchem"). Each year, Ankura Consulting Group, LLC ("Ankura") performs a review for UCC based upon historical asbestos claims and resolution activity and historical defense spending. UCC compares current asbestos claim, resolution and defense spending activity to the results of the most recent Ankura study at each balance sheet date to determine whether the asbestos-related liability continues to be appropriate.

In 2016, UCC elected to change its method of accounting for asbestos-related defense and processing costs from expensing as incurred to estimating and accruing a liability. In addition to performing their annual review of pending and future asbestos claim resolution activity, Ankura also performed a review for UCC of asbestos-related defense and processing costs to determine a reasonable estimate of future defense and processing costs to be included in the asbestos-related liability, through the terminal year of 2049.

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For additional information, see Part I, Item 3. Legal Proceedings; Asbestos-Related Matters in Management's Discussion and Analysis of Financial Condition and Results of Operations; and Notes 1 and 14 to the Consolidated Financial Statements.

***Environmental Matters***

The Corporation determines the costs of environmental remediation of its facilities and formerly owned facilities based on evaluations of current law and existing technologies. Inherent uncertainties exist in such evaluations primarily due to unknown environmental conditions, changing governmental regulations and legal standards regarding liability and emerging remediation technologies. The recorded liabilities are adjusted periodically as remediation efforts progress or as additional technical or legal information becomes available. At December 31, 2017, the Corporation had accrued obligations of \$114 million for probable environmental remediation and restoration costs, including \$19 million for the remediation of Superfund sites. This is management's best estimate of the costs for remediation and restoration with respect to environmental matters for which the Corporation has accrued liabilities, although it is reasonably possible that the ultimate cost with respect to these particular matters could range up to approximately three times that amount. For further discussion, see Environmental Matters in Notes 1 and 14 to the Consolidated Financial Statements.

***Pension Plans and Other Postretirement Benefits***

The amounts recognized in the consolidated financial statements related to pension and other postretirement benefits are determined from actuarial valuations. Inherent in these valuations are assumptions including expected return on plan assets, discount rates at which the liabilities could have been settled at December 31, 2017, rate of increase in future compensation levels, mortality rates and health care cost trend rates. These assumptions are updated annually and are disclosed in Note 16 to the Consolidated Financial Statements. In accordance with U.S. GAAP, actual results that differ from the assumptions are accumulated and amortized over future periods and, therefore, affect expense recognized and obligations recorded in future periods.

On January 1, 2016, the Corporation adopted the spot rate approach to determine the discount rate utilized to measure the service cost and interest cost components of net periodic pension and other postretirement benefit costs. Under the spot rate approach, the Corporation calculates service costs and interest costs by applying individual spot rates from the Willis Towers Watson U.S. RATE:Link 60-90 corporate yield curve (based on 60th to 90th percentile high-quality corporate bond yields) to the separate expected cash flow components of service cost and interest cost. Prior to 2016, the service and interest cost components were determined based on the single discount rate used to measure the benefit obligation. The Corporation changed to the new method to provide a more precise measure of service and interest costs by improving the correlation between projected benefit cash flows and the discrete spot yield curves. The Corporation accounted for this change as a change in accounting estimate and it was applied prospectively starting in 2016.

The Corporation determines the expected long-term rate of return on plan assets by performing a detailed analysis of key economic and market factors driving historical returns for each asset class and formulating a projected return based on factors in the current environment. Factors considered include, but are not limited to, inflation, real economic growth, interest rate yield, interest rate spreads, and other valuation measures and market metrics. The expected long-term rate of return for each asset class is then weighted based on the strategic asset allocation approved by the governing body for each plan. The Corporation's historical experience with the pension fund asset performance is also considered. The expected long-term rate of return is an assumption and not what is expected to be earned in any one particular year. The weighted-average long-term rate of return assumption used for determining net periodic pension expense for 2017 and 2016 was 6.80 percent. This assumption was also used for determining 2018 net periodic pension expense. Future actual pension expense will depend on future investment performance, changes in future discount rates and various other factors related to the population of participants in the Corporation's pension plans.

The discount rates utilized to measure the pension and other postretirement benefit obligations are based on the yield on high-quality corporate fixed income investments at the measurement date. Future expected actuarially determined cash flows for the plans are individually discounted at the spot rates under the Willis Towers Watson U.S. RATE:Link 60-90 corporate yield curve (based on 60th to 90th percentile high-quality corporate bond yields) to arrive at the plan's obligations as of the measurement date. The weighted-average discount rate utilized to measure pension obligations was 3.59 percent at December 31, 2017 and 4.00 percent at December 31, 2016.

The value of the qualified plan assets totaled \$3.3 billion at December 31, 2017, an increase from \$3.1 billion at December 31, 2016. The underfunded status of the qualified plan decreased by \$86 million at December 31, 2017, compared with December 31, 2016. The Corporation contributed \$162 million to the qualified plan in 2017.

The assumption for the long-term rate of increase in compensation levels was 4.25 percent at December 31, 2017 and 2016. Since 2002, the Corporation has used a generational mortality table to determine the duration of its pension and other postretirement obligations.

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The Corporation bases the determination of pension expense on a market-related valuation of plan assets that reduces year-to-year volatility. This market-related valuation recognizes investment gains or losses over a five-year period from the year in which they occur. Investment gains or losses for this purpose represent the difference between the expected return calculated using the market-related value of plan assets and the actual return based on the market value of plan assets. Since the market-related value of plan assets recognizes gains or losses over a five-year period, the future value of plan assets will be impacted when previously deferred gains or losses are recorded. Over the life of the plan, both gains and losses have been recognized and amortized. At December 31, 2017, \$12 million of net losses remain to be recognized in the calculation of the market-related value of plan assets. These net losses will result in increases in future pension expense as they are recognized in the market-related value of assets.

The net decrease in the market-related value of assets due to the recognition of prior gains (losses) is presented in the following table:

<b>Net Decrease in Market-Related Asset Value due to Recognition of Prior Gains (Losses)</b>	
In millions	
2018	\$ (15)
2019	(31)
2020	12
2021	22
Total	\$ (12)

Based on the 2018 pension assumptions and changes in the market-related value of assets, the Corporation expects net periodic benefit cost to increase approximately \$17 million for pension and other postretirement benefits in 2018 compared with 2017. The increase in net periodic benefit cost is primarily due to the impact of lower discount rates and the resulting increase in amortization of actuarial losses.

A 25 basis point adjustment in the long-term return on assets assumption would change total pension expense for 2018 by \$8 million. A 25 basis point adjustment in the discount rate assumption would have an immaterial impact on the total pension expense for 2018.

**Income Taxes**

Deferred tax assets and liabilities are determined based on temporary differences between the financial reporting and tax bases of assets and liabilities, applying enacted tax rates expected to be in effect for the year in which the differences are expected to reverse. Based on the evaluation of available evidence, both positive and negative, the Corporation recognizes future tax benefits, such as net operating loss carryforwards and tax credit carryforwards, to the extent that realizing these benefits is considered more likely than not.

At December 31, 2017, the Corporation had a net deferred tax asset balance of \$511 million, after valuation allowances of \$19 million. In evaluating the ability to realize the deferred tax assets, the Corporation relies on, in order of increasing subjectivity, taxable income in prior carryback years, the future reversals of existing taxable temporary differences, tax planning strategies and forecasted taxable income using historical and projected future operating results.

At December 31, 2017, the Corporation had deferred tax assets for tax loss and tax credit carryforwards of \$47 million of which \$30 million is subject to expiration in the years 2018 through 2022. In order to realize these deferred tax assets for tax loss and tax credit carryforwards, the Corporation needs taxable income of approximately \$1,538 million across multiple jurisdictions. The taxable income needed to realize the deferred tax assets for tax loss and tax credit carryforwards that are subject to expiration between 2018 through 2022 is \$618 million.

The Corporation recognizes the financial statement effects of an uncertain tax position when it is more likely than not, based on technical merits, that the position will be sustained upon examination. At December 31, 2017, the Corporation had a liability for uncertain tax positions of \$1 million.

The Corporation accrues for non-income tax contingencies when it is probable that a liability to a taxing authority has been incurred and the amount of the contingency can be reasonably estimated. At December 31, 2017, the Corporation had an immaterial tax contingency reserve.

On December 22, 2017, The Act was enacted, making significant changes to the U.S. tax law. The SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118"), which provides guidance on accounting for the tax effects of The Act for which the accounting

under Accounting Standards Codification 740, "Income Taxes" ("ASC 740") is incomplete. To the extent that a company's accounting for certain income tax effects of The Act is incomplete, but it is able to determine a reasonable estimate, it must record a provisional estimate in the financial statements. The provisional amounts, and adjustments identified in the measurement period, are recorded to the provision for income taxes on continuing operations in the period the amounts are determined. In accordance with SAB 118, income tax effects of The Act may be refined upon obtaining, preparing or analyzing additional information during the measurement period and such changes could be material. SAB 118 provides that the measurement period is complete when a company's accounting is complete and in no circumstances should the measurement period extend beyond one year from the enactment date. If a company cannot determine a provisional estimate to be included in the financial statements, it should continue to apply ASC 740 on the basis of the provisions of the tax laws that were in effect immediately before enactment of The Act. For additional information, see Notes 1 and 7 to the Consolidated Financial Statements.

## **Environmental Matters**

### ***Environmental Policies***

The Corporation is committed to world-class environmental, health and safety ("EH&S") performance, as demonstrated by a long-standing commitment to RESPONSIBLE CARE®, as well as a strong commitment to achieve the Corporation's 2025 Sustainability Goals - goals that set the standard for sustainability in the chemical industry by focusing on improvements in UCC's local corporate citizenship and product stewardship, and by actively pursuing methods to reduce the Corporation's environmental impact.

The EH&S management system ("EMS") defines the "who, what, when and how" needed for the businesses to achieve the policies, requirements, performance objectives, leadership expectations and public commitments. EMS is also designed to minimize the long-term cost of environmental protection and to comply with applicable laws and regulations. To ensure effective utilization, EMS is integrated into a company-wide management system for EH&S, Operations, Quality and Human Resources, including implementation of the global EH&S Work Process to improve EH&S performance and to ensure ongoing compliance worldwide.

UCC first works to eliminate or minimize the generation of waste and emissions at the source through research, process design, plant operations and maintenance. Next, UCC finds ways to reuse and recycle materials. Finally, unusable or non-recyclable hazardous waste is treated before disposal to eliminate or reduce the hazardous nature and volume of the waste. Treatment may include destruction by chemical, physical, biological or thermal means. Disposal of waste materials in landfills is considered only after all other options have been thoroughly evaluated. UCC has specific requirements for waste that is transferred to non-UCC facilities, including the periodic auditing of these facilities.

### ***Chemical Security***

Public and political attention continues to be placed on the protection of U.S. critical infrastructure, including the chemical industry, from security threats. Terrorist attacks and natural disasters have increased concern about the security and safety of chemical production and distribution. The focus on security is not new to UCC. UCC continues to improve its security plans, placing emphasis on the safety of UCC communities and people by being prepared to meet risks at any level and to address both internal and external identifiable risks. UCC's security plans are also developed to avert interruptions of normal business operations, which could have a material impact on the Corporation's results of operations, liquidity and financial condition.

UCC is a RESPONSIBLE CARE® company and adheres to the RESPONSIBLE CARE® Security Code, which requires that all aspects of security - including facility, transportation, and cyberspace - be assessed and gaps addressed. Through global implementation of the Security Code, including voluntary security enhancements and upgrades made since 2002, UCC has permanently heightened the level of security - not just in the United States, but worldwide. In addition, UCC uses a risk-based approach employing the U.S. Government's Sandia National Labs methodology to repeatedly assess the risks to sites, systems and processes. UCC has expanded its comprehensive Distribution Risk Review process that had been in place for decades to address potential threats in all modes of transportation across its supply chain. To reduce vulnerabilities, UCC maintains security measures that meet or exceed regulatory and industry security standards in all areas in which UCC operates. Assessment and improvement costs are not considered material to the Corporation's consolidated financial statements.

## **Climate Change**

Climate change matters for UCC are driven by changes in regulatory matters and physical climate parameters.

### **Regulatory Matters**

Regulatory matters include cap and trade schemes, increased greenhouse gas ("GHG") limits, and taxes on GHG emissions, fuel and energy. The potential implications of each of these matters are all very similar, including increased cost of purchased energy, additional capital costs for installation or modification of GHG emitting equipment, and additional costs associated directly with GHG emissions (such as cap and trade systems or carbon taxes), which are primarily related to energy use. It is difficult to estimate the potential impact of these regulatory matters on energy prices.

Reducing UCC's overall energy usage and GHG emissions through new and unfolding projects will decrease the potential impact of these regulatory matters. The Corporation has not experienced any material impact related to regulated GHG emissions.

### **Physical Climate Parameters**

Many scientific academies throughout the world have concluded that it is very likely that human activities are contributing to global warming. At this point, it is difficult to predict and assess the probability and opportunity of a global warming trend on UCC specifically. Preparedness plans are developed that detail actions needed in the event of severe weather. These measures have historically been in place and these activities and associated costs are driven by normal operational preparedness. UCC continues to study the long-term implications of changing climate parameters or water availability, plant siting issues, and impacts and opportunities for products.

The Corporation continues to elevate its internal focus and external positions to focus on the root cause of GHG emissions, including the sustainable use of energy. Through corporate energy efficiency programs and focused GHG management efforts, the Corporation has and is continuing to reduce its GHG emissions footprint.

### **Environmental Remediation**

UCC accrues the costs of remediation of its facilities and formerly owned facilities based on current law and existing technologies. The nature of such remediation includes, for example, the management of soil and groundwater contamination. The policies adopted to properly reflect the monetary impacts of environmental matters are discussed in Note 1 to the Consolidated Financial Statements. To assess the impact on the consolidated financial statements, environmental experts review currently available facts to evaluate the probability and scope of potential liabilities. Inherent uncertainties exist in such evaluations primarily due to unknown environmental conditions, changing governmental regulations and legal standards regarding liability, and emerging remediation technologies. These liabilities are adjusted periodically as remediation efforts progress or as additional technical or legal information becomes available. In the fourth quarter of 2016, the Corporation recorded an adjustment to the environmental accrual, primarily resulting from the culmination of negotiations with regulators and/or final stages of certain remediation projects. These charges were included in "Cost of sales" in the consolidated statements of income. The Corporation had an accrued liability of \$95 million at December 31, 2017 and \$125 million at December 31, 2016, related to the remediation of current or former UCC-owned sites.

In addition to current and former UCC-owned sites, under the Federal Comprehensive Environmental Response, Compensation and Liability Act and equivalent state laws (hereafter referred to collectively as "Superfund Law"), UCC is liable for remediation of other hazardous waste sites where UCC allegedly disposed of, or arranged for the treatment or disposal of, hazardous substances. Because Superfund Law imposes joint and several liability upon each party at a site, UCC has evaluated its potential liability in light of the number of other companies that also have been named potentially responsible parties ("PRPs") at each site, the estimated apportionment of costs among all PRPs, and the financial ability and commitment of each to pay its expected share. Management's estimate of the Corporation's remaining liability for the remediation of Superfund sites was \$19 million at December 31, 2017 and \$20 million at December 31, 2016, which has been accrued, although the ultimate cost with respect to these sites could exceed that amount. The Corporation has not recorded any third-party recovery related to these sites as a receivable.

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Information regarding environmental sites is provided below:

Environmental Sites	UCC-owned Sites <sup>1</sup>		Superfund Sites <sup>2</sup>	
	2017	2016	2017	2016
Number of sites at Jan 1	26	27	70	67
Sites added during year	—	—	1	4
Sites closed during year	(1)	(1)	(2)	(1)
Number of sites at Dec 31	25	26	69	70

1. UCC-owned sites are sites currently or formerly owned by UCC. In the United States, remediation obligations are imposed by the Resource Conservation and Recovery Act or analogous state law.

2. Superfund sites are sites, including sites not owned by UCC, where remediation obligations are imposed by Superfund Law.

