

DOW CHEMICAL CO /DE/  
Form 10-K  
February 12, 2016  
Table of Contents

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

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2015

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: 1-3433

THE DOW CHEMICAL COMPANY

(Exact name of registrant as specified in its charter)

Delaware

38-1285128

State or other jurisdiction of  
incorporation or organization

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

2030 DOW CENTER, MIDLAND, MICHIGAN 48674

(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: 989-636-1000

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

Title of each class

Name of each exchange on which registered

Common Stock, par value \$2.50 per share

New York Stock Exchange

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.

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).

Yes  No

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

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

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).  Yes  No

Edgar Filing: DOW CHEMICAL CO /DE/ - Form 10-K

The aggregate market value of voting common stock held by non-affiliates as of June 30, 2015 (based upon the closing price of \$51.17 per common share as quoted on the New York Stock Exchange), was approximately \$59.1 billion. For purposes of this computation, it is assumed that the shares of voting stock held by Directors and Officers would be deemed to be stock held by affiliates. Non-affiliated common stock outstanding at June 30, 2015 was 1,154,841,365 shares.

Total common stock outstanding at January 31, 2016 was 1,117,112,448 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Part III: Proxy Statement for the Annual Meeting of Stockholders to be held on May 12, 2016.

---

Table of Contents

The Dow Chemical Company  
 ANNUAL REPORT ON FORM 10-K  
 For the fiscal year ended December 31, 2015  
 TABLE OF CONTENTS

	PAGE
<u>PART I</u>	
<u>Item 1.</u> Business.	<u>4</u>
<u>Item 1A.</u> Risk Factors.	<u>19</u>
<u>Item 1B.</u> Unresolved Staff Comments.	<u>23</u>
<u>Item 2.</u> Properties.	<u>24</u>
<u>Item 3.</u> Legal Proceedings.	<u>25</u>
<u>Item 4.</u> Mine Safety Disclosures.	<u>26</u>
<u>PART II</u>	
<u>Item 5.</u> Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.	<u>27</u>
<u>Item 6.</u> Selected Financial Data.	<u>29</u>
<u>Item 7.</u> Management’s Discussion and Analysis of Financial Condition and Results of Operations.	<u>30</u>
<u>Item 7A.</u> Quantitative and Qualitative Disclosures About Market Risk.	<u>68</u>
<u>Item 8.</u> Financial Statements and Supplementary Data.	<u>69</u>
<u>Item 9.</u> Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.	<u>146</u>
<u>Item 9A.</u> Controls and Procedures.	<u>147</u>
<u>Item 9B.</u> Other Information.	<u>149</u>
<u>PART III</u>	
<u>Item 10.</u> Directors, Executive Officers and Corporate Governance.	<u>150</u>
<u>Item 11.</u> Executive Compensation.	<u>150</u>
<u>Item 12.</u> Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.	<u>150</u>

<u>Item 13.</u>	Certain Relationships and Related Transactions, and Director Independence.	<u>150</u>
<u>Item 14.</u>	Principal Accounting Fees and Services.	<u>150</u>
<u>PART IV</u>		
<u>Item 15.</u>	Exhibits, Financial Statement Schedules.	<u>151</u>
<u>SIGNATURES</u>		<u>153</u>

Table of Contents

The Dow Chemical Company and Subsidiaries

Throughout this Annual Report on Form 10-K, except as otherwise noted by the context, the terms "Company" or "Dow" as used herein mean The Dow Chemical Company and its consolidated 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," "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.