In total, the Corporation's accrued liability for probable environmental remediation and restoration costs was \$114 million at December 31, 2017, compared with \$145 million at December 31, 2016. This is management's best estimate of the costs for remediation and restoration with respect to environmental matters for which the Corporation has accrued liabilities, although it is reasonably possible that the ultimate cost with respect to these particular matters could range up to approximately three times that amount. Consequently, it is reasonably possible that environmental remediation and restoration costs in excess of amounts accrued could have a material impact on the Corporation's results of operations, financial condition and cash flows. It is the opinion of the Corporation's management, however, that the possibility is remote that costs in excess of the range disclosed will have a material impact on the Corporation's results of operations, financial condition and cash flows.

The amounts charged to income on a pretax basis related to environmental remediation totaled \$36 million in 2017, \$122 million in 2016 and \$58 million in 2015. The amounts charged to income on a pretax basis related to operating the Corporation's pollution abatement facilities, excluding internal recharges, totaled \$113 million in 2017, \$103 million in 2016 and \$96 million in 2015. Capital expenditures for environmental protection were \$9 million in 2017, \$10 million in 2016 and \$14 million in 2015.

**Asbestos-Related Matters**

The Corporation is and has been involved in a large number of asbestos-related suits filed primarily in state courts during the past four decades. These suits principally allege personal injury resulting from exposure to asbestos-containing products and frequently seek both actual and punitive damages. The alleged claims primarily relate to products that UCC sold in the past, alleged exposure to asbestos-containing products located on UCC's premises, and UCC's responsibility for asbestos suits filed against a former subsidiary, Amchem. In many cases, plaintiffs are unable to demonstrate that they have suffered any compensable loss as a result of such exposure, or that injuries incurred in fact resulted from exposure to UCC's products.

The table below provides information regarding asbestos-related claims pending against the Corporation and Amchem based on criteria developed by UCC and its external consultants. UCC had a significant increase in the number of claims settled, dismissed or otherwise resolved in 2015, resulting from a detailed review of the status of individual claims and an update to criteria used to classify claims.

Asbestos-Related Claim Activity	2017	2016	2015
Claims unresolved at Jan 1	16,141	18,778	26,116
Claims filed	7,010	7,813	7,544
Claims settled, dismissed or otherwise resolved	(7,724)	(10,450)	(14,882)
Claims unresolved at Dec 31	15,427	16,141	18,778
Claimants with claims against both UCC and Amchem	(5,530)	(5,741)	(6,804)
Individual claimants at Dec 31	9,897	10,400	11,974

Plaintiffs' lawyers often sue numerous defendants in individual lawsuits or on behalf of numerous claimants. As a result, the damages alleged are not expressly identified as to UCC, Amchem or any other particular defendant, even when specific damages are alleged with respect to a specific disease or injury. In fact, there are no asbestos personal injury cases in which only the Corporation and/or Amchem are the sole named defendants. For these reasons and based upon the Corporation's litigation and settlement experience, the Corporation does not consider the damages alleged against it and Amchem to be a meaningful factor in its determination of any potential asbestos-related liability.

For additional information, see Part I, Item 3. Legal Proceedings and Asbestos-Related Matters in Notes 1 and 14 to the Consolidated Financial Statements.

**Debt Covenants and Default Provisions**

The Corporation's outstanding public debt has been issued under indentures which contain, among other provisions, covenants that the Corporation must comply with while the underlying notes are outstanding. Such covenants are typically based on the Corporation's size and financial position and include, subject to the exceptions and qualifications contained in the indentures, obligations not to (i) allow liens on principal U.S. manufacturing facilities, (ii) enter into sale and lease-back transactions with respect to principal U.S. manufacturing facilities, or (iii) merge into or consolidate with any other entity or sell or convey all or substantially all of its assets. Failure of the Corporation to comply with any of these covenants could, after the passage of any applicable grace period, result in a default under the applicable indenture which would allow the note holders to accelerate the due date of the outstanding principal and accrued interest on the subject notes. Management believes the Corporation was in compliance with the covenants referred to above at December 31, 2017.

**ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

UCC's business operations give rise to market risk exposure due to changes in foreign exchange rates and interest rates. To manage such risks effectively, the Corporation can enter into hedging transactions, pursuant to established guidelines and policies that enable it to mitigate the adverse effects of financial market risk. The Corporation does not hold derivative financial instruments for trading purposes.

As a result of investments, production facilities and other operations on a global basis, the Corporation has assets, liabilities and cash flows in currencies other than the U.S. dollar. The primary objective of the Corporation's foreign exchange risk management is to optimize the U.S. dollar value of net assets and cash flows, keeping the adverse impact of currency movements to a minimum. To achieve this objective, the Corporation will hedge, when appropriate, on a net exposure basis using foreign currency forward contracts, over-the-counter option contracts, cross-currency swaps and nonderivative instruments in foreign currencies. The main exposures are related to assets, liabilities and cash flows denominated in the currencies of Europe, Asia Pacific and Canada.

The main objective of interest rate risk management is to reduce the total funding cost to the Corporation and to alter the interest rate exposure to the desired risk profile. The Corporation's primary exposure is to the U.S. dollar yield curve. UCC will use interest rate swaps and "swaptions," when appropriate, to accomplish this objective.

UCC uses value-at-risk ("VAR"), stress testing and scenario analysis for risk measurement and control purposes. VAR estimates the maximum potential loss in fair market values given a certain move in prices over a certain period of time, using specified confidence levels. The VAR methodology used by the Corporation is a variance/covariance model. This model uses a 97.5 percent confidence level and includes at least one year of historical data. The 2017 and 2016 year-end and average daily VAR for the aggregate of all positions are shown below:

<b>Total Daily VAR at Dec 31</b>	<i>2017</i>		<i>2016</i>	
	<i>Year-end</i>	<i>Average</i>	<i>Year-end</i>	<i>Average</i>
In millions				
Interest rate	\$ 3	\$ 3	\$ 3	\$ 3

**ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

*To the Board of Directors and Stockholder of Union Carbide Corporation*

**Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of Union Carbide Corporation and subsidiaries (the "Corporation") as of December 31, 2017 and 2016, the related consolidated statements of income, comprehensive income, equity, and cash flows, for each of the three years in the period ended December 31, 2017, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Corporation as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with accounting principles generally accepted in the United States of America.

**Change in Accounting Principle**

As discussed in Note 14 to the financial statements, in the fourth quarter of 2016, the Corporation changed its accounting policy from expensing asbestos-related defense and processing costs as incurred to the accrual of asbestos-related defense and processing costs when probable of occurring and estimable.

**Basis for Opinion**

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Corporation is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Corporation's internal control over financial reporting. Accordingly, we express no such opinion.

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

/s/ DELOITTE & TOUCHE LLP

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Deloitte & Touche LLP  
Midland, Michigan  
February 15, 2018

We have served as the Corporation's auditor since 2001.

**Union Carbide Corporation and Subsidiaries**  
**Consolidated Statements of Income**

(In millions) For the years ended Dec 31,	2017	2016	2015
Net trade sales	\$ 143	\$ 108	\$ 87
Net sales to related companies	5,022	4,811	5,755
<b>Total Net Sales</b>	<b>5,165</b>	<b>4,919</b>	<b>5,842</b>
Cost of sales	4,176	3,713	4,506
Research and development expenses	19	18	20
Selling, general and administrative expenses	6	7	8
Asbestos-related charge	—	1,113	—
Restructuring and asset related charges - net	74	4	19
Integration and separation costs	1	—	—
Equity in earnings of a nonconsolidated affiliate	—	2	4
Sundry income (expense) - net	(11)	16	(22)
Interest expense and amortization of debt discount	28	25	28
<b>Income Before Income Taxes</b>	<b>850</b>	<b>57</b>	<b>1,243</b>
Provision (Credit) for income taxes	645	(32)	435
<b>Net Income Attributable to Union Carbide Corporation</b>	<b>\$ 205</b>	<b>\$ 89</b>	<b>\$ 808</b>

*See Notes to the Consolidated Financial Statements.*

**Union Carbide Corporation and Subsidiaries**  
**Consolidated Statements of Comprehensive Income**

(In millions) For years ended Dec 31,	<i>2017</i>	<i>2016</i>	<i>2015</i>
Net Income Attributable to Union Carbide Corporation	\$ 205	\$ 89	\$ 808
Other Comprehensive Income (Loss), Net of Tax			
Cumulative translation adjustments	3	(1)	2
Pension and other postretirement benefit plans	(35)	(91)	13
Total other comprehensive income (loss)	(32)	(92)	15
Comprehensive Income (Loss) Attributable to Union Carbide Corporation	\$ 173	\$ (3)	\$ 823

*See Notes to the Consolidated Financial Statements.*

**Union Carbide Corporation and Subsidiaries**  
**Consolidated Balance Sheets**

(In millions, except share amounts) At Dec 31,	2017	2016
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash equivalents	\$ 13	\$ 11
Accounts receivable:		
Trade (net of allowance for doubtful receivables 2017: \$-; 2016: \$-)	21	15
Related companies	972	843
Other	50	36
Income taxes receivable	281	275
Notes receivable from related companies	1,238	1,411
Inventories	278	307
Other current assets	35	39
<b>Total current assets</b>	<b>2,888</b>	<b>2,937</b>
<b>Investments</b>		
Investments in related companies	639	639
Investment in nonconsolidated affiliate	—	14
Other investments	25	30
Noncurrent receivables	62	52
Noncurrent receivables from related companies	54	57
<b>Total investments</b>	<b>780</b>	<b>792</b>
<b>Property</b>		
Property	7,309	7,144
Less accumulated depreciation	5,930	5,750
<b>Net property</b>	<b>1,379</b>	<b>1,394</b>
<b>Other Assets</b>		
Intangible assets (net of accumulated amortization 2017: \$82; 2016: \$78)	25	25
Deferred income tax assets	511	928
Deferred charges and other assets	36	70
<b>Total other assets</b>	<b>572</b>	<b>1,023</b>
<b>Total Assets</b>	<b>\$ 5,619</b>	<b>\$ 6,146</b>
<b>Liabilities and Equity</b>		
<b>Current Liabilities</b>		
Notes payable to related companies	\$ 28	\$ 25
Long-term debt due within one year	1	1
Accounts payable:		
Trade	270	249
Related companies	684	521
Other	22	7
Income taxes payable	24	23
Asbestos-related liabilities - current	132	126
Accrued and other current liabilities	174	181
<b>Total current liabilities</b>	<b>1,335</b>	<b>1,133</b>
<b>Long-Term Debt</b>	<b>474</b>	<b>475</b>
<b>Other Noncurrent Liabilities</b>		
Pension and other postretirement benefits - noncurrent	1,054	1,170
Asbestos-related liabilities - noncurrent	1,237	1,364
Other noncurrent obligations	151	206
<b>Total other noncurrent liabilities</b>	<b>2,442</b>	<b>2,740</b>
<b>Stockholders' Equity</b>		
Common stock (authorized: 1,000 shares of \$0.01 par value each; issued: 935.51 shares)	—	—
Additional paid-in capital	138	138
Retained earnings	2,582	2,980
Accumulated other comprehensive loss	(1,352)	(1,320)

Union Carbide Corporation's stockholders' equity	1,368	1,798
Total Liabilities and Equity	\$ 5,619	\$ 6,146

*See Notes to the Consolidated Financial Statements.*

**Union Carbide Corporation and Subsidiaries**  
**Consolidated Statements of Cash Flows**

(In millions) For the years ended Dec 31,	2017	2016	2015
<b>Operating Activities</b>			
Net Income Attributable to Union Carbide Corporation	\$ 205	\$ 89	\$ 808
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	200	190	184
Provision (credit) for deferred income tax	414	(297)	(44)
Earnings of nonconsolidated affiliate in excess of dividends received	—	(1)	(1)
Net gain on sales of property and investments	(26)	(51)	(7)
Net gain on sale of ownership interest in nonconsolidated affiliate	(4)	—	—
Net gain on ownership transfer of property	—	—	(23)
Asbestos-related charge	—	1,113	—
Restructuring and asset related charges - net	74	4	19
Net periodic pension benefit cost	28	27	68
Pension contributions	(162)	(52)	(2)
Other, net	—	(1)	1
Changes in assets and liabilities:			
Accounts and notes receivable	7	(7)	39
Related company receivables	44	132	191
Inventories	29	(4)	62
Accounts payable	36	18	(22)
Related company payables	166	45	(413)
Asbestos-related payments	(121)	(61)	(76)
Other assets and liabilities	(112)	(457)	569
Cash provided by operating activities	778	687	1,353
<b>Investing Activities</b>			
Capital expenditures	(223)	(267)	(270)
Proceeds from sale of ownership interest in nonconsolidated affiliate	22	—	—
Changes in noncurrent receivable from related company	3	5	69
Proceeds from sales of property	18	60	40
Cash acquired in ownership transfer of property	—	—	5
Purchases of investments	(1)	(1)	(27)
Proceeds from sales of investments	9	5	1
Cash used for investing activities	(172)	(198)	(182)
<b>Financing Activities</b>			
Dividends paid to stockholder	(603)	(500)	(1,170)
Payments on long-term debt	(1)	(1)	(1)
Cash used for financing activities	(604)	(501)	(1,171)
<b>Summary</b>			
Increase (Decrease) in cash and cash equivalents	2	(12)	—
Cash and cash equivalents at beginning of year	11	23	23
Cash and cash equivalents at end of year	\$ 13	\$ 11	\$ 23
<b>Supplemental Cash Flow Information</b>			
Cash paid (refunded) for:			
Interest, net of amounts capitalized	\$ 37	\$ 38	\$ 39
Income taxes	\$ 254	\$ 697	\$ (125)

See Notes to the Consolidated Financial Statements.

**Union Carbide Corporation and Subsidiaries**  
**Consolidated Statements of Equity**

(In millions)	<i>Common Stock</i>	<i>Additional Paid-in Capital</i>	<i>Retained Earnings</i>	<i>Accum. Other Comp Loss</i>	<i>Total Equity</i>
<b>2015</b>					
Balance at Jan 1, 2015	\$ —	\$ 312	\$ 3,740	\$ (1,243)	\$ 2,809
Net income attributable to Union Carbide Corporation	—	—	808	—	808
Other comprehensive income	—	—	—	15	15
Dividends declared	—	—	(1,170)	—	(1,170)
Shares acquired for constructive retirement	—	(174)	—	—	(174)
Other	—	—	13	—	13
Balance at Dec 31, 2015	\$ —	\$ 138	\$ 3,391	\$ (1,228)	\$ 2,301
<b>2016</b>					
Net income attributable to Union Carbide Corporation	—	—	89	—	89
Other comprehensive loss	—	—	—	(92)	(92)
Dividends declared	—	—	(500)	—	(500)
Balance at Dec 31, 2016	\$ —	\$ 138	\$ 2,980	\$ (1,320)	\$ 1,798
<b>2017</b>					
Net income attributable to Union Carbide Corporation	—	—	205	—	205
Other comprehensive loss	—	—	—	(32)	(32)
Dividends declared	—	—	(603)	—	(603)
Balance at Dec 31, 2017	\$ —	\$ 138	\$ 2,582	\$ (1,352)	\$ 1,368

See Notes to the Consolidated Financial Statements.

**Union Carbide Corporation and Subsidiaries**  
**Notes to the Consolidated Financial Statements**

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**NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**Principles of Consolidation and Basis of Presentation**

Except as otherwise indicated by the context, the terms "Corporation" and "UCC" as used herein mean Union Carbide Corporation and its consolidated subsidiaries. The accompanying consolidated financial statements of the Corporation were prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and include the assets, liabilities, revenues and expenses of all majority-owned subsidiaries over which the Corporation exercises control and, when applicable, entities for which the Corporation has a controlling financial interest. Intercompany transactions and balances are eliminated in consolidation. Investments in nonconsolidated affiliates (20-50 percent owned companies, joint ventures and partnerships) are accounted for using the equity method.

The Corporation is a wholly owned subsidiary of The Dow Chemical Company ("Dow"). In accordance with the accounting requirements for wholly owned subsidiaries, the presentation of earnings per share is not required and therefore is not provided.

The Corporation's business activities comprise components of Dow's global operations rather than stand-alone operations. Dow conducts its worldwide operations through principal product groups. Because there are no separable reportable business segments for UCC under the accounting guidance related to segment reporting and no detailed business information is provided to a chief operating decision maker regarding the Corporation's stand-alone operations, the Corporation's results are reported as a single operating segment.

Effective August 31, 2017, pursuant to the merger of equals transaction contemplated by the Agreement and Plan of Merger, dated as of December 11, 2015, as amended on March 31, 2017, Dow and E. I. du Pont de Nemours and Company ("DuPont") each merged with subsidiaries of DowDuPont Inc. ("DowDuPont") and, as a result, Dow and DuPont became subsidiaries of DowDuPont (the "Merger"). See Note 3 for additional information.

### **Use of Estimates in Financial Statement Preparation**

The preparation of financial statements in accordance with U.S. GAAP requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. The Corporation's consolidated financial statements include amounts that are based on management's best estimates and judgments. Actual results could differ from those estimates.

### **Related Companies**

Transactions with the Corporation's parent company, Dow, and other subsidiaries of Dow and DowDuPont have been reflected as related company transactions in the consolidated financial statements.

### **Significant Accounting Policies**

#### *Asbestos-Related Matters*

Accruals for asbestos-related matters, including defense and processing costs, are recorded based on an analysis of claim and resolution activity, defense spending and pending and future claims. These accruals are assessed at each balance sheet date to determine if the asbestos-related liability remains appropriate. Accruals for asbestos-related matters are included in the consolidated balance sheets in "Asbestos-related liabilities - current" and "Asbestos-related liabilities - noncurrent."

This accounting policy was added in the fourth quarter of 2016. See Note 14 for additional information.

#### *Legal Costs*

The Corporation expenses legal costs as incurred, with the exception of defense and processing costs associated with asbestos-related matters.

#### *Foreign Currency Translation*

While the Corporation's consolidated subsidiaries are primarily based in the United States, the Corporation has small subsidiaries in Asia Pacific and the rest of the world. For those subsidiaries, the local currency has been primarily used as the functional currency. Translation gains and losses of those operations that use local currency as the functional currency are included in the consolidated balance sheets in "Accumulated other comprehensive loss" ("AOCL"). Where the U.S. dollar is used as the functional currency, foreign currency gains and losses are reflected in income.

#### *Environmental Matters*

Accruals for environmental matters are recorded when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated based on current law and existing technologies. These accruals are adjusted periodically as assessment and remediation efforts progress or as additional technical or legal information becomes available. Accruals for environmental liabilities are included in the consolidated balance sheets in "Accrued and other current liabilities" and "Other noncurrent obligations" at undiscounted amounts. Accruals for related insurance or other third-party recoveries for environmental liabilities are recorded when it is probable that a recovery will be realized and are included in the consolidated balance sheets in "Accounts receivable - Other."

Environmental costs are capitalized if the costs extend the life of the property, increase its capacity, and/or mitigate or prevent contamination from future operations. Environmental costs are also capitalized in recognition of legal asset retirement obligations resulting from the acquisition, construction and/or normal operation of a long-lived asset. Costs related to environmental contamination treatment and cleanup are charged to expense. Estimated future incremental operations, maintenance and management costs directly related to remediation are accrued when such costs are probable and reasonably estimable.

#### *Cash and Cash Equivalents*

Cash and cash equivalents include time deposits and investments with maturities of three months or less at the time of purchase.

#### *Financial Instruments*

The Corporation calculates the fair value of financial instruments using quoted market prices when available. When quoted market prices are not available for financial instruments, the Corporation uses standard pricing models with market-based inputs that take into account the present value of estimated future cash flows.

#### *Inventories*

Inventories are stated at the lower of cost or net realizable value. The method of determining cost for each subsidiary varies among last-in, first-out ("LIFO"); first-in, first-out ("FIFO"); and average cost, and is used consistently from year to year.

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The Corporation routinely exchanges and swaps raw materials and finished goods with other companies to reduce delivery time, freight and other transportation costs. These transactions are treated as non-monetary exchanges and are valued at cost.

### *Property*

Land, buildings and equipment, including property under capital lease agreements, are carried at cost less accumulated depreciation. Depreciation is based on the estimated service lives of depreciable assets and is calculated using the straight-line method. Fully depreciated assets are retained in property and accumulated depreciation accounts until they are removed from service. In the case of disposals, assets and related accumulated depreciation are removed from the accounts, and the net amounts, less proceeds from disposal, are included in income.

### *Impairment and Disposal of Long-Lived Assets*

The Corporation evaluates long-lived assets and certain identifiable intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. When undiscounted future cash flows are not expected to be sufficient to recover an asset's carrying amount, the asset is written down to its fair value based on bids received from third parties or a discounted cash flow analysis based on market participant assumptions.

Long-lived assets to be disposed of by sale, if material, are classified as held for sale and reported at the lower of carrying amount or fair value less cost to sell, and depreciation is ceased. Long-lived assets to be disposed of other than by sale are classified as held and used until they are disposed of and reported at the lower of carrying amount or fair value, and depreciation is recognized over the remaining useful life of the assets.

### *Other Intangible Assets*

Finite-lived intangible assets such as purchased customer lists, developed technology, patents, trademarks and software, are amortized over their estimated useful lives, generally on a straight-line basis for periods ranging primarily from three to twenty years.

### *Investments in Related Companies*

Investments in related companies consist of the Corporation's ownership interests in Dow subsidiaries located in North America and Latin America. The Corporation accounts for these investments using the cost method as it does not have significant influence over the operating and financial policies of these related companies.

### *Revenue*

Substantially all of the Corporation's revenues are generated by sales to Dow. Approximately 99 percent of the Corporation's sales are related to sales of product (99 percent in 2016 and 99 percent in 2015); the remaining 1 percent is related to the licensing of patents and technology (1 percent in 2016 and 1 percent in 2015).

Revenue for product sales to related companies is recognized as risk and title to the product transfer to the related company, which occurs either at the time production is complete or free on board ("FOB") UCC's manufacturing facility, in accordance with the sales agreement between the Corporation and Dow.

Revenue for product sales to trade customers is recognized as risk and title to the product transfer to the customer, which for trade sales, usually occurs at the time shipment is made. As such, title to the product passes when the product is delivered to the freight carrier. UCC's standard terms of delivery are included in its contracts of sale, order confirmation documents and invoices. Freight costs and any directly related costs of transporting finished product to customers are recorded as "Cost of sales" in the consolidated statements of income.

Revenue related to the initial licensing of patents and technology is recognized when earned; revenue related to running royalties is recognized according to licensee production levels.

### *Severance Costs*

Management routinely reviews its operations around the world in an effort to ensure competitiveness across its operations and geographic regions. When the reviews result in a workforce reduction related to the shutdown of facilities or other optimization activities, severance benefits are provided to employees primarily under ongoing benefit arrangements. These severance costs are accrued once management commits to a plan of termination and it becomes probable that employees will be entitled to benefits at amounts that can be reasonably estimated.

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*Integration and Separation Costs*

The Corporation classifies expenses related to the Merger as integration and separation costs. Merger-related costs include: costs incurred to prepare for and close the Merger, post-Merger integration expenses and costs incurred to prepare for the separation of Dow's agriculture business, specialty products business and materials science business.

This accounting policy was added in the third quarter of 2017 as a result of the Merger.

*Income Taxes*

The Corporation accounts for income taxes using the asset and liability method. Under this method, deferred tax assets and liabilities are recognized for the future tax consequences of temporary differences between the carrying amounts and tax bases of assets and liabilities using enacted tax rates. The effect of a change in tax rates on deferred tax assets or liabilities is recognized in income in the period that includes the enactment date. The Corporation is included in the same consolidated federal income tax group and consolidated income tax return as Dow. The Corporation accounts for its income taxes following the formula in the Dow-UCC Tax Sharing Agreement used to compute the amount due to Dow or UCC for UCC's share of taxable income and tax attributes on the consolidated income tax return. This method generally follows the separate return method. The amounts reported as income taxes payable or receivable represent the Corporation's payment obligation (or refundable amount) to Dow based on a theoretical tax liability calculated on a separate return method.

The Corporation recognizes the financial statement effects of an uncertain income tax position when it is more likely than not, based on the technical merits, that the position will be sustained upon examination. The Corporation accrues for non-income tax contingencies when it is probable that a liability to a taxing authority has been incurred and the amount of the contingency can be reasonably estimated.

Provision is made for taxes on undistributed earnings of foreign subsidiaries and related companies to the extent that such earnings are not deemed to be permanently invested.

**Changes in Financial Statement Presentation**

*Consolidated Statements of Income*

In the third quarter of 2017, the Corporation changed the presentation of certain line items on the face of the consolidated statements of income to conform to the presentation that was adopted for DowDuPont. Costs associated with integration and separation activities are now separately reported as "Integration and separation costs" and "Interest income" has been reclassified to "Sundry income (expense) - net." The following table summarizes the changes made to the consolidated statements of income for the years ended December 31, 2016 and 2015:

Summary of Changes to the Consolidated Statements of Income	2016		2015	
	As Filed	Updated	As Filed	Updated
In millions				
Sundry income (expense) - net	\$ 2	\$ 16	\$ (30)	\$ (22)
Interest income	\$ 14	\$ —	\$ 8	\$ —

*Consolidated Statements of Cash Flows*

In the first quarter of 2017, the Corporation made a change to the consolidated statements of cash flows to include a new line under "Operating Activities" entitled "Asbestos-related payments." The new line captures cash payments made for asbestos-related claim and resolution activity as well as asbestos-related defense and processing costs (effective as of the fourth quarter of 2016 as a result of an accounting policy change).

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In the third quarter of 2017, the Corporation changed the presentation to the consolidated statements of cash flows to conform to the presentation that was adopted for DowDuPont. "Net periodic pension benefit cost" is now separately reported and has been reclassified from "Other assets and liabilities." The following table summarizes the changes made to the consolidated statements of cash flows for the years ended December 31, 2016 and 2015:

Summary of Changes to the Consolidated Statements of Cash Flows In millions	2016		2015	
	As Filed	Updated	As Filed	Updated
Operating Activities				
Net periodic pension benefit cost	\$ —	\$ 27	\$ —	\$ 68
Asbestos-related payments	\$ —	\$ (61)	\$ —	\$ (76)
Other assets and liabilities	\$ (491)	\$ (457)	\$ 561	\$ 569

**NOTE 2 - RECENT ACCOUNTING GUIDANCE**

**Accounting Guidance Issued But Not Adopted at December 31, 2017**

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, "Revenue from Contracts with Customers (Topic 606)," which is the new comprehensive revenue recognition standard that will supersede all existing revenue recognition guidance under U.S. GAAP. The standard's core principle is that a company will recognize revenue when it transfers promised goods or services to a customer in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. ASU 2015-14, "Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date," which was issued in August 2015, revised the effective date for this ASU to annual and interim periods beginning on or after December 15, 2017, with early adoption permitted, but not earlier than the original effective date of annual and interim periods beginning on or after December 15, 2016, for public entities. Entities will have the option of using either a full retrospective approach or a modified approach to adopt the guidance in ASU 2014-09.

In May 2014, the FASB and International Accounting Standards Board formed The Joint Transition Resource Group for Revenue Recognition ("TRG"), consisting of financial statement preparers, auditors and users, to seek feedback on potential issues related to the implementation of the new revenue standard. As a result of feedback from the TRG, the FASB issued additional guidance to provide clarification, implementation guidance and practical expedients to address some of the challenges of implementation. In March 2016, the FASB issued ASU 2016-08, "Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net)," which is an amendment on assessing whether an entity is a principal or an agent in a revenue transaction. This amendment addresses issues to clarify the principal versus agent assessment and leads to more consistent application. In April 2016, the FASB issued ASU 2016-10, "Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing," which contains amendments to the new revenue recognition standard on identifying performance obligations and accounting for licenses of intellectual property. The amendments related to identifying performance obligations clarify when a promised good or service is separately identifiable and allows entities to disregard items that are immaterial in the context of a contract. The licensing implementation amendments clarify how an entity should evaluate the nature of its promise in granting a license of intellectual property, which will determine whether revenue is recognized over time or at a point in time. In May 2016, the FASB issued ASU 2016-12, "Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients," which provides clarity and implementation guidance on assessing collectibility, presentation of sales taxes, noncash consideration, and completed contracts and contract modifications at transition. The new standards have the same effective date and transition requirements as ASU 2014-09.

The Corporation analyzed the impact of ASU 2014-09 and the related ASU's across all revenue streams to evaluate the impact of the new standard on revenue contracts. This included reviewing current accounting policies and practices to identify potential differences that would result from applying the requirements under the new standard. The Corporation has completed contract reviews and validated the results of applying the new revenue guidance. The Corporation has finalized its accounting policies, the evaluation of the impact of the accounting and disclosure requirements on its business processes, controls and systems, and is currently drafting new disclosures required post-implementation in 2018. The Corporation will adopt the new standard using the modified retrospective approach, under which the cumulative effect of initially applying the new guidance is recognized as an adjustment to the opening balance of retained earnings in the first quarter of 2018. Based on the completed analysis, the Corporation has determined the adjustment will not have a material impact on the consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)," which requires organizations that lease assets to recognize on the balance sheet the assets and liabilities for the rights and obligations created by those leases. The new guidance requires that a lessee recognize assets and liabilities for leases with lease terms of more than twelve months and recognition, presentation and measurement in the financial statements will depend on its classification as a finance or operating lease. In addition, the new

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guidance will require disclosures to help investors and other financial statement users better understand the amount, timing and uncertainty of cash flows arising from leases. Lessor accounting remains largely unchanged from current U.S. GAAP but does contain some targeted improvements to align with the new revenue recognition guidance issued in 2014. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018, using a modified retrospective approach, and early adoption is permitted. The Corporation has a team in place to evaluate the new guidance and is in the process of implementing a software solution to facilitate the development of business processes and controls around leases to meet the new accounting and disclosure requirements upon adoption in the first quarter of 2019.

In October 2016, the FASB issued ASU 2016-16, "Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory," which requires an entity to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The amendments are effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017, and should be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings at the beginning period of adoption. Early adoption is permitted in the first interim period of an annual reporting period for which financial statements have not been issued. The Corporation will adopt the new guidance in the first quarter of 2018 and the adoption of this guidance will not have a material impact on the consolidated financial statements.

In February 2017, the FASB issued ASU 2017-05, "Other Income - Gains and Losses from the Derecognition of Nonfinancial Assets (Subtopic 610-20): Clarifying the Scope of Asset Derecognition Guidance and Accounting for Partial Sales of Nonfinancial Assets," which clarifies the scope of guidance on nonfinancial asset derecognition in Accounting Standards Codification 610-20 and the accounting for partial sales of nonfinancial assets. The new guidance also conforms the derecognition guidance for nonfinancial assets with the model in the new revenue standard (ASU 2014-09). The new standard is effective for annual reporting periods, and interim periods within those fiscal years, beginning after December 15, 2017, and an entity is required to apply the amendments at the same time that it applies the amendments in ASU 2014-09. The Corporation will apply the new guidance with the implementation of the new revenue standard in the first quarter of 2018 and the adoption of the guidance will not have a material impact on the consolidated financial statements.

In March 2017, the FASB issues ASU 2017-07, "Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost," which amends the requirements related to the income statement presentation of the components of net periodic benefit cost for employer sponsored defined benefit pension and other postretirement benefit plans. Under the new guidance, an entity must disaggregate and present the service cost component of the net periodic benefit cost in the same income statement line item(s) as other employee compensation costs arising from services rendered during the period, and only the service cost component will be eligible for capitalization. Other components of net periodic benefit cost will be presented separately from the line item(s) that includes the service cost. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017. Early adoption is permitted at the beginning of an annual period in which the financial statements have not been issued. Entities must use a retrospective transition method to adopt the requirement for separate presentation of the income statement service cost and other components, and a prospective transition method to adopt the requirement to limit the capitalization of benefit cost to the service component. The Corporation will adopt the new guidance in the first quarter of 2018 using a retrospective transition method to reclassify net periodic benefit cost, other than the service cost component, from "Cost of sales," "Research and development expenses" and "Selling, general and administrative expenses" to "Sundry income (expense) - net" in the consolidated statements of income.