This document also contains statements about Dow's agreement to effect an all-stock, merger of equals strategic combination with E. I. du Pont de Nemours and Company ("DuPont") resulting in a new combined company ("Diamond-Orion HoldCo") and then, subsequent to the merger, Dow and DuPont intend to pursue the separation of Diamond-Orion HoldCo's agriculture business, specialty business and material science business through one or more tax-efficient transactions (collectively, the "Transaction"). Many factors could cause actual results to differ materially from these forward-looking statements with respect to the Transaction, including (i) the completion of the proposed Transaction on anticipated terms and timing, including obtaining shareholder and regulatory approvals, anticipated tax treatment, unforeseen liabilities, future capital expenditures, revenues, expenses, earnings, synergies, economic performance, indebtedness, financial condition, losses, future prospects, business and management strategies for the management, expansion and growth of the new combined company's operations and other conditions to the completion of the merger, (ii) the ability of Dow and DuPont to integrate the business successfully and to achieve anticipated synergies, risks and costs and pursuit and/or implementation of the potential separation, including timing anticipated, any changes to the configuration of businesses included in the potential separation if implemented, (iii) potential litigation relating to the proposed Transaction that could be instituted against Dow, DuPont or their respective directors, (iv) the risk that disruptions from the proposed Transaction will harm Dow's or DuPont's business, including current plans and operations, (v) the ability of Dow or DuPont to retain and hire key personnel, (vi) potential adverse reactions or changes to business relationships resulting from the announcement or completion of the merger, (vii) uncertainty as to the long-term value of Diamond-Orion HoldCo common stock, (viii) continued availability of capital and financing and rating agency actions, (ix) legislative, regulatory and economic developments, (x) potential business uncertainty during the pendency of the merger that could affect Dow's and/or DuPont's economic performance, (xi) certain contractual restrictions that could be imposed on Dow and/or DuPont during the pendency of the merger that might impact Dow's or DuPont's ability to pursue certain business opportunities or strategic transactions and (xii) unpredictability and severity of catastrophic events, including, but not limited to, acts of terrorism or outbreak of war or hostilities, as well as management's response to any of the aforementioned factors. These risks, as well as other risks associated with the proposed merger, will be more fully discussed in the joint proxy statement/prospectus that will be included in the registration statement on Form S-4 that will be filed with the U.S. Securities and Exchange Commission in connection with the proposed merger. While the list of factors presented here is, and the list of factors to be presented in the registration statement on Form S-4 are, considered representative, no such list should be considered to be a complete statement of all potential risks and uncertainties. Unlisted factors may present significant additional obstacles to the realization of forward-looking statements. Consequences of material differences in results as compared with those anticipated in the forward-looking statements could include, among other things, business

disruption, operational problems, financial loss, legal liability to third parties and similar risks, any of which could have a material adverse effect on Dow's or DuPont's consolidated financial condition, results of operations, credit rating or liquidity. Neither Dow nor DuPont assumes any obligation to publicly provide revisions or updates to any forward-looking statements, whether as a result of new information, future developments or otherwise, should circumstances change, except as otherwise required by securities and other applicable laws.

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). The Dow Chemical Company 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.

Table of Contents

The Dow Chemical Company and Subsidiaries  
PART I, Item 1. Business.

THE COMPANY

The Dow Chemical Company was incorporated in 1947 under Delaware law and is the successor to a Michigan corporation, of the same name, organized in 1897. The Company's principal executive offices are located at 2030 Dow Center, Midland, Michigan 48674. Throughout this Annual Report on Form 10-K, except as otherwise indicated by the context, the terms "Company" or "Dow" as used herein mean The Dow Chemical Company and its consolidated subsidiaries.

Available Information

The Company'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 Investor Relations section of the Company's website ([www.dow.com/investors](http://www.dow.com/investors)), 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 Company's website and its content are not deemed incorporated by reference into this report.

General

Dow combines the power of science and technology to passionately innovate what is essential to human progress. The Company is driving innovations that extract value from materials, polymers, chemicals and biological sciences to help address many of the world's most challenging problems such as the need for clean water, clean energy generation and conservation, and increasing agricultural productivity. Dow's integrated, market-driven, industry-leading portfolio of specialty chemical, advanced materials, agrosociences and plastics businesses delivers a broad range of technology-based products and solutions to customers in approximately 180 countries and in high-growth sectors such as packaging, electronics, water, coatings and agriculture. In 2015, Dow had annual sales of nearly \$49 billion and employed approximately 49,500 people worldwide. The Company's more than 6,000 product families are manufactured at 179 sites in 35 countries across the globe. The Company conducts its worldwide operations through global businesses, which are reported in five operating segments: Agricultural Sciences, Consumer Solutions, Infrastructure Solutions, Performance Materials & Chemicals and Performance Plastics.