### **NOTE 3 - MERGER WITH DUPONT**

Effective August 31, 2017, Dow and DuPont completed the previously announced merger of equals transaction contemplated by the Agreement and Plan of Merger, dated as of December 11, 2015, as amended on March 31, 2017 (the "Merger Agreement"), by and among Dow, DuPont, DowDuPont, Diamond Merger Sub, Inc. and Orion Merger Sub, Inc. Pursuant to the Merger Agreement, (i) Diamond Merger Sub, Inc. was merged with and into Dow, with Dow surviving the merger as a subsidiary of DowDuPont (the "Diamond Merger") and (ii) Orion Merger Sub, Inc. was merged with and into DuPont, with DuPont surviving the merger as a subsidiary of DowDuPont (the "Orion Merger" and, together with the Diamond Merger, the "Mergers"). Following the consummation of the Mergers, each of Dow and DuPont became subsidiaries of DowDuPont (collectively, the "Merger"). Following the Merger, Dow and DuPont intend to pursue, subject to approval by the board of directors of DowDuPont ("DowDuPont Board"), the separation of the combined company's agriculture business, specialty products business and materials science business through one or more tax-efficient transactions ("Intended Business Separations").

On August 31, 2017, following the Diamond Merger, Dow requested that the New York Stock Exchange ("NYSE") withdraw the shares of Dow Common Stock from listing on the NYSE and file a Form 25 with the U.S. Securities and Exchange Commission ("SEC") to report that the shares of Dow Common Stock are no longer listed on the NYSE. The shares of Dow Common Stock were suspended from trading on the NYSE prior to the open of trading on September 1, 2017.

On September 12, 2017, DowDuPont announced that the DowDuPont Board and management, with the assistance of independent advisors, completed their comprehensive review of the portfolio composition of the three intended independent companies. The DowDuPont Board unanimously concluded that, in light of knowledge gained since the announcement of the proposed merger of equals, certain targeted adjustments will be made between the materials science and specialty products businesses, which will enhance the competitive advantages of the intended resulting companies. As a result of this change, it is expected that a portion of UCC's business will move to the specialty products business as part of the Intended Business Separations, and the Corporation does not expect the Intended Business Separations to have a material impact on the Consolidated Financial Statements.

#### **NOTE 4 - DIVESTITURE**

##### **Divestiture of Methylmercapto Propionaldehyde Assets**

On November 1, 2015, the Corporation completed the sale of its assets related to the production of methylmercapto propionaldehyde ("MMP") at the St. Charles Operations site in Taft, Louisiana to MMP SCO, LLC ("Novus"), a subsidiary of Novus International, Inc., for net proceeds of \$31 million. Included in the divestiture was the Corporation's MMP manufacturing facility, as well as inventory. The Corporation continues to operate and provide services to the MMP facility under separate agreements with Novus. The net proceeds were included in "Accrued and other current liabilities" and "Other noncurrent obligations" in the consolidated balance sheets as a deferred gain and will be amortized to "Sundry income (expense) - net" in the consolidated statements of income over the 25-year term of the operating agreements. The transaction also included a 25-year acrolein supply agreement containing an upfront payment of \$42.5 million which was reflected in "Accrued and other current liabilities" and "Other noncurrent obligations" in the consolidated balance sheets and will be amortized to "Net trade sales" over the 25-year term of the agreement. Proceeds of \$10 million for the sale of two related patents resulted in a pretax gain of \$10 million and was included in "Sundry income (expense) - net" in the consolidated statements of income.

#### **NOTE 5 - RESTRUCTURING AND ASSET RELATED CHARGES - NET**

##### **2017 Restructuring and Asset Related Charges**

In September 2017, the Corporation approved restructuring actions that are aligned with DowDuPont's synergy targets. As a result of these actions, the Corporation recorded a pretax restructuring charge for severance and related benefit costs of \$8 million in the third quarter of 2017. In November 2017, the Corporation approved additional restructuring actions in connection with the restructuring program. A pretax restructuring charge for severance and related benefit costs of \$2 million was recorded in the fourth quarter of 2017, as well as charges of \$62 million for the write-off and write-down of manufacturing and facility assets at multiple UCC sites, including a steam unit in Institute, West Virginia. The impact of these charges was shown as "Restructuring and asset related charges - net" in the consolidated statements of income. These actions are expected to be substantially completed by the end of 2019. At December 31, 2017, severance of \$2 million had been paid, leaving a liability of \$8 million.

##### **2016 Restructuring**

On June 27, 2016, the Corporation approved actions to further improve cost effectiveness with additional workforce reductions. As a result of these actions, the Corporation recorded a pretax restructuring charge in the second quarter of 2016 consisting of severance and related benefit costs of \$1 million for the separation of approximately 5 positions. In the fourth quarter of 2016, the Corporation recorded an additional charge of \$2 million related to the separation of an additional 16 positions, and in the second quarter of 2017, an additional charge of \$2 million was recorded to adjust the charge for severance and related benefit costs. The impact of these charges was shown as "Restructuring and asset related charges - net" in the consolidated statements of income. At December 31, 2017, the liability for severance and related benefit costs was zero, substantially completing the 2016 restructuring program.

##### **2015 Restructuring and Asset Related Charges**

On April 29, 2015, the Corporation approved actions to improve the cost effectiveness of the Corporation's global operations and further streamline the organization. These actions affected approximately 16 positions and resulted in the shutdown of a manufacturing facility that produced water soluble polymers in Institute, West Virginia, in the fourth quarter of 2015.

As a result of these actions, the Corporation recorded pretax restructuring charges of \$18 million in the second quarter of 2015 consisting of costs associated with exit and disposal activities of \$2 million, severance and related benefit costs of \$2 million and asset related charges of \$14 million. In the fourth quarter of 2015, the Corporation recorded an additional charge of \$1 million related to the separation of an additional 8 positions. At December 31, 2015, severance of \$1 million had been paid, leaving a liability of \$2 million for approximately 15 employees.

During the second quarter of 2016, the Corporation recorded an unfavorable adjustment to the 2015 restructuring charge related to additional accruals for exit and disposal activities of \$1 million, included in "Restructuring and asset related charges - net" in

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the consolidated statements of income. In 2016, severance of \$2 million was paid, substantially completing the 2015 restructuring activities, with any remaining liabilities for contract cancellation fees to be settled over time.

The Corporation expects to incur additional costs in the future related to restructuring activities, as UCC continually looks for ways to enhance the efficiency and cost effectiveness of its operations. Future costs are expected to include demolition costs related to the closed facilities; these will be recognized as incurred. The Corporation also expects to incur additional employee related costs, including involuntary termination benefits, related to its other optimization activities. These costs cannot be reasonably estimated at this time.

**NOTE 6 - SUPPLEMENTARY INFORMATION**

<b>Sundry Income (Expense) - Net</b>			
In millions	2017	2016	2015
Dow administrative and overhead fees <sup>1</sup>	\$ (33)	\$ (27)	\$ (30)
Net commission expense - related company <sup>1</sup>	(22)	(22)	(22)
Net gain (loss) on sales of property	23	50	(3)
Interest income	20	14	8
Net gain on sale of a nonconsolidated affiliate <sup>2</sup>	4	—	—
Net gain on ownership transfer of property	—	—	23
Net gain on sale of patents <sup>3</sup>	—	—	10
Foreign exchange gain (loss)	—	1	(2)
Other - net	(3)	—	(6)
<b>Total sundry income (expense) - net</b>	<b>\$ (11)</b>	<b>\$ 16</b>	<b>\$ (22)</b>

1. See Note 18 for additional information.

2. See Note 10 for additional information.

3. See Note 4 for additional information.

**Accrued and Other Current Liabilities**

"Accrued and other current liabilities" in the consolidated balance sheets were \$174 million at December 31, 2017, and \$181 million at December 31, 2016. The current portion of the Corporation's accrued obligations for environmental matters, which is a component of "Accrued and other current liabilities," was \$67 million at December 31, 2017, and \$58 million at December 31, 2016 (see Note 14 for additional information). No other component of "Accrued and other current liabilities" was more than 5 percent of total current liabilities.

**NOTE 7 - INCOME TAXES**

On December 22, 2017, the Tax Cuts and Jobs Act ("The Act") was enacted. The Act reduces the U.S. federal corporate income tax rate from 35 percent to 21 percent, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously deferred, creates new provisions related to foreign sourced earnings, eliminates the domestic manufacturing deduction and moves to a territorial system. At December 31, 2017, the Corporation had not completed its accounting for the tax effects of The Act; however, as described below, the Corporation made a reasonable estimate of the effects on its existing deferred tax balances and the one-time transition tax. In accordance with Staff Accounting Bulletin 118 ("SAB118"), income tax effects of The Act may be refined upon obtaining, preparing or analyzing additional information during the measurement period and such changes could be material. During the measurement period, provisional amounts may also be adjusted for the effects, if any, of interpretive guidance issued after December 31, 2017, by U.S. regulatory and standard-setting bodies.

- As a result of The Act, the Corporation remeasured its U.S. federal deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future, which is generally 21 percent. However, the Corporation is still analyzing certain aspects of The Act and refining its calculations, which could potentially affect the measurement of these balances or potentially give rise to new deferred tax amounts. The provisional amount recorded related to the remeasurement of the Corporation's deferred tax balance was \$250 million, recorded as a charge to "Provision (Credit) for income taxes."
- The Act requires a mandatory deemed repatriation of post-1986 undistributed foreign earnings and profits ("E&P"), which results in a one-time transition tax. As a result, the Corporation recorded an insignificant provisional amount for the transition tax liability for its foreign subsidiaries. The Corporation has not yet completed its calculation of the total post-1986 foreign E&P for its foreign subsidiaries as E&P will not be finalized until the DowDuPont federal income tax

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return is filed. Further, the transition tax is based in part on the amount of those earnings held in cash and other specified assets, which is a defined term under The Act.

- For tax years beginning after December 31, 2017, The Act introduces new provisions for U.S. taxation of certain global intangible low-taxed income ("GILTI"). Due to its complexity and a current lack of guidance as to how to calculate the tax, the Corporation is not yet able to determine a reasonable estimate for the impact of the incremental tax liability. When additional guidance is available, the Corporation will make a policy election on whether the additional liability will be recorded in the period in which it is incurred or recognized for the basis differences that would be expected to reverse in future years.

<b>Geographic Allocation of Income and Provision (Credit) for Income Taxes</b>				
In millions		2017	2016	2015
Income (Loss) Before Income Taxes				
Domestic	\$	856	\$ 49	\$ 1,254
Foreign		(6)	8	(11)
Income before income taxes	\$	850	\$ 57	\$ 1,243
Current tax expense (benefit)				
Federal	\$	226	\$ 265	\$ 373
State and local		2	(3)	2
Foreign		3	3	104
Total current tax expense	\$	231	\$ 265	\$ 479
Deferred tax expense (benefit)				
Federal <sup>1</sup>	\$	392	\$ (285)	\$ (31)
State and local		22	(12)	(13)
Total deferred tax expense (benefit)	\$	414	\$ (297)	\$ (44)
Provision (Credit) for income taxes	\$	645	\$ (32)	\$ 435
Net Income	\$	205	\$ 89	\$ 808

1. 2017 includes the impact of The Act; 2016 includes the impact of the asbestos-related charge.

<b>Reconciliation to U.S. Statutory Rate</b>		2017	2016	2015
Statutory U.S. federal income tax rate		35.0 %	35.0 %	35.0 %
U.S. manufacturing deductions		—	(14.0)	(0.6)
Unrecognized tax benefits		(0.4)	(45.6)	1.9
Federal tax accrual adjustments		(1.1)	(12.3)	(0.6)
Impact of U.S. tax reform		29.4	—	—
Deferred intercompany gain		11.4	—	—
State and local tax impact		2.2	(24.6)	(0.9)
Other - net		(0.6)	5.4	0.2
Effective Tax Rate <sup>1</sup>		75.9 %	(56.1)%	35.0 %

1. The tax rate for 2017 was unfavorably impacted by The Act and the recognition of a deferred gain. The tax rate for 2016 was favorably impacted by the release of a reserve in excess of the settlement of an uncertain tax position and from the asbestos-related charge. The tax rate for 2015 was favorably impacted by changes in valuation allowances on state income tax attributes. A change in uncertain tax positions in the fourth quarter of 2015 unfavorably impacted the tax rate and resulted in an increase in "Deferred income tax assets" and "Other noncurrent obligations" in the consolidated balance sheets.

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A transaction for the sale of stock between the Corporation and Dow in 2014 created a gain that was initially deferred for tax purposes. This deferred gain became taxable as a result of activities executed in anticipation of the intended separation of DowDuPont into three publicly traded companies. As a result, in the third quarter of 2017, the Corporation increased "Income taxes payable" in the consolidated balance sheets and recorded a charge to "Provision (Credit) for income taxes" in the consolidated statements of income of \$97 million.

Deferred Tax Balances at Dec 31 In millions	2017		2016	
	Assets	Liabilities	Assets	Liabilities
Property	\$ —	\$ 132	\$ —	\$ 183
Tax loss and credit carryforwards	47	—	53	—
Postretirement benefit obligations	251	—	442	—
Other accruals and reserves	349	1	611	—
Inventory	8	—	14	—
Other - net	9	1	13	2
Subtotal	\$ 664	\$ 134	\$ 1,133	\$ 185
Valuation allowances <sup>1</sup>	(19)	—	(20)	—
Total	\$ 645	\$ 134	\$ 1,113	\$ 185

1. Primarily related to the realization of recorded tax benefits on state tax loss carryforwards from operations in the United States.

Operating Loss and Tax Credit Carryforwards In millions	2017 Asset	2016 Asset
Operating loss carryforwards		
Expire within 5 years	\$ 29	\$ 31
Expire after 5 years or indefinite expiration	12	17
Total operating loss carryforwards	\$ 41	\$ 48
Tax credit carryforwards		
Expire within 5 years	\$ 1	\$ 1
Expire after 5 years or indefinite expiration	5	4
Total tax credit carryforwards	\$ 6	\$ 5

Undistributed earnings of foreign subsidiaries and related companies that are deemed to be permanently invested amounted to \$9 million at December 31, 2017 and \$36 million at December 31, 2016. The unrecognized deferred tax liability on those earnings is not material.

The following table provides a reconciliation of the Corporation's unrecognized tax benefits:

Total Gross Unrecognized Tax Benefits In millions	2017	2016	2015
Total unrecognized tax benefits at Jan 1	\$ 1	\$ 68	\$ 1
Increases related to positions taken on items from prior years	—	139	67
Settlement of uncertain tax positions with tax authorities	—	(206)	—
Total unrecognized tax benefits at Dec 31	\$ 1	\$ 1	\$ 68
Total unrecognized tax benefits that, if recognized, would impact the effective tax rate	\$ 1	\$ 1	\$ 1
Total amount of interest and penalties (benefit) recognized in "Provision (Credit) for income taxes"	\$ (6)	\$ (36)	\$ 37
Total accrual for interest and penalties recognized in the consolidated balance sheets	\$ —	\$ —	\$ 38

In the fourth quarter of 2016, a settlement in the amount of \$206 million was reached for a tax matter regarding a historical change in the legal ownership structure of a nonconsolidated affiliate. As a result of the settlement, the Corporation recorded a net decrease to uncertain tax positions of \$67 million in "Other noncurrent obligations" in the consolidated balance sheets.

The Corporation is included in Dow's consolidated federal income tax group and consolidated tax return. Current and deferred tax expenses are calculated for the Corporation as a stand-alone group and are allocated to the group from the consolidated totals, consistent with the Dow-UCC Tax Sharing Agreement. UCC is currently under examination in a number of tax jurisdictions,

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including the U.S. federal and various state jurisdictions. It is reasonably possible that these examinations may be resolved within twelve months. The impact on the Corporation's results of operations is not expected to be material.

Tax years that remain subject to examination for the Corporation's major tax jurisdictions are shown below:

<b>Tax Years Subject to Examination by Major Tax Jurisdiction at Dec 31, 2017</b>		<i>Earliest Open Year</i>
<i>Jurisdiction</i>		
United States:		
Federal income tax		2004
State and local income tax		2004

Inherent uncertainties exist in estimates of tax contingencies due to changes in tax law, both legislated and concluded through the various jurisdictions' tax court systems. It is the opinion of the Corporation's management that the possibility is remote that costs in excess of those accrued will have a material impact on the Corporation's consolidated financial statements.