Strategy

Dow's strategy is to invest in a market-driven portfolio of advantaged and technology-enabled businesses that create value for our shareholders and customers.

Dow DuPont Planned Merger of Equals

On December 11, 2015, the Company and E. I. du Pont de Nemours and Company ("DuPont") announced that their boards of directors unanimously approved a definitive agreement under which the companies will combine in an all-stock merger of equals strategic combination. The combined company will be named DowDuPont. This transaction is expected to close in the second half of 2016, subject to customary closing conditions, including regulatory approvals. The parties intend to subsequently pursue a separation of DowDuPont into three independent, publicly traded companies through tax-efficient transactions, including a leading global pure-play agriculture company, a leading global pure-play material science company and a leading technology and innovation-driven specialty products company. See Part I, Item 1A. Risk Factors and Note 27 to the Consolidated Financial Statements for further details on this transaction.





Table of Contents**BUSINESS SEGMENTS AND PRODUCTS**

Dow's worldwide operations are managed through global businesses which are reported in five operating segments: Agricultural Sciences, Consumer Solutions, Infrastructure Solutions, Performance Materials & Chemicals and Performance Plastics. This operating structure maximizes Dow's integration benefits and the value from materials, polymers, chemicals and biological sciences to help address many of the world's most challenging problems - either through molecular and value chain alignment, or through the benefits derived from Dow's enhanced, innovation-driven market focus. See Part II, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations and Note 26 to the Consolidated Financial Statements for additional information concerning the Company's operating segments.

**AGRICULTURAL SCIENCES**

The Agricultural Sciences segment is a global leader in providing crop protection and seed/plant biotechnology products and technologies, urban pest management solutions and healthy oils. The business invents, develops, manufactures and markets products for use in agricultural, industrial and commercial pest management, and food service. The segment has broad global reach with sales in nearly 130 countries and research and development ("R&D") and manufacturing facilities located in all geographic areas. Growth is achieved through the development of innovative new products and technologies, successful segmentation of market offerings with leading brands, diverse channels to market, competitive cost positions, strategic bolt-on acquisitions, and commercial and R&D collaborations. The Company is committed to the development of innovative new crop protection and biological products and technologies.

Details on Agricultural Sciences' 2015 sales, by business and geographic area, are as follows:

**Products**

Key product lines, including crop application, are listed below:

Key Product Lines	Crop Application					Range and Pasture	Rice	Soybeans	Sunflower	Trees, Fruits and Vegetables	Others
	Canola	Cereals	Corn	Cotton							
Insecticides	x	x	x	x		x	x	x	x	x	
Fungicides		x				x	x		x	x	
Herbicides	x	x	x	x	x	x	x	x	x	x	
Seeds	x	x	x	x	x		x	x		x	
Other			x								

The Company's ability to produce seeds can be materially impacted by weather conditions, local political conditions and the availability of reliable contract growers.

## Table of Contents

Agricultural Sciences is focused on delivering results through technology leadership. Major brands and technologies, by key product line, are listed below:

### Key Product Lines Brands and Technologies

Insecticides ISOCLAST™; LORSBAN™; RADIANT™; SENTRICON™; TRACER™

Fungicides DITHANE™; INATREQ™

Herbicides ARYLEX™; BROADWAY™; CLINCHER™; DURANGO™; FENCER™; GARLON™; LONTREL™; MILESTONE™; PANZER™; PRIMUS™; RINSKOR™; SPIDER™; STARANE™; SURESTART™; TO

AGROMEN™; BRODBECK™ Seeds; DAIRYLAND SEED™; DOW™ Seeds; MYCOGEN™ Seeds; NEXERA™; Omega-9 Healthier Oils; PFISTER™ Seeds; PHYTOGEN™; POWERCORE™ Insect Trait

Seeds Technology<sup>(2)</sup>; PRAIRIE BRAND™ Seeds; REFUGE ADVANCED™ powered by SmartStax®  
SmartStax® Insect Trait Technology<sup>(2)</sup>

Other N-SERVE™ Nitrogen Stabilizer; TELONE™

(1) AGROMEN trademark used under license from Agromen Sementes Agricolas Ltda.

Smartstax® and POWERCORE™ multi-event technology developed by Dow AgroSciences LLC and Monsanto.

(2) Smartstax®, the Smartstax® logo, POWERCORE™ and the POWERCORE™ logo are trademarks of Monsanto Technology, LLC.

U.S. federal regulatory approvals have been obtained for the commercialization of ENLIST™ Corn, Soybeans and Cotton, including the U.S. Environmental Protection Agency's ("EPA") registration of ENLIST DUO™ for use with ENLIST™ Corn and Soybeans in 15 key states. The Company has also secured approval of the registration of ENLIST E3™ Soybeans in Argentina and approval of the registration of ENLIST™ Soybean Seeds and Corn Seeds in Brazil. Regulatory approvals for ENLIST™ products in certain other countries are still pending. After the EPA's registration of ENLIST DUO™ for use with ENLIST™ Corn and Soybeans, the National Resources Defense Council, Center for Food Safety and other organizations filed suit against the EPA to set aside the registration in the United States Court of Appeals for the Ninth Circuit (the "Court"), and Dow AgroSciences intervened in the cases. In late November 2015, the EPA filed a motion to vacate and remand the registration to the EPA. Dow AgroSciences opposed the motion to vacate the registration. On January 25, 2016, the Court denied the EPA's motion to vacate the registration, so the ENLIST DUO™ registration for use with ENLIST™ Corn and Soybeans remains fully intact.

### Patents, Trademarks and Licenses

Agricultural Sciences has significant technology-driven growth, led by plant biotechnology traits and crop protection products that utilize proprietary formulations. As a result, the Company uses patents, trademarks, licenses and registrations to protect its investment in germplasm, traits and proprietary chemistries and formulations. The Company also licenses plant biotechnology traits from third parties and engages in research collaborations with global industry, academia and governments. The Company does not regard the Agricultural Sciences segment as being materially dependent on any single or group of related patents, trademarks, licenses or registrations.

### Competition

Agricultural Sciences competes with producers of crop protection chemicals and agricultural biotechnology in the United States and abroad. The Company competes on the basis of technology and trait leadership, price, quality and cost competitiveness. Key competitors include BASF, Bayer, DuPont, Monsanto and Syngenta, as well as generic and regional seed companies.

### Distribution

Agricultural Sciences has a diverse worldwide network which markets and distributes the Company's brands to customers globally. This network consists of the Company's sales and marketing organization partnering with distributors, independent retailers and growers, cooperatives and agents throughout the world.

Seasonality

Agricultural Sciences sales and EBITDA are strongest in the first half of the year, aligning with the planting and growing season in the northern hemisphere, where approximately 60 percent of the segment's annual sales are generated. Inventory tends to be at peak levels in the first half of the year, in advance of the northern hemisphere planting and growing season. Accounts receivable tends to be highest during the second quarter, consistent with the peak sales period in the northern hemisphere.

Table of Contents

Divestiture

On July 31, 2015, the Company sold its AgroFresh business to AgroFresh Solutions, Inc ("AFSI"). The AgroFresh business was reported in the Agricultural Sciences segment through the date of divestiture. The Company has retained a minority interest in AFSI which is also reported in the Agricultural Sciences segment.