**NOTE 8 - INVENTORIES**

The following table provides a breakdown of inventories:

<b>Inventories at Dec 31</b>		
In millions	<i>2017</i>	<i>2016</i>
Finished goods	\$ 222	\$ 186
Work in process	47	38
Raw materials	48	50
Supplies	73	87
Total	\$ 390	\$ 361
Adjustment of inventories to a LIFO basis	(112)	(54)
Total inventories	\$ 278	\$ 307

Inventories valued on a LIFO basis, principally U.S. chemicals and plastics product inventories, represented 70 percent of the total inventories at December 31, 2017, and 68 percent of the total inventories at December 31, 2016.

A reduction of certain inventories resulted in the liquidation of some of the Corporation's LIFO inventory layers, which increased pretax income \$2 million in 2017, had an immaterial impact on pretax income in 2016 and decreased pretax income \$14 million in 2015.

**NOTE 9 - PROPERTY**

The following table provides a breakdown of property:

<b>Property at Dec 31 <sup>1</sup></b>	<i>Estimated Useful Lives (Years)</i>		
In millions		<i>2017</i>	<i>2016</i>
Land and land improvements	0-25	\$ 283	\$ 274
Buildings	5-50	402	396
Machinery and equipment	3-20	6,049	5,872
Other property	3-30	325	272
Construction in progress	—	250	330
Total property		\$ 7,309	\$ 7,144

1. Updated to conform with the presentation adopted for Dow.

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The following table provides information regarding depreciation expense and capitalized interest:

In millions	2017	2016	2015
Depreciation expense	\$ 176	\$ 166	\$ 160
Capitalized interest	\$ 10	\$ 13	\$ 10

**NOTE 10 - NONCONSOLIDATED AFFILIATE**

The Corporation's investment in Asian Acetyls Co., Ltd. ("ASACCO"), a nonconsolidated affiliate accounted for by the equity method, was zero at December 31, 2017 and \$14 million at December 31, 2016. Dividends received from ASACCO were zero in 2017, \$1 million in 2016 and \$2 million in 2015. Undistributed earnings of ASACCO included in retained earnings were zero at December 31, 2017 and \$9 million at December 31, 2016. The nonconsolidated affiliate was a privately held company; therefore, a quoted market price was not available.

On March 16, 2017, UCC entered into a share sale and purchase agreement to sell its ownership interest in the nonconsolidated affiliate. ASACCO agreed to purchase all of the shares of registered common stock owned by UCC. On April 24, 2017, the sale was completed for \$22 million. In the second quarter of 2017, the Corporation recorded a pretax gain of \$4 million on the sale, included in "Sundry income (expense) - net" in the consolidated statements of income.

**NOTE 11 - INVESTMENTS IN RELATED COMPANIES**

The Corporation's ownership interests in related companies at December 31, 2017 and 2016 were as follows:

Investments in Related Companies at Dec 31 In millions	Ownership Interest		Investment Balance	
	2017	2016	2017	2016
Dow International Holdings Company <sup>1</sup>	12%	15%	\$ 633	\$ 633
Dow Quimica Argentina S.A. <sup>2</sup>	—%	23%	—	—
Dow Quimica Mexicana S.A. de C.V.	15%	15%	5	5
Other	—%	—%	1	1
<b>Total Investments in Related Companies</b>			<b>\$ 639</b>	<b>\$ 639</b>

1. Ownership interest changed as a result of stock transfers and redemptions in Dow International Holdings Company by the parent company, Dow.

2. UCC transferred its shares in Dow Quimica Argentina S.A. ("DQA") to PBB Polisar S.R.L. and Dow Investment Argentina S.A., subsidiaries of Dow, in exchange for \$2 million in cash and was included in "Sundry income (expense) - net" in the consolidated statements of income. In 2013, UCC's investment in DQA was fully impaired.

**NOTE 12 - INTANGIBLE ASSETS**

The following table provides information regarding the Corporation's intangible assets:

Intangible Assets at Dec 31 In millions	2017			2016		
	Gross Carrying Amount	Accum Amort	Net	Gross Carrying Amount	Accum Amort	Net
Intangible assets with finite lives:						
Licenses and developed technology	\$ 33	\$ (33)	\$ —	\$ 33	\$ (33)	\$ —
Software	74	(49)	25	70	(45)	25
<b>Total intangible assets</b>	<b>\$ 107</b>	<b>\$ (82)</b>	<b>\$ 25</b>	<b>\$ 103</b>	<b>\$ (78)</b>	<b>\$ 25</b>

The following table provides information regarding amortization expense:

Amortization Expense In millions	2017	2016	2015
Software <sup>1</sup>	\$ 5	\$ 4	\$ 2

1. Included in "Cost of sales" in the consolidated statements of income.

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Total estimated amortization expense for the next five fiscal years is as follows:

<b>Estimated Amortization Expense for Next Five Years</b>	
In millions	
2018	\$ 6
2019	\$ 6
2020	\$ 6
2021	\$ 4
2022	\$ 2

**NOTE 13 - NOTES PAYABLE AND LONG-TERM DEBT**

<b>Notes Payable at Dec 31</b>	2017	2016
In millions		
Notes payable to related companies	\$ 28	\$ 25
Year-end average interest rates	2.56%	2.07%

<b>Long-Term Debt at Dec 31</b>	2017 Average Rate	2017	2016 Average Rate	2016
In millions				
Promissory notes and debentures:				
Debentures due 2023	7.875%	\$ 175	7.875%	\$ 175
Debentures due 2025	6.79%	12	6.79%	12
Debentures due 2025	7.50%	150	7.50%	150
Debentures due 2096	7.75%	135	7.75%	135
Capital lease obligations	—	8	—	9
Unamortized debt discount and issuance costs	—	(5)	—	(5)
Long-term debt due within one year	—	(1)	—	(1)
Total long-term debt		\$ 474		\$ 475

<b>Maturities of Long-Term Debt for Next Five Years at Dec 31, 2017</b>	
In millions	
2018	\$ 1
2019	\$ 1
2020	\$ 1
2021	\$ 1
2022	\$ 1

**Debt Covenants and Default Provisions**

The Corporation's outstanding public debt has been issued under indentures which contain, among other provisions, covenants that the Corporation must comply with while the underlying notes are outstanding. Such covenants are typically based on the Corporation's size and financial position and include, subject to the exceptions and qualifications contained in the indentures, obligations not to (i) allow liens on principal U.S. manufacturing facilities, (ii) enter into sale and lease-back transactions with respect to principal U.S. manufacturing facilities, or (iii) merge into or consolidate with any other entity or sell or convey all or substantially all of its assets. Failure of the Corporation to comply with any of these covenants could, after the passage of any applicable grace period, result in a default under the applicable indenture which would allow the note holders to accelerate the due date of the outstanding principal and accrued interest on the subject notes.

## NOTE 14 - COMMITMENTS AND CONTINGENT LIABILITIES

### Environmental Matters

Accruals for environmental matters are recorded when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated, based on current law and existing technologies.

At December 31, 2017, the Corporation had accrued obligations of \$114 million for probable environmental remediation and restoration costs, including \$19 million for the remediation of Superfund sites. These obligations were included in "Accrued and other current liabilities" and "Other noncurrent obligations" in the consolidated balance sheets. This is management's best estimate of the costs for remediation and restoration with respect to environmental matters for which the Corporation has accrued liabilities, although it is reasonably possible that the ultimate cost with respect to these particular matters could range up to approximately three times that amount. Consequently, it is reasonably possible that environmental remediation and restoration costs in excess of amounts accrued could have a material impact on the Corporation's results of operations, financial condition and cash flows. It is the opinion of the Corporation's management that the possibility is remote that costs in excess of the range disclosed will have a material impact on the Corporation's results of operations, financial condition and cash flows. Inherent uncertainties exist in these estimates primarily due to unknown environmental conditions, changing governmental regulations and legal standards regarding liability, and emerging remediation technologies for handling site remediation and restoration. At December 31, 2016, the Corporation had accrued obligations of \$145 million for probable environmental remediation and restoration costs, including \$20 million for the remediation of Superfund sites. In the fourth quarter of 2016, the Corporation recorded an adjustment to the environmental accrual, primarily resulting from the culmination of negotiations with regulators and/or final stages of certain remediation projects. These charges were included in "Cost of sales" in the consolidated statements of income and were included in the total obligation of \$145 million.

The following table summarizes the activity in the Corporation's accrued obligations for environmental matters for the years ended December 31, 2017 and 2016:

<b>Accrued Liability for Environmental Matters</b>		
In millions	2017	2016
Balance at Jan 1	\$ 145	\$ 115
Accrual adjustment	36	115
Payments against reserve	(68)	(85)
Foreign currency impact	1	—
Balance at Dec 31	\$ 114	\$ 145

The amounts charged to income on a pretax basis related to environmental remediation totaled \$36 million in 2017, \$122 million in 2016 and \$58 million in 2015. Capital expenditures for environmental protection were \$9 million in 2017, \$10 million in 2016 and \$14 million in 2015.

### Litigation

The Corporation is involved in a number of legal proceedings and claims with both private and governmental parties. These cover a wide range of matters, including, but not limited to: product liability; trade regulation; governmental regulatory proceedings; health, safety and environmental matters; employment; patents; contracts; taxes; and commercial disputes.

### Asbestos-Related Matters

#### Introduction

Separately, the Corporation is and has been involved in a large number of asbestos-related suits filed primarily in state courts during the past four decades. These suits principally allege personal injury resulting from exposure to asbestos-containing products and frequently seek both actual and punitive damages. The alleged claims primarily relate to products that UCC sold in the past, alleged exposure to asbestos-containing products located on UCC's premises, and UCC's responsibility for asbestos suits filed against a former UCC subsidiary, Amchem Products, Inc. ("Amchem"). In many cases, plaintiffs are unable to demonstrate that they have suffered any compensable loss as a result of such exposure, or that injuries incurred in fact resulted from exposure to the Corporation's products.

The Corporation expects more asbestos-related suits to be filed against UCC and Amchem in the future, and will aggressively defend or reasonably resolve, as appropriate, both pending and future claims.

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*Estimating the Liability for Asbestos-Related Pending and Future Claims*

Based on a study completed by Ankura Consulting Group, LLC ("Ankura") in January 2003, the Corporation increased its December 31, 2002, asbestos-related liability for pending and future claims for a 15-year period ending in 2017 to \$2.2 billion, excluding future defense and processing costs. Since then, the Corporation has compared current asbestos claim and resolution activity to the results of the most recent Ankura study at each balance sheet date to determine whether the accrual continues to be appropriate. In addition, the Corporation has requested Ankura to review the Corporation's historical asbestos claim and resolution activity each year since 2004 to determine the appropriateness of updating the most recent Ankura study.

In October 2016, the Corporation requested Ankura to review its historical asbestos claim and resolution activity and determine the appropriateness of updating its December 2014 study. In response to the request, Ankura reviewed and analyzed asbestos-related claim and resolution data through September 30, 2016. The resulting study, completed by Ankura in December 2016, provided estimates for the undiscounted cost of disposing of pending and future claims against UCC and Amchem, excluding future defense and processing costs, for both a 15-year period and through the terminal year of 2049.

Based on the study completed in December 2016 by Ankura, and the Corporation's own review of the asbestos claim and resolution activity, it was determined that an adjustment to the accrual was necessary. The Corporation determined that using the estimate through the terminal year of 2049 was more appropriate due to increasing knowledge and data about the costs to resolve claims and diminished volatility in filing rates. Using the range in the Ankura December 2016 study, which was estimated to be between \$502 million and \$565 million for the undiscounted cost of disposing of pending and future claims, the Corporation increased its asbestos-related liability for pending and future claims through the terminal year of 2049 by \$104 million, included in "Asbestos-related charge" in the consolidated statements of income. At December 31, 2016, the Corporation's asbestos-related liability for pending and future claims was \$486 million, and approximately 14 percent of the recorded liability related to pending claims and approximately 86 percent related to future claims.

*Estimating the Liability for Asbestos-Related Defense and Processing Costs*

In September 2014, the Corporation began to implement a strategy designed to reduce and to ultimately stabilize and forecast defense costs associated with asbestos-related matters. The strategy included a number of important changes including: invoicing protocols including capturing costs by plaintiff; review of existing counsel roles, work processes and workflow; and utilization of enterprise legal management software, which enabled claim-specific tracking of asbestos-related defense and processing costs. The Corporation reviewed the information generated from this new strategy and determined that it now had the ability to reasonably estimate asbestos-related defense and processing costs for the same periods that it estimates its asbestos-related liability for pending and future claims. The Corporation believes that including estimates of the liability for asbestos-related defense and processing costs provides a more complete assessment and measure of the liability associated with resolving asbestos-related matters, which the Corporation believes is preferable in these circumstances.

In October 2016, in addition to the study for asbestos claim and resolution activity, the Corporation requested Ankura to review asbestos-related defense and processing costs and provide an estimate of a reasonable forecast of defense and processing costs associated with resolving pending and future asbestos-related claims facing UCC and Amchem for the same periods of time that the Corporation uses for estimating resolution costs. In December 2016, Ankura conducted the study and provided the Corporation with an estimate of future defense and processing costs for both a 15-year period and through the terminal year of 2049. The resulting study estimated asbestos-related defense and processing costs for pending and future asbestos claims to be between \$1,009 million and \$1,081 million through the terminal year of 2049.

In the fourth quarter of 2016, the Corporation elected to change its method of accounting for asbestos-related defense and processing costs from expensing as incurred to estimating and accruing a liability. This change is believed to be preferable as asbestos-related defense and processing costs represent expenditures related to legacy activities that do not contribute to current or future revenue generating activities of the Corporation. The change is also reflective of the manner in which the Corporation manages its asbestos-related exposure, including careful monitoring of the correlation between defense spending and resolution costs. Together, these two sources of cost more accurately represent the "total cost" of resolving asbestos-related claims now and in the future.

This accounting policy change was reflected as a change in accounting estimate effected by a change in accounting principle. As a result of this accounting policy change and based on the December 2016 Ankura study of asbestos-related defense and processing costs and the Corporation's own review of the data, a pretax charge for asbestos-related defense and processing costs of \$1,009 million was recorded in the fourth quarter of 2016, included in "Asbestos-related charge" in the consolidated statements of income. The Corporation's total asbestos-related liability, including defense and processing costs, was \$1,490 million at December 31, 2016, and was included in "Asbestos-related liabilities - current" and "Asbestos-related liabilities - noncurrent" in the consolidated balance sheets.

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*Asbestos-Related Liability at December 31, 2017*

In October 2017, the Corporation requested Ankura to review its historical asbestos claim and resolution activity (including asbestos-related defense and processing costs) and determine the appropriateness of updating its December 2016 study. In response to that request, Ankura reviewed and analyzed data through September 30, 2017. In December 2017, Ankura stated that an update of its December 2016 study would not provide a more likely estimate of future events than the estimate reflected in the study and, therefore, the estimate in that study remained applicable. Based on the Corporation's own review of the asbestos claim and resolution activity (including asbestos-related defense and processing costs) and Ankura's response, the Corporation determined that no change to the accrual was required. At December 31, 2017, the asbestos-related liability for pending and future claims against UCC and Amchem, including future asbestos-related defense and processing costs, was \$1,369 million, and approximately 16 percent of the recorded liability related to pending claims and approximately 84 percent related to future claims.

*Insurance Receivables*

The Corporation has receivables for insurance recoveries related to its asbestos liability as well as receivables for defense and resolution costs submitted to insurance carriers that have a settlement agreement in place regarding their asbestos-related insurance coverage. The Corporation continues to believe that its recorded receivable for insurance recoveries from all insurance carriers is probable of collection. At December 31, 2017, the Corporation's receivable for insurance recoveries related to its asbestos liability was \$37 million (\$41 million at December 31, 2016).

*Summary*

The Corporation's management believes the amounts recorded for the asbestos-related liability (including defense and processing costs) reflect reasonable and probable estimates of the liability based on current, known facts. However, future events, such as the number of new claims to be filed and/or received each year and the average cost of defending and disposing of each such claim, as well as the numerous uncertainties surrounding asbestos litigation in the United States, could cause the actual costs for the Corporation to be higher or lower than those projected or those recorded. Any such event could result in an increase or decrease in the recorded liability.