CONSUMER SOLUTIONS

The Consumer Solutions segment consists of three global businesses: Consumer Care, Dow Automotive Systems and Dow Electronic Materials. These global businesses develop and market customized materials using advanced technology and unique chemistries for specialty applications - including semiconductors and organic light-emitting diodes, adhesives and foams used by the transportation industry, and cellulose and other polymers for innovative pharmaceutical formulations and food solutions. These businesses serve the needs of market segments as diverse as: automotive; electronics and entertainment; food and pharmaceuticals; and, personal and home care products. The segment's commitment to continuous innovation and rapid new product development enables it to maximize opportunities in emerging geographies and high-growth consumer market segments.

Details on Consumer Solutions' 2015 sales, by business and geographic area, are as follows:

Consumer Care

Consumer Care provides global and regional brand owners in food, pharmaceutical, personal care and home care markets with innovative formulations and ingredients designed to add value to their products and help consumers live healthier and more convenient lives.

Consumer Care's principal businesses each serve one or more key market segments, as noted below:

Business	Market Segments	Technologies
Dow Home, Institutional & Personal Care Solutions	Personal care, home care and specialty applications with key focus on hair care, skin care, sun care, cleansing, as well as, fabric, dish, floor, hard surface and air care applications	From polymers and emollients to chelants and dispersants, Dow offers unique innovations that empower consumer brands around the world to deliver exceptional product performance and process enhancements that create value. Other notable technologies include opacifiers, rheology modifiers, surfactants and solvents. Cellulosic and other technologies help bring new classes of medicines to market and enable foods that are healthier (gluten-free, reduced oil/fat content). Notable technologies include excipients and active pharmaceutical ingredients, solubility enhancers, reagents, granulation and binders, as well as coatings and controlled release.
Dow Pharma and Food Solutions	Pharmaceutical, food and nutrition	Offers cleaning solutions, equipment and services for metal and dry cleaning applications. Provides closed-loop SAFE-TAINER™ System delivery systems to ensure emission free use of cleaning agents.
SAFE-CHEM™	A service business responsible for the sustainable and innovative use of solvents	



Table of Contents

## Dow Automotive Systems

Dow Automotive Systems is a leading global provider of collaborative solutions and advanced materials for original equipment manufacturers, tier suppliers, aftermarket customers and commercial transportation manufacturers. Dow Automotive Systems' leading technologies, materials engineering, testing and service support are complemented by a robust line of structural, elastic and rubber-to-substrate adhesives; composite materials technologies; polyurethane foams and acoustical management systems; and films and fluids.

Dow Automotive Systems' principal businesses offer the following technologies and serve the following market segments:

Business	Market Segments	Technologies
Adhesives	Elastic, structural and specialty adhesives	Innovative and differentiated adhesive technologies to meet customer specifications for durability and crash performance
Performance Solutions	Performance plastics, fluids and polyurethane foam solutions	Technologies that differentiate customers' products with improved performance characteristics

## Dow Electronic Materials

Dow Electronic Materials is a leading global supplier of enabling materials for a broad range of consumer electronics including smartphones, tablets, television monitors and personal computers, as well as electronic devices and systems used in a variety of industries. The business produces materials for chemical mechanical planarization ("CMP"); materials used in the production of electronic displays, including films, filters and organic light-emitting diodes ("OLEDs"); metalorganic precursors for light-emitting diodes ("LEDs"); products and technologies that drive leading-edge semiconductor design; materials used in the fabrication of printed circuit boards; and integrated metallization processes for metal finishing and decorative applications.

Dow Electronic Materials is comprised of four principal businesses, each serving one or more key market segments, as noted below:

Business	Market Segments	Technologies
Semiconductor Technologies	Integrated circuit fabrication for memory and logic	CMP consumables, photolithography materials
Interconnect Technologies	Printed circuit board, electronic and industrial finishing	Interconnect metallization and imaging process chemistries
Display Technologies	Display materials	Display films and filters, OLED materials
Growth Technologies	New and emerging technologies	Advanced chip packaging materials, metalorganic precursors, optical and ceramic materials

## Competition

The Consumer Solutions segment experiences competition in each business within the segment. The competitors include many large, multinational chemical firms as well as a number of regional and local competitors. The segment's products have unique performance characteristics that are required by customers who demand a high-level of customer service and technical expertise from the Company's sales force and scientists; therefore, Dow is well positioned to withstand competitive threats. Key competitors include Ashland, BASF, Bayer, JSR Micro and Shin-Etsu Chemical.