Because of the uncertainties described above, the Corporation cannot estimate the full range of the cost of resolving pending and future asbestos-related claims facing UCC and Amchem. As a result, it is reasonably possible that an additional cost of disposing of asbestos-related claims, including future defense and processing costs, could have a material impact on the Corporation's results of operations and cash flows for a particular period and on the consolidated financial position.

***Other Litigation***

While it is not possible at this time to determine with certainty the ultimate outcome of any of the legal proceedings and claims referred to in this filing, management believes that the possibility is remote that the aggregate of all such other claims and lawsuits will have a material adverse impact on the results of operations, cash flows and financial position of the Corporation.

**Purchase Commitments**

The Corporation has outstanding purchase commitments and various commitments for take-or-pay or throughput agreements. The Corporation was not aware of any purchase commitments that were negotiated as part of a financing arrangement for the facilities that will provide the contracted goods or services or for the costs related to those goods or services at December 31, 2017 and 2016.

**Operating Leases**

The Corporation has leases primarily for facilities and distribution equipment. The future minimum rental payments under leases with remaining noncancelable terms in excess of one year are as follows:

<b>Minimum Lease Commitments at Dec 31, 2017</b>	
In millions	
2018	\$ 5
2019	4
2020	3
2021	2
2022	1
2023 and thereafter	6
<b>Total</b>	<b>\$ 21</b>

Rental expenses under leases were \$32 million in 2017, \$28 million in 2016 and \$29 million in 2015.

**NOTE 15 - ACCUMULATED OTHER COMPREHENSIVE LOSS**

The following table summarizes the changes and after-tax balances of each component of accumulated other comprehensive loss for the years ended December 31, 2017, 2016 and 2015:

<b>Accumulated Other Comprehensive Loss</b>		<i>Pension and Other Postretire Benefits</i>	<i>Accum Other Comp Loss</i>
In millions	<i>Cumulative Translation Adj</i>		
<b>2015</b>			
Balance at Jan 1, 2015	\$ (63)	\$ (1,180)	\$ (1,243)
Other comprehensive income (loss) before reclassifications	2	(34)	(32)
Amounts reclassified from accumulated other comprehensive income	—	47	47
Net other comprehensive income	2	13	15
Balance at Dec 31, 2015	\$ (61)	\$ (1,167)	\$ (1,228)
<b>2016</b>			
Other comprehensive loss before reclassifications	(1)	(133)	(134)
Amounts reclassified from accumulated other comprehensive income	—	42	42
Net other comprehensive loss	(1)	(91)	(92)
Balance at Dec 31, 2016	\$ (62)	\$ (1,258)	\$ (1,320)
<b>2017</b>			
Other comprehensive loss before reclassifications	—	(83)	(83)
Amounts reclassified from accumulated other comprehensive income	3	48	51
Net other comprehensive income (loss)	3	(35)	(32)
Balance at Dec 31, 2017	\$ (59)	\$ (1,293)	\$ (1,352)

The tax effects on the net activity related to each component of accumulated other comprehensive income (loss) for the years ended December 31, 2017, 2016 and 2015 were as follows:

<b>Tax Benefit (Expense)</b>			
In millions	<i>2017</i>	<i>2016</i>	<i>2015</i>
Pension and other postretirement benefit plans	\$ 3	\$ (54)	\$ 5

A summary of the reclassifications out of accumulated other comprehensive loss for the years ended December 31, 2017, 2016 and 2015 is provided as follows:

<b>Reclassifications Out of Accumulated Other Comprehensive Loss</b>				<i>Consolidated Statements of Income Classification</i>
In millions	<i>2017</i>	<i>2016</i>	<i>2015</i>	
Cumulative translation adjustments	\$ 3	\$ —	\$ —	See (1) below
Pension and other postretirement benefit plans	76	67	75	See (2) below
Tax benefit	(28)	(25)	(28)	See (3) below
After-tax	48	42	47	
Total reclassifications for the period, after-tax	\$ 51	\$ 42	\$ 47	

1. "Sundry income (expense) - net."

2. Included in the computation of net periodic benefit cost of the Corporation's pension and other postretirement plans. See Note 16 for additional information.

3. "Provision (Credit) for income taxes."

**NOTE 16 - PENSION PLANS AND OTHER POSTRETIREMENT BENEFITS**

**Pension Plans**

The Corporation has a defined benefit pension plan that covers substantially all employees in the United States. Benefits are based on length of service and the employee's three highest consecutive years of compensation. Employees hired on or after January 1, 2008, earn benefits that are based on a set percentage of annual pay, plus interest. The Corporation also has a non-qualified supplemental pension plan.

The Corporation's funding policy is to contribute to the plan when pension laws or economics either require or encourage funding. In 2017, UCC contributed \$162 million to its pension plans including contributions to fund benefit payments for its non-qualified supplemental plan. UCC expects to contribute approximately \$42 million to its pension plans in 2018.

The weighted-average assumptions used to determine pension plan obligations and net periodic benefit costs are provided below:

Pension Plan Assumptions	Benefit Obligations at Dec 31		Net Periodic Costs for the Year Ended		
	2017	2016	2017	2016	2015
Discount rate	3.59%	4.00%	4.00%	4.26%	3.90%
Rate of compensation increase	4.25%	4.25%	4.25%	4.50%	4.50%
Expected return on plan assets	—	—	6.80%	6.80%	6.80%

**Other Postretirement Benefits**

The Corporation provides certain health care and life insurance benefits to retired U.S. employees and survivors. The plan provides health care benefits, including hospital, physicians' services, drug and major medical expense coverage and life insurance benefits. The Corporation and the retiree share the cost of these benefits, with the Corporation portion increasing as the retiree has increased years of credited service, although there is a cap on the Corporation portion. The Corporation has the ability to change these benefits at any time. Employees hired after January 1, 2008, are not covered under this plan.

The Corporation funds most of the cost of these health care and life insurance benefits as incurred. In 2017, UCC did not make any contributions to its other postretirement benefit plan trust. Likewise, UCC does not expect to contribute assets to its other postretirement benefit plan trust in 2018.

The weighted-average assumptions used to determine other postretirement benefit obligations and net periodic benefit costs for the plan are provided in the following table:

Plan Assumptions for Other Postretirement Benefits	Benefit Obligations at Dec 31		Net Periodic Costs for the Year Ended		
	2017	2016	2017	2016	2015
Discount rate	3.51%	3.88%	3.88%	4.08%	3.75%
Health care cost trend rate assumed for next year	6.75%	7.00%	7.00%	7.25%	7.05%
Rate to which the cost trend rate is assumed to decline (the ultimate health care cost trend rate)	5.00%	5.00%	5.00%	5.00%	5.00%
Year that the rate reaches the ultimate health care cost trend rate	2025	2025	2025	2025	2020

Assumed health care cost trend rates have a modest effect on the amounts reported for the health care plan. A one percentage point change in assumed health care cost trend rates would have an immaterial impact on service and interest cost and the postretirement benefit obligation.

**Assumptions**

The Corporation determines the expected long-term rate of return on plan assets by performing a detailed analysis of key economic and market factors driving historical returns for each asset class and formulating a projected return based on factors in the current environment. Factors considered include, but are not limited to, inflation, real economic growth, interest rate yield, interest rate spreads, and other valuation measures and market metrics. The expected long-term rate of return for each asset class is then weighted based on the strategic asset allocation approved by the governing body for each plan. The Corporation's historical experience with the pension fund asset performance is also considered.

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Effective January 1, 2016, the Corporation adopted the spot rate approach to determine the discount rate utilized to measure the service cost and interest cost components of net periodic pension and other postretirement benefit costs. Under the spot rate approach, the Corporation calculates service cost and interest cost by applying individual spot rates from the Willis Towers Watson U.S. RATE:Link 60-90 corporate yield curve (based on 60th to 90th percentile high-quality corporate bond yields) to the separate expected cash flow components of service cost and interest cost. Prior to 2016, the service and interest cost components were determined based on the single discount rate used to measure the benefit obligation. The Corporation changed to the new method to provide a more precise measure of service and interest costs by improving the correlation between projected benefit cash flows and the discrete spot yield curves. The Corporation accounted for this change as a change in accounting estimate and it was applied prospectively starting in 2016.

The discount rates utilized to measure the pension and other postretirement obligations of the U.S. qualified plans were based on the yield on high-quality corporate fixed income investments at the measurement date. Future expected actuarially determined cash flows for the plans are individually discounted at the spot rates under the Willis Towers Watson U.S. RATE:Link 60-90 corporate yield curve (based on 60th to 90th percentile high-quality corporate bond yields) to arrive at the plan's obligations as of the measurement date.

The Corporation utilizes the Society of Actuaries' mortality tables released in 2014 and a modified version of the generational mortality improvement scale released in 2014 for purposes of measuring the U.S. pension and other postretirement obligations, based on an evaluation of the mortality experience of its pension plans.

Summarized information on the Corporation's pension and other postretirement benefit plans is as follows:

Change in Projected Benefit Obligations, Plan Assets and Funded Status for all Plans	Defined Benefit Pension Plans		Other Postretirement Benefits	
	2017	2016	2017	2016
In millions				
<i>Change in projected benefit obligations:</i>				
Benefit obligation at beginning of year	\$ 4,025	\$ 3,993	\$ 264	\$ 276
Service cost	38	39	1	1
Interest cost	129	131	8	8
Actuarial changes in assumptions and experience	241	155	(23)	4
Benefits paid	(281)	(285)	(26)	(25)
Other	(2)	(8)	—	—
Benefit obligation at end of year	\$ 4,150	\$ 4,025	\$ 224	\$ 264
<i>Change in plan assets:</i>				
Fair value of plan assets at beginning of year	\$ 3,097	\$ 3,173	\$ —	\$ —
Actual return on plan assets	331	165	—	—
Employer contributions	162	52	—	—
Asset transfers	(2)	(8)	—	—
Benefits paid	(281)	(285)	—	—
Fair value of plan assets at end of year	\$ 3,307	\$ 3,097	\$ —	\$ —
Funded status at end of year	\$ (843)	\$ (928)	\$ (224)	\$ (264)
<i>Net amounts recognized in the consolidated balance sheets at Dec 31:</i>				
Accrued and other current liabilities	\$ (2)	\$ (2)	\$ (15)	\$ (24)
Pension and other postretirement benefits - noncurrent	(841)	(926)	(209)	(240)
Net amount recognized	\$ (843)	\$ (928)	\$ (224)	\$ (264)
<i>Pretax amounts recognized in accumulated other comprehensive (income) loss at Dec 31:</i>				
Net loss (gain)	\$ 2,083	\$ 2,035	\$ (86)	\$ (69)
Prior service credit	(12)	(13)	—	—
Pretax balance in accumulated other comprehensive (income) loss at end of year	\$ 2,071	\$ 2,022	\$ (86)	\$ (69)

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The accumulated benefit obligation for all defined benefit pension plans was \$4.1 billion at December 31, 2017 and \$4.0 billion at December 31, 2016.

<b>Pension Plans with Accumulated Benefit Obligations in Excess of Plan Assets at Dec 31</b>		
In millions	2017	2016
Projected benefit obligations	\$ 4,150	\$ 4,025
Accumulated benefit obligations	\$ 4,120	\$ 3,997
Fair value of plan assets	\$ 3,307	\$ 3,097

<b>Pension Plans with Projected Benefit Obligations in Excess of Plan Assets at Dec 31</b>		
In millions	2017	2016
Projected benefit obligations	\$ 4,150	\$ 4,025
Accumulated benefit obligations	\$ 4,120	\$ 3,997
Fair value of plan assets	\$ 3,307	\$ 3,097

<b>Net Periodic Benefit Cost for All Plans for the Year Ended Dec 31</b>	<i>Defined Benefit Pension Plans</i>			<i>Other Postretirement Benefits</i>		
	2017	2016	2015	2017	2016	2015
In millions						
<i>Net Periodic Benefit Cost:</i>						
Service cost	\$ 38	\$ 39	\$ 44	\$ 1	\$ 1	\$ 1
Interest cost	129	131	164	8	8	10
Expected return on plan assets	(221)	(217)	(226)	—	—	—
Amortization of prior service credit	(1)	(1)	(1)	—	—	(1)
Amortization of net (gain) loss	83	75	87	(6)	(7)	(10)
Net periodic benefit cost	\$ 28	\$ 27	\$ 68	\$ 3	\$ 2	\$ —
<i>Changes in plan assets and benefit obligations recognized in other comprehensive (income) loss:</i>						
Net (gain) loss	\$ 131	\$ 208	\$ 34	\$ (23)	\$ 4	\$ 19
Prior service cost	—	—	4	—	—	—
Amortization of prior service credit	1	1	1	—	—	1
Amortization of net gain (loss)	(83)	(75)	(87)	6	7	10
Total recognized in other comprehensive (income) loss	\$ 49	\$ 134	\$ (48)	\$ (17)	\$ 11	\$ 30
Total recognized in net periodic benefit cost and other comprehensive (income) loss	\$ 77	\$ 161	\$ 20	\$ (14)	\$ 13	\$ 30

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The estimated pretax net (gain) loss and prior service credit for defined benefit pension plans and other postretirement benefit plans that will be amortized from accumulated other comprehensive loss into net periodic benefit cost during 2018 are summarized below:

<b>Estimated Pretax Amortization of Net (Gain) Loss and Prior Service Credit for the Year Ended Dec 31</b>		
In millions		2018
<i>Defined Benefit Pension Plans:</i>		
Net loss		\$ 95
Prior service credit		\$ (1)
<i>Other Postretirement Benefit Plans:</i>		
Net gain		\$ (9)

**Estimated Future Benefit Payments**

The estimated future benefit payments, reflecting expected future service, as appropriate, are presented in the following table:

<b>Estimated Future Benefit Payments at Dec 31, 2017</b>	<i>Defined Benefit Pension Plans</i>	<i>Other Postretirement Benefits</i>
In millions		
2018	\$ 275	\$ 16
2019	275	17
2020	274	17
2021	274	18
2022	272	19
2023-2027	1,307	79
<b>Total</b>	<b>\$ 2,677</b>	<b>\$ 166</b>

**Plan Assets**

Plan assets consist primarily of equity and fixed income securities of U.S. and foreign issuers, and include alternative investments such as real estate, private equity and other absolute return strategies. Plan assets totaled \$3.3 billion at December 31, 2017 and \$3.1 billion at December 31, 2016, of which no DowDuPont or Dow common stock was directly held.

The Corporation's investment strategy for the plan assets is to manage the assets in relation to the liability in order to pay retirement benefits to plan participants over the life of the plans. This is accomplished by identifying and managing the exposure to various market risks, diversifying investments across various asset classes and earning an acceptable long-term rate of return consistent with an acceptable amount of risk, while considering the liquidity needs of the plan.

The plan is permitted to use derivative instruments for investment purposes, as well as for hedging the underlying asset and liability exposures and rebalancing the asset allocation. The plan uses value-at-risk, stress testing, scenario analysis and Monte Carlo simulation to monitor and manage both asset risk in the portfolios and surplus risk.

Equity securities primarily include investments in large- and small-cap companies located in both developed and emerging markets around the world. Fixed income securities are primarily U.S. dollar based and include U.S. treasuries and investment grade corporate bonds of companies diversified across industries. Alternative investments primarily include investments in real estate, private equity limited partnerships and absolute return strategies. Other significant investment types include various insurance contracts; and interest rate, equity and foreign exchange derivative investments and hedges.

The Corporation mitigates the credit risk of investments by establishing guidelines with the investment managers that limit investment in any single issue or issuer to an amount that is not material to the portfolio being managed. These guidelines are monitored for compliance both by the Corporation and the external managers. Credit risk for hedging activity is mitigated by utilizing multiple counterparties, collateral support agreements, and centralized clearing where appropriate.

The Northern Trust Collective Government Short Term Investment money market fund is utilized as the sweep vehicle for the pension plan, which from time to time can represent a significant investment. Approximately 35 percent of the liability of the pension plan is covered by a participating group annuity issued by Prudential Insurance Company.