## Joint Ventures

The Consumer Solutions segment includes a portion of the Company's share of the results of Dow Corning Corporation ("Dow Corning"), a joint venture that manufactures silicone and silicone products, which is owned 50 percent by the Company.

On December 10, 2015, the Company entered into a definitive agreement to restructure the ownership of Dow Corning. Under the terms of the agreement, Dow will become the 100 percent owner of Dow Corning, currently a 50:50 joint venture between Dow and Corning Incorporated ("Corning"). Dow and Corning will maintain their current equity stake in the Hemlock Semiconductor Group. The transaction is expected to close in the first half of 2016.

## Table of Contents

### INFRASTRUCTURE SOLUTIONS

The Infrastructure Solutions segment is comprised of an industry-leading portfolio of businesses utilizing advanced technology to deliver products such as architectural and industrial coatings, construction material ingredients, building insulation, adhesives, microbial protection for the oil and gas industry, and water technologies. With unmatched R&D capabilities, a broad range of chemistries, extensive geographic reach and strong channels to market, this segment is well positioned to capitalize on market trends. The segment has broad geographic reach with sales in nearly 150 countries and R&D and manufacturing facilities located in key geographic areas.

Details on Infrastructure Solutions' 2015 sales, by business and geographic area, are as follows:

#### Dow Building & Construction

Dow Building & Construction is comprised of two businesses - Dow Building Solutions and Dow Construction Chemicals. Leveraging more than 60 years of building science experience and deep application expertise, as well as 75 years of STYROFOAM™ brand products, Dow creates high-performance solutions designed to help make residential and commercial buildings more comfortable, last longer, save energy and reduce emissions. The business group offers extensive lines of industry-leading durable insulation solutions and functional ingredients that provide improved thermal performance, air sealing, weatherization, waterproofing and fire retardancy for construction products.

#### Dow Coating Materials

The Dow Coating Materials business manufactures and delivers solutions that leverage high quality, technologically advanced product offerings for architectural paint and coatings, as well as industrial coatings applications, including paper, leather, concrete, wood, automotive, maintenance and protective industries. Dow Coating Materials introduced the industry's first waterborne technology in 1953 and has since led the industry's conversion away from solvent borne technology to allow for lower volatile organic compounds and an improved sustainability profile while pushing performance boundaries.

#### Energy & Water Solutions

Energy & Water Solutions is comprised of four businesses - Dow Microbial Control; Dow Oil, Gas & Mining; Dow Solar; and Dow Water and Process Solutions. Dow Microbial Control provides technology used to predict, diagnose and sustainably solve the planet's most difficult microbial challenges while Dow Oil, Gas & Mining is helping to provide energy to the world by supplying smart, innovative and customized solutions to enable the tapping of both conventional and unconventional sources. Providing building-integrated photovoltaics, Dow Solar enables energy solutions in the infrastructure market sector. Also aligned to the infrastructure market sector is Dow Water and Process Solutions, a leading provider of purification and separation technologies including reverse osmosis membranes and ion exchange resins to help customers with a broad array of separation and purification needs such as reusing waste water streams, making fresh drinking water from sea water, creating a closed loop water system for oil field operations, and removing impurities in dairy processing.

#### Performance Monomers

The Performance Monomers business produces monomer products that are sold externally as well as consumed internally as building blocks used in downstream polymer businesses. The business' products are used in several applications, including dispersions and emulsions for adhesives, coatings, inks, woven and non-woven textiles, plastics and polymers and superabsorbent products. Included in this portfolio is Plastics Additives, a worldwide supplier of additives used in a large variety of applications ranging from construction materials and packaging containers to consumer appliances and electronics, business machines and automotive parts.