The weighted-average target allocation for plan assets of the Corporation's pension plans is summarized as follows:

<b>Target Allocation for Plan Assets at Dec 31, 2017</b>	<i>Target Allocation</i>
<i>Asset Category</i>	
Equity securities	23%
Fixed income securities	45
Alternative investments	27
Other	5
<b>Total</b>	<b>100%</b>

Fair value calculations may not be indicative of net realizable value or reflective of future fair values. Furthermore, although the Corporation believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

For assets classified as Level 1 measurements (measured using quoted prices in active markets), the total fair value is either the price of the most recent trade at the time of the market close or the official close price, as defined by the exchange on which the asset is most actively traded on the last trading day of the period, multiplied by the number of units held without consideration of transaction costs.

For assets classified as Level 2 measurements, where the security is frequently traded in less active markets, fair value is based on the closing price at the end of the period; where the security is less frequently traded, fair value is based on the price a dealer would pay for the security or similar securities, adjusted for any terms specific to that asset or liability. Market inputs are obtained from well-established and recognized vendors of market data and subjected to tolerance and quality checks. For derivative assets and liabilities, standard industry models are used to calculate the fair value of the various financial instruments based on significant observable market inputs such as foreign exchange rates, commodity prices, swap rates, interest rates, and implied volatilities obtained from various market sources. For other assets for which observable inputs are used, fair value is derived through the use of fair value models, such as a discounted cash flow model or other standard pricing models.

For assets classified as Level 3 measurements, total fair value is based on significant unobservable inputs including assumptions where there is little, if any, market activity for the investment. Investment managers or fund managers provide valuations of the investment on a monthly or quarterly basis. These valuations are reviewed for reasonableness based on applicable sector, benchmark and company performance. Adjustments to valuations are made where appropriate. Where available, audited financial statements are obtained and reviewed for the investments as support for the manager's investment valuation. Some pension plan assets are held in funds where fair value is based on an estimated net asset value per share (or its equivalent) as of the most recently available fund financial statements, and adjusted for estimated earnings and investment activity. These funds are classified as Level 3 due to the significant unobservable inputs inherent in the fair value measurement.

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The following table summarizes the bases used to measure the Corporation's pension plan assets at fair value for the years ended December 31, 2017 and 2016:

Basis of Fair Value Measurements	Dec 31, 2017				Dec 31, 2016 <sup>1</sup>			
	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
In millions								
Cash and cash equivalents	\$ 193	\$ 153	\$ 40	\$ —	\$ 242	\$ 237	\$ 5	\$ —
Equity securities:								
U.S. equity securities	\$ 374	\$ 357	\$ 17	\$ —	\$ 253	\$ 236	\$ 17	\$ —
Non - U.S. equity securities	472	404	61	7	294	234	54	6
Total equity securities	\$ 846	\$ 761	\$ 78	\$ 7	\$ 547	\$ 470	\$ 71	\$ 6
Fixed income securities:								
Debt - government-issued	\$ 873	\$ —	\$ 873	\$ —	\$ 893	\$ —	\$ 893	\$ —
Debt - corporate-issued	515	—	515	—	512	—	512	—
Debt - asset-backed	24	—	24	—	33	—	33	—
Total fixed income securities	\$ 1,412	\$ —	\$ 1,412	\$ —	\$ 1,438	\$ —	\$ 1,438	\$ —
Alternative investments:								
Hedge funds	\$ 292	\$ —	\$ 124	\$ 168	\$ 341	\$ 21	\$ 139	\$ 181
Private market securities	237	—	—	237	214	—	—	214
Real estate	360	—	—	360	329	—	—	329
Derivatives - asset position	6	—	6	—	55	—	55	—
Derivatives - liability position	(32)	—	(32)	—	(66)	—	(66)	—
Total alternative investments	\$ 863	\$ —	\$ 98	\$ 765	\$ 873	\$ 21	\$ 128	\$ 724
Other investments	\$ (6)	\$ —	\$ (6)	\$ —	\$ 18	\$ —	\$ (1)	\$ 19
Subtotal	\$ 3,308	\$ 914	\$ 1,622	\$ 772	\$ 3,118	\$ 728	\$ 1,641	\$ 749
Items to reconcile to fair value of plan assets:								
Pension trust receivables <sup>2</sup>	\$ 2				\$ 4			
Pension trust payables <sup>3</sup>	(3)				(25)			
Total	\$ 3,307				\$ 3,097			

1. As a result of the DowDuPont merger, certain asset categories and classifications of prior period amounts have been revised to improve comparability with the presentation of Dow and DowDuPont, including the reclassification of cash and cash equivalents of \$237 million, equity securities of \$124 million and alternative investments of \$21 million from Level 2 to Level 1. Further, pension trust receivables and pension trust payables previously presented with Level 2 investments are now separately presented.

2. Primarily receivables for investment securities sold.

3. Primarily payables for investment securities purchased.

The following table summarizes the changes in fair value of Level 3 pension plan assets for the years ended December 31, 2017 and 2016:

Fair Value Measurement of Level 3 Pension Plan Assets <sup>1</sup>	Equity Securities	Alternative Investments	Other Investments	Total
In millions				
Balance at Jan 1, 2016	\$ 5	\$ 720	\$ 22	\$ 747
Actual return on plan assets:				
Relating to assets held at Dec 31, 2016	1	(37)	2	(34)
Relating to assets sold during 2016	—	39	(8)	31
Purchases, sales and settlements	—	2	3	5
Balance at Dec 31, 2016	\$ 6	\$ 724	\$ 19	\$ 749
Actual return on plan assets:				
Relating to assets held at Dec 31, 2017	—	4	—	4
Relating to assets sold during 2017	—	25	—	25
Purchases, sales and settlements	1	12	(19)	(6)
Balance at Dec 31, 2017	\$ 7	\$ 765	\$ —	\$ 772

1. As a result of the DowDuPont merger, certain classifications of prior period amounts have been revised to improve comparability with the presentation of Dow and DowDuPont, including the reclassification of \$77 million at December 31, 2016 (\$51 million at December 31, 2015) of assets from fixed income securities to alternative investments.

**Defined Contribution Plans**

In addition to the qualified defined benefit pension plan, U.S. employees may participate in defined contribution plans (Employee Savings Plans or 401(k) plans) by contributing a portion of their compensation, which is partially matched by the Corporation. Expense recognized for all defined contribution plans was \$21 million in 2017, \$17 million in 2016 and \$16 million in 2015.

**NOTE 17 - FAIR VALUE MEASUREMENTS**

The Corporation's investments in marketable securities are classified as available-for-sale. Proceeds from sales of available-for-sale securities in 2017 were \$2 million (\$2 million in 2016 and \$1 million in 2015).

Portfolio managers regularly review all of the Corporation's holdings to determine if any investments are other-than-temporarily impaired. The analysis includes reviewing the amount of the impairment, as well as the length of time it has been impaired. In addition, specific guidelines for each instrument type are followed to determine if an other-than-temporary impairment has occurred. At December 31, 2017 and 2016, there were no impairment indicators or circumstances that would result in a material adjustment of these investments.

The Corporation's financial instruments are classified as Level 2 measurements. For assets and liabilities classified as Level 2 measurements, where the security is frequently traded in less active markets, fair value is based on the closing price at the end of the period; where the security is less frequently traded, fair value is based on the price a dealer would pay for the security or similar securities, adjusted for any terms specific to that asset or liability, or by using observable market data points of similar, more liquid securities to imply the price. Market inputs are obtained from well-established and recognized vendors of market data and subjected to tolerance/quality checks.

Assets that are measured using significant other observable inputs are primarily valued by reference to quoted prices of similar assets in active markets, adjusted for any terms specific to that asset. For all other assets for which observable inputs are used, fair value is derived through the use of fair value models, such as a discounted cash flow model or other standard pricing models. There were no transfers between Levels 1 and 2 in the years ended December 31, 2017 and 2016.

The following table summarizes the fair value of the Corporation's financial instruments at December 31, 2017 and 2016:

Fair Value of Financial Instruments In millions	2017				2016			
	Cost	Gain	Loss	Fair Value	Cost	Gain	Loss	Fair Value
Cash equivalents	\$ 9	\$ —	\$ —	\$ 9	\$ 7	\$ —	\$ —	\$ 7
Debt securities <sup>1</sup>	\$ —	\$ —	\$ —	\$ —	\$ 2	\$ —	\$ —	\$ 2
Long-term debt including debt due within one year	\$ (475)	\$ —	\$ (129)	\$ (604)	\$ (476)	\$ —	\$ (95)	\$ (571)

1. Marketable securities are included in "Other investments" in the consolidated balance sheets.

Cost approximates fair value for all other financial instruments.

**NOTE 18 - RELATED PARTY TRANSACTIONS**

The Corporation sells its products to Dow to simplify the customer interface process. Products are sold to and purchased from Dow at market-based prices in accordance with the terms of Dow's intercompany pricing policies. After each quarter, the Corporation and Dow analyze the pricing used for the sales in that quarter and reach agreement on any necessary adjustments, at which point the prices are final. The Corporation also procures certain commodities and raw materials through a Dow subsidiary and pays a commission to that Dow subsidiary based on the volume and type of commodities and raw materials purchased. The commission expense was included in "Sundry income (expense) - net" in the consolidated statements of income. Purchases from that Dow subsidiary were approximately \$1.7 billion in 2017, \$1.4 billion in 2016 and \$1.7 billion in 2015.

The Corporation has a master services agreement with Dow whereby Dow provides services including, but not limited to, accounting, legal, treasury (investments, cash management, risk management, insurance), procurement, human resources, environmental, health and safety, and business management for UCC. Under the master services agreement with Dow, general administrative and overhead type services that Dow routinely allocates to various businesses are charged to UCC. The master services agreement cost allocation basis is headcount and includes a 10 percent service fee. This agreement resulted in expense of \$33 million in 2017, \$27 million in 2016 and \$30 million in 2015 for general administrative and overhead type services and the 10 percent service fee, and was included in "Sundry income (expense) - net" in the consolidated statements of income. The remaining

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activity-based costs were approximately \$78 million in 2017, \$58 million in 2016 and \$63 million in 2015 and were included in "Cost of sales" in the consolidated statements of income.

Management believes the method used for determining expenses charged by Dow is reasonable. Dow provides these services by leveraging its centralized functional service centers to provide services at a cost that management believes provides an advantage to the Corporation.

The monitoring and execution of risk management policies related to interest rate and foreign currency risks, which are based on Dow's risk management philosophy, are provided as a service to UCC.

As part of Dow's cash management process, UCC is a party to revolving loans with Dow that have interest rates based on LIBOR (London Interbank Offered Rate) with varying maturities. At December 31, 2017, the Corporation had a note receivable of \$1.2 billion (\$1.4 billion at December 31, 2016) from Dow under a revolving loan agreement. The Corporation may draw from this note receivable in support of its daily working capital requirements and, as such, the net effect of cash inflows and outflows under this revolving loan agreement is presented in the consolidated statements of cash flows as an operating activity.

The Corporation also has a separate revolving credit agreement with Dow that allows the Corporation to borrow or obtain credit enhancements up to an aggregate of \$1 billion that matures on December 30, 2018. Dow may demand repayment with a 30-day written notice to the Corporation, subject to certain restrictions. A related collateral agreement provides for the replacement of certain existing pledged assets, primarily equity interests in various subsidiaries and joint ventures, with cash collateral. At December 31, 2017, \$949 million (\$947 million at December 31, 2016) was available under the revolving credit agreement. The cash collateral was reported as "Noncurrent receivables from related companies" in the consolidated balance sheets.

On a quarterly basis, the Corporation's Board of Directors reviews and determines if there will be a dividend distribution to its parent company and sole shareholder, Dow. The Board takes into consideration the level of earnings and cash flows, among other factors, in determining the amount of the dividend distribution. In 2017, the Corporation declared and paid dividends totaling \$603 million to Dow. In 2016, the Corporation declared and paid dividends totaling \$500 million to Dow.

In accordance with the Tax Sharing Agreement between the Corporation and Dow, the Corporation makes payments to Dow to cover the Corporation's estimated federal tax liability; payments were \$294 million in 2017, \$415 million in 2016 and \$310 million in 2015.

**NOTE 19 - BUSINESS AND GEOGRAPHIC REGIONS**

Dow conducts its worldwide operations through principal product groups, and the Corporation's business activities comprise components of Dow's principal product groups rather than stand-alone operations. The Corporation sells substantially all of its products to Dow in order to simplify the customer interface process at market-based prices in accordance with Dow's intercompany pricing policy. Because there are no separable reportable business segments for the Corporation and no detailed business information is provided to a chief operating decision maker regarding the Corporation's stand-alone operations, the Corporation's results are reported as a single operating segment.

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Sales are attributed to geographic regions based on customer location; long-lived assets are attributed to geographic regions based on asset location. Sales to external customers and long-lived assets by geographic region were as follows:

<b>Geographic Region Information</b>				
In millions	<i>United States</i>	<i>Asia Pacific</i>	<i>Rest of World</i>	<i>Total</i>
<b>2017</b>				
Sales to external customers <sup>1</sup>	\$ 110	\$ 21	\$ 12	\$ 143
Long-lived assets	\$ 1,341	\$ 9	\$ 29	\$ 1,379
<b>2016</b>				
Sales to external customers <sup>1</sup>	\$ 95	\$ 3	\$ 10	\$ 108
Long-lived assets	\$ 1,353	\$ 10	\$ 31	\$ 1,394
<b>2015</b>				
Sales to external customers <sup>1</sup>	\$ 70	\$ 3	\$ 14	\$ 87
Long-lived assets	\$ 1,259	\$ 10	\$ 32	\$ 1,301

1. Of total sales to external customers, sales in Malaysia were approximately 15 percent in 2017, 3 percent in 2016 and 4 percent in 2015, and are included in Asia Pacific.

**ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

None.



**ITEM 9B. OTHER INFORMATION**

None.

Union Carbide Corporation and Subsidiaries

**PART III**

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**ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

Omitted pursuant to General Instruction I of Form 10-K.

**ITEM 11. EXECUTIVE COMPENSATION**

Omitted pursuant to General Instruction I of Form 10-K.

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

Omitted pursuant to General Instruction I of Form 10-K.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

Omitted pursuant to General Instruction I of Form 10-K.

**ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES**

Prior to the closing of the DowDuPont transaction, the Dow Audit Committee pre-approved all auditing services and permitted non-audit services for 2017 (including the fees and terms thereof) to be performed for Dow and its subsidiaries (including the Corporation) by its independent auditor, subject to the *de minimus* exception for non-audit services described in Section 10A(i)(1)(B) of the Securities Exchange Act, any such exceptions are approved by the Dow Audit Subcommittee of the DowDuPont Audit Committee prior to the completion of the audit. The Corporation's management and its Board of Directors subscribe to these policies and procedures. For the years ended December 31, 2017 and 2016, professional services were performed for the Corporation by Deloitte & Touche LLP, the member firms of Deloitte Touche Tohmatsu Limited, and their respective affiliates (collectively, the "Deloitte Entities").

Total fees paid to the Deloitte Entities were \$1.5 million in 2017 and \$1.6 million in 2016. These are the aggregate of fees billed for the audit of the Corporation's annual financial statements, the reviews of the financial statements in the Quarterly Reports on Form 10-Q, statutory audits and other regulatory filings.

**Union Carbide Corporation and Subsidiaries**  
**PART IV**

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**ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES**

(a) The following documents are filed as part of this report:

1. The Corporation's 2017 Consolidated Financial Statements and the Report of Independent Registered Public Accounting Firm are included in Item 8 of this Annual Report on Form 10-K.
2. Financial Statement Schedules are omitted because of the absence of the conditions under which they are required or because the information called for is included in the Consolidated Financial Statements or Notes thereto.