Table of Contents

## Products

Infrastructure Solutions' businesses each serve one or more key market segments, as noted below:

Business	Applications/Market Segments	Major Products
Dow Building & Construction	Rigid and spray foam insulation; weatherization, waterproofing and air sealing; caulks and sealants; elastomeric roof coatings; exterior insulation finishing systems; roof tiles and siding; industrial non-wovens; cement-based tile adhesives; plasters and renders; tape joint compounds; and concrete additives	AQUASET™ acrylic thermosetting resins, DOW™ latex powder, FROTH-PAK™ foam insulation and sealants, GREAT STUFF™ insulating foam sealants and adhesives, RHOPLEX™ and PRIMAL™ acrylic emulsion polymers, STYROFOAM™ brand insulation products, THERMAX™ exterior insulation, WALOCEL™ cellulose ethers, WEATHERMATE™ house wrap, XENERGY™ high performance insulation, LIQUID ARMOR™ flashing and sealant ACRY SOL™ Rheology Modifiers, AVANSE™ acrylic binders, EVOQUE™ Pre-Composite Polymer, FORMASHIELD™ acrylic binder, RHOPLEX™ acrylic resin, TAMOL™ Dispersants, MAINCOTE™ acrylic epoxy hybrid, PARALOID™ Edge ISO-free technology and ACOUSTICRYL™ liquid-applied sound damping technology
Dow Coating Materials	Acrylic binders for architectural paint and coatings, industrial coatings, and paper; dispersants; rheology modifiers; opacifiers and surfactants for both architectural and industrial applications; protective and functional coatings	Demulsifiers, drilling and completion fluids, heat transfer fluids, rheology modifiers, scale inhibitors, shale inhibitors, specialty amine solvents, surfactants, water clarifiers, DOW ADSORBSIA™ selective media, DOW EDI™ modules, DOWEX™ and AMBERJET™ ion exchange resins, DOWEX™ OPTIPORE™ polymeric adsorbent resins, DOW FILMTEC™ reverse osmosis and nanofiltration elements, TEQUATIC™ PLUS fine particle filter, AMBERLYST™ polymeric catalysts, AQUACAR™, BIOBAN™, SILVADUR™ antimicrobial, DOW POWERHOUSE™ Solar Shingles
Energy & Water Solutions	Helping customers in exploration, production, transmission, refining and gas processing to optimize supply, improve efficiencies and manage emissions. Providing expertise and localized solutions for microbial control for well souring, industrial cooling water, fabric odor elimination, in-can preservation and dry film protection. Providing advanced, cost effective separation and purification technology for water treatment and filtration, pharmaceutical, food and beverage, and chemical processing	
Performance Monomers	Super absorbents, water treatment, flocculants and detergents, acrylic sheets, coatings, inks and paints, molding compounds, impact modifiers, processing aids, electronic displays, adhesives, textiles, automotive and architectural safety glass, and plastics additives	Acrylates, methacrylates, vinyl acetate monomers, high-quality impact modifiers, processing aids, foam cell promoters and weatherable acrylic capstock compounds for thermoplastic and thermosetting materials

## Competition

Competitors of the Infrastructure Solutions segment include many large multinational chemical firms as well as a number of regional and local competitors. The segment's products have unique performance characteristics that are required by customers who demand a high level of customer service and expertise from our sales force and scientists; therefore, Dow is well positioned to withstand competitive threats. Key competitors include Arkema, Ashland, BASF, Elementis, Hydranautics, Lanxess, Lonza, Owens-Corning and Shin-Etsu Chemical.

## Joint Ventures

The Infrastructure Solutions segment includes a portion of the Company's share of the results of Dow Corning, a joint venture that manufactures silicone and silicone products, which is owned 50 percent by the Company.