The following exhibits are filed with or incorporated by reference into this Annual Report on Form 10-K:

<i>Exhibit No.</i>	<i>Description of Exhibit</i>
2.1	<a href="#">Agreement and Plan of Merger dated as of August 3, 1999 among Union Carbide Corporation, The Dow Chemical Company and Transition Sub Inc., incorporated by reference to Exhibit 2 of the Corporation's Current Report on Form 8-K dated August 3, 1999.</a>
2.2	<a href="#">Agreement for the Sale &amp; Purchase of Shares, dated as of August 17, 2009, among Union Carbide Corporation, UCMG L.L.C. and Petroliam Nasional Berhad, incorporated by reference to Exhibit 2.1 of the Corporation's Current Report on Form 8-K dated September 30, 2009.</a>
3.1	<a href="#">Restated Certificate of Incorporation of Union Carbide Corporation under Section 807 of the Business Corporation Law, as filed on May 13, 2008, incorporated by reference to Exhibit 3.1.4 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2008.</a>
3.2	<a href="#">Amended and Restated Bylaws of Union Carbide Corporation, amended as of April 22, 2004, incorporated by reference to Exhibit 3.2 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended March 31, 2004.</a>
4.1	<a href="#">Indenture dated as of June 1, 1995, between the Corporation and the Chase Manhattan Bank (formerly Chemical Bank), Trustee, incorporated by reference to Exhibit 4.1.2 to the Corporation's Form S-3 effective October 13, 1995, Reg. No. 33-60705.</a>
4.2	The Corporation will furnish to the Commission upon request any other debt instrument referred to in Item 601(b)(4)(iii) (A) of Regulation S-K.
10.1	<a href="#">Amended and Restated Service Agreement, effective as of July 1, 2002, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.23 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2002.</a>
10.1.1	<a href="#">Service Addendum No. 2 to the Service Agreement, effective as of August 1, 2001, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.23.2 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2002.</a>
10.1.2	<a href="#">Restated Service Addendum No. 1 to the Service Agreement, effective as of February 6, 2001, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.23.3 of the Corporation's 2002 Form 10-K.</a>
10.1.3	<a href="#">Service Addendum No. 3 to the Amended and Restated Service Agreement, effective as of January 1, 2005, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.1.3 of the Corporation's 2004 Form 10-K.</a>
10.1.4	<a href="#">First Amendment to Amended and Restated Service Agreement, effective as of January 1, 2011, between the Corporation and The Dow Chemical Company incorporated by reference to Exhibit 10.1.4 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended March 31, 2011.</a>
10.2	<a href="#">Second Amended and Restated Sales Promotion Agreement, effective January 1, 2004, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.24 of the Corporation's 2003 Form 10-K.</a>
10.2.1	<a href="#">First Amendment to Second Amended and Restated Sales Promotion Agreement, effective as of March 22, 2013, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.2.1 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013.</a>
10.2.2	<a href="#">Second Amendment to Second Amended and Restated Sales Promotion Agreement, effective as of July 1, 2014, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.2.2 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2014.</a>

<i>Exhibit No.</i>	<i>Description of Exhibit</i>
10.3	<a href="#"><u>Third Amended and Restated Agreement (to Provide Materials and Services), dated as of March 1, 2008, between the Corporation and Dow Hydrocarbons and Resources LLC, incorporated by reference to Exhibit 10.3 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended March 31, 2008.</u></a>
10.4	<a href="#"><u>Amended and Restated Tax Sharing Agreement, effective as of February 7, 2001, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.27 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2003.</u></a>
10.5	<a href="#"><u>Amended and Restated Revolving Credit Agreement dated as of May 28, 2004, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors, incorporated by reference to Exhibit 10.28 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2004.</u></a>
10.5.1	<a href="#"><u>First Amendment dated October 29, 2004 to the Amended and Restated Revolving Credit Agreement, dated as of May 28, 2004, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors, incorporated by reference to Exhibit 10.5.1 of the Corporation's 2004 Form 10-K.</u></a>
10.5.2	<a href="#"><u>Second Amendment to the Amended and Restated Revolving Credit Agreement, effective as of December 30, 2004, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors, incorporated by reference to Exhibit 10.5.2 of the Corporation's 2004 Form 10-K.</u></a>
10.5.3	<a href="#"><u>Third Amendment to the Amended and Restated Revolving Credit Agreement, dated as of September 30, 2005, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors, incorporated by reference to Exhibit 10.5.3 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2005.</u></a>
10.5.4	<a href="#"><u>Fourth Amendment to the Amended and Restated Revolving Credit Agreement, dated as of September 30, 2006, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors, incorporated by reference to Exhibit 10.5.4 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2006.</u></a>
10.5.5	<a href="#"><u>Fifth Amendment to the Amended and Restated Revolving Credit Agreement, dated as of September 30, 2007, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors incorporated by reference to Exhibit 10.5.5 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2007.</u></a>
10.5.6	<a href="#"><u>Sixth Amendment to the Amended and Restated Revolving Credit Agreement, effective as of September 30, 2008, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors, incorporated by reference to Exhibit 10.5.6 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2008.</u></a>
10.5.7	<a href="#"><u>Seventh Amendment to the Amended and Restated Revolving Credit Agreement, effective as of September 30, 2009, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors, incorporated by reference to Exhibit 10.5.7 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2009.</u></a>
10.5.8	<a href="#"><u>Eighth Amendment to the Amended and Restated Revolving Credit Agreement, effective as of September 30, 2010, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors, incorporated by reference to Exhibit 10.5.8 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2010.</u></a>
10.5.9	<a href="#"><u>Ninth Amendment to the Amended and Restated Revolving Credit Agreement, effective as of September 30, 2011, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors, incorporated by reference to Exhibit 10.5.9 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2011.</u></a>
10.5.10	<a href="#"><u>Tenth Amendment to the Amended and Restated Revolving Credit Agreement, effective as of December 6, 2012, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors, incorporated by reference to Exhibit 10.5.10 of the Corporation's 2012 10-K.</u></a>
10.5.11	<a href="#"><u>Eleventh Amendment to the Amended and Restated Revolving Credit Agreement, effective as of December 16, 2013, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors, incorporated by reference to Exhibit 10.5.11 of the Corporation's 2013 10-K.</u></a>
10.5.12	<a href="#"><u>Twelfth Amendment to the Amended and Restated Revolving Credit Agreement, effective as of December 17, 2014, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors, incorporated by reference to Exhibit 10.5.12 of the Corporation's 2014 10-K.</u></a>
10.5.13	<a href="#"><u>Thirteenth Amendment to the Amended and Restated Revolving Credit Agreement, effective as of December 16, 2015, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors, incorporated by reference to Exhibit 10.5.13 of the Corporation's 2015 10-K.</u></a>
10.5.14	<a href="#"><u>Fourteenth Amendment to the Amended and Restated Revolving Credit Agreement, effective as of December 12, 2016, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors, incorporated by reference to Exhibit 10.5.14 of the Corporation's 2016 10-K.</u></a>

<i>Exhibit No.</i>	<i>Description of Exhibit</i>
10.5.15*	<a href="#"><u>Fifteenth Amendment to the Amended and Restated Revolving Credit Agreement, effective as of December 30, 2017, among the Corporation, The Dow Chemical Company and certain Subsidiary Guarantors.</u></a>
10.6	<a href="#"><u>Amended and Restated Pledge and Security Agreement dated as of May 28, 2004, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.29 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2004.</u></a>
10.7	<a href="#"><u>Second Amended and Restated Revolving Loan Agreement, effective as of November 1, 2005, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.7 of the Corporation's 2005 Annual Report on Form 10-K.</u></a>
10.7.1	<a href="#"><u>First Amendment to Second Amended and Restated Revolving Loan Agreement, effective as of December 31, 2007, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.7.1 of the Corporation's 2007 Annual Report on Form 10-K.</u></a>
10.7.2	<a href="#"><u>Second Amendment to Second Amended and Restated Revolving Loan Agreement, effective as of August 1, 2009, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.7.2 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2009.</u></a>
10.7.3	<a href="#"><u>Third Amendment to Second Amended and Restated Revolving Loan Agreement, effective as of February 1, 2010, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.7.3 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2010.</u></a>
10.7.4	<a href="#"><u>Fourth Amendment to Second Amended and Restated Revolving Loan Agreement, effective as of August 1, 2010, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.7.4 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2010.</u></a>
10.7.5	<a href="#"><u>Fifth Amendment to Second Amended and Restated Revolving Loan Agreement, effective as of August 1, 2011, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.7.5 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2011.</u></a>
10.7.6	<a href="#"><u>Sixth Amendment to Second Amended and Restated Revolving Loan Agreement, effective as of April 1, 2012, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.7.6 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2012.</u></a>
10.7.7	<a href="#"><u>Seventh Amendment to Second Amended and Restated Revolving Loan Agreement, effective as of August 1, 2013, between the Corporation and The Dow Chemical Company, incorporated by reference to Exhibit 10.7.7 of the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2013.</u></a>
10.9	<a href="#"><u>Contribution Agreement dated as of December 21, 2007, among the Corporation, Dow International Holdings Company and The Dow Chemical Company, incorporated by reference to Exhibit 10.9 of the Corporation's 2007 Annual Report on Form 10-K.</u></a>
21	Omitted pursuant to General Instruction I of Form 10-K.
23*	<a href="#"><u>Ankura Consulting Group, LLC's Consent.</u></a>
31.1*	<a href="#"><u>Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u></a>
31.2*	<a href="#"><u>Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u></a>
32.1*	<a href="#"><u>Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u></a>
32.2*	<a href="#"><u>Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u></a>
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

\* Filed herewith

The Corporation will provide a copy of any exhibit upon receipt of a written request for the particular exhibit or exhibits desired. All requests should be addressed to the Corporation's principal executive offices.

**ITEM 16. FORM 10-K SUMMARY**

Not applicable.

**Union Carbide Corporation and Subsidiaries**  
**Trademark Listing**

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The following trademarks of Union Carbide Corporation or its subsidiaries appear in this report:

CARBOWAX, FLEXOMER, POLYOX, REDI-LINK, SENTRY, SI-LINK, TERGITOL, TRITON, TUFLIN, UCAR, UCARTHERM, UCON, UNIGARD, UNIPURGE, UNIVAL

The following trademark of The Dow Chemical Company appears in this report: METEOR

The following registered service mark of American Chemistry Council appears in this report: RESPONSIBLE CARE

**Union Carbide Corporation and Subsidiaries**  
**Signatures**

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Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, on the 15th day of February 2018.

UNION CARBIDE CORPORATION

\_\_\_\_\_  
/s/ RONALD C. EDMONDS

Ronald C. Edmonds  
Controller and Vice President of Controllers and Tax  
The Dow Chemical Company  
Authorized Representative of Union Carbide Corporation

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed below on the 15th day of February 2018 by the following persons on behalf of the Registrant and in the capacities indicated:

\_\_\_\_\_  
/s/ RICHARD A. WELLS

Richard A. Wells, Director, President and Chief Executive Officer

\_\_\_\_\_  
/s/ GLENN J. MORAN

Glenn J. Moran, Director

\_\_\_\_\_  
/s/ IGNACIO MOLINA

Ignacio Molina, Director, Vice President, Treasurer and  
Chief Financial Officer

\_\_\_\_\_  
/s/ RONALD C. EDMONDS

Ronald C. Edmonds  
Controller and Vice President of Controllers and Tax  
The Dow Chemical Company  
Authorized Representative of Union Carbide Corporation

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**Union Carbide Corporation and Subsidiaries**

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**Supplemental Information to be Furnished With Reports Filed Pursuant to Section 15(d) of the Act by Registrants Which Have Not Registered Securities Pursuant to Section 12 of the Act**

The Corporation is a wholly owned subsidiary of The Dow Chemical Company ("Dow"). Dow and E.I. du Pont de Nemours and Company ("DuPont") each merged with subsidiaries of DowDuPont, Inc. ("DowDuPont") on August 31, 2017, and, as a result, Dow and DuPont became subsidiaries of DowDuPont. The Corporation is a wholly owned subsidiary of Dow and, as such, does not send an annual report or proxy material with respect to any annual or other meeting of security holders to Dow, DowDuPont or any other security holders.

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**FIFTEENTH AMENDMENT TO THE  
AMENDED AND RESTATED REVOLVING CREDIT AGREEMENT**

This Fifteenth Amendment to the Amended and Restated Revolving Credit Agreement (this “Amendment”) is made effective as of December 30, 2017, and is entered into among Union Carbide Corporation, as Borrower (“Borrower”), The Dow Chemical Company, as Lender (“Lender”) and Union Carbide Chemicals & Plastics Technology LLC as the Subsidiary Guarantor (the “Subsidiary Guarantor”) (together, the “Parties”).

BACKGROUND

The Parties have entered into the Amended and Restated Revolving Credit Agreement dated as of May 28, 2004, as amended by the First Amendment to the Amended and Restated Revolving Credit Agreement dated October 29, 2004, the Second Amendment to the Amended and Restated Revolving Credit Agreement dated December 30, 2004, the Third Amendment to the Amended and Restated Revolving Credit Agreement dated September 30, 2005, the Fourth Amendment to the Amended and Restated Revolving Credit Agreement dated September 30, 2006, the Fifth Amendment to the Amended and Restated Revolving Credit Agreement dated September 30, 2007, the Sixth Amendment to the Amended and Restated Revolving Credit Agreement dated September 30, 2008, the Seventh Amendment to the Amended and Restated Revolving Credit Agreement dated September 30, 2009, and the Eighth Amendment to the Amended and Restated Revolving Credit Agreement dated September 30, 2010, the Ninth Amendment to the Amended and Restated Revolving Credit Agreement dated September 30, 2011, the Tenth Amendment to the Amended and Restated Revolving Credit Agreement dated December 6, 2012, the Eleventh Amendment to the Amended and Restated Revolving Credit Agreement dated December 16, 2013, the Twelfth Amendment to the Amended and Restated Revolving Credit Agreement dated December 17, 2014, and the Thirteenth Amendment to the Amended and Restated Revolving Credit Agreement dated December 18, 2015, and the Fourteenth Amendment to the Amended and Restated Revolving Credit Agreement dated December 12, 2016 (the “Credit Agreement”). Union Carbide Subsidiary C is no longer a Subsidiary Guarantor under this Credit Agreement as it is no longer a wholly owned subsidiary of Borrower.

The Parties desire to amend the Credit Agreement according to the terms in this Amendment. Any capitalized terms used in this Amendment, but not otherwise defined in this Amendment, are as defined in the Credit Agreement.

THE AGREEMENT

1. Amendment to Section 1.1. The Parties agree to amend Section 1.1 of the Credit Agreement by Replacing the definition of “Scheduled Termination Date” with the following definition:

“Scheduled Termination Date” means December 30, 2018.
2. No Other Amendment or Waiver. Except as expressly amended by this Amendment, the Credit Agreement and all other Loan Documents remain in full force and effect in accordance with their terms, and the Parties ratify and confirm the Credit Agreement and all other Loan Documents in all respects.

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3. Execution in Counterparts. This amendment may be executed in any number of counterparts and and by different parties in separate counterparts, each of which when so executed will be deemed to be an original and all of which taken together will constitute one and the same agreement. Signature pages may be detached from multiple separate counterparts and attached to a single counterpart so that all signature pages are attached to the same document.
  4. Governing Law. This Amendment and the rights and obligation of the Parties to this Amendment will be governed by, and construed and interpreted in accordance with, the law of the State of New York.
  5. Subsidiary Guarantor. The Guarantor to this Agreement will only be bound by its guarantee if it remains a wholly owned subsidiary of the Borrower.

The Parties agree that this Amendment is effective as of December 30, 2017, and they have caused their authorized representatives to execute this Amendment below.

**LENDER:****THE DOW CHEMICAL COMPANY**

By: /s/ GARY MCGUIRE

Name: Gary McGuire

Title: Vice President and Treasurer

**SUBSIDIARY GUARANTOR:****UNION CARBIDE CHEMICALS &  
PLASTICS TECHNOLOGY LLC**

By: /s/ MARK A WHITEMAN

Name: Mark A. Whiteman

Title: President

**BORROWER:****UNION CARBIDE CORPORATION**

By: /s/ IGNACIO MOLINA

Name: Ignacio Molina

Title: Chief Financial Officer, Vice President, and  
Treasurer





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**Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Richard A. Wells, certify that:

1. I have reviewed this annual report on Form 10-K of Union Carbide Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 15, 2018

/s/ RICHARD A. WELLS

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Richard A. Wells  
President and Chief Executive Officer

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**Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Ignacio Molina, certify that:

1. I have reviewed this annual report on Form 10-K of Union Carbide Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 15, 2018

/s/ IGNACIO MOLINA

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Ignacio Molina  
Vice President, Treasurer and Chief Financial Officer