On December 10, 2015, the Company entered into a definitive agreement to restructure the ownership of Dow Corning. Under the terms of the agreement, Dow will become the 100 percent owner of Dow Corning, currently a 50:50 joint venture between Dow and Corning. Dow and Corning will maintain their current equity stake in the Hemlock Semiconductor Group. The transaction is expected to close in the first half of 2016.

## Table of Contents

### PERFORMANCE MATERIALS & CHEMICALS

The Performance Materials & Chemicals segment is comprised of three technology-driven, customer-centric global businesses that are advantaged through integration and driven by innovative technology and solutions: Chlor-Alkali and Vinyl, Industrial Solutions and Polyurethanes. Products produced by this segment are back-integrated into feedstocks, supporting a low-cost manufacturing base and consistent, reliable supply. The Performance Materials & Chemicals segment is positioned for growth through diverse markets and product offerings. The segment has broad geographic reach with sales in nearly 140 countries and manufacturing facilities located in all geographic areas. Performance Materials & Chemicals has a diverse product line that serves customers in a large number of industries including appliance, construction and industrial.

Details on Performance Materials & Chemicals' 2015 sales, by business and geographic area, are as follows:

#### Chlor-Alkali and Vinyl

The Chlor-Alkali and Vinyl business provides cost-advantaged chlorine and caustic soda supply and integration for the Polyurethanes business. Chlor-Alkali and Vinyl also includes the marketing of caustic soda, a valuable co-product of the chlor-alkali manufacturing process, and ethylene dichloride and vinyl chloride monomer, essential for the production of polyvinyl chloride.

#### Industrial Solutions

The Industrial Solutions business enables manufacturing of the world's goods and services with additive solutions that minimize friction and heat in mechanical processes, manage the oil and water interface, deliver active ingredients for maximum effectiveness, facilitate dissolvability and provide the foundational building blocks for the development of chemical technologies. The business supports industrial manufacturers associated with virtually all end-markets, notably electronics, agricultural chemicals, engine/heavy equipment, coatings, adhesives and inks, and detergents and cleaners. Industrial Solutions is also the world's largest producer of purified ethylene oxide. Approximately 80 percent of the ethylene oxide produced by Dow is consumed within the Performance Materials & Chemicals segment.

#### Polyurethanes

Polyurethanes is comprised of four businesses: Isocyanates, Polyols, Polyurethane Systems and Propylene Oxide/Propylene Glycol ("PO/PG"). The Polyurethanes business is the world's largest producer of propylene oxide and propylene glycol as well a leading producer of polyether polyols and aromatic isocyanates that serve energy efficiency, consumer comfort and industrial market sectors. Propylene oxide is produced using the chlorohydrins process as well as by hydrogen peroxide to propylene oxide manufacturing technology<sup>(1)</sup>. Performance Materials & Chemicals businesses consume approximately 90 percent of the propylene oxide produced or procured by Dow.

#### Competition

Competition for the Performance Materials & Chemicals segment varies based on the business. Key competitors include large, international chemical companies as well as chemical divisions of major national and international oil companies. Performance Materials & Chemicals back-integration into feedstocks supports a low-cost manufacturing base and consistent, reliable product supply. Dow is a full-service supplier with a global technical service network located close to the customer, which allows the Company to fuel growth in specialty applications and collaborate with customers to invent unique chemistries and tailored solutions. In addition to its competitive cost position, reliable supply and superior customer service, the Company also competes worldwide on the basis of quality, technology and price. Key competitors include BASF, Bayer, Hexion and Huntsman.

(1) Hydrogen peroxide to propylene oxide manufacturing technology is utilized by MTP HPPO Manufacturing Company Limited, a Thailand-based consolidated variable interest entity ultimately owned 50 percent by the

Company and 50 percent by SCG Chemicals Co. Ltd.; and BASF DOW HPPO Production B.V.B.A., a Belgium-based joint venture ultimately owned 100 percent by HPPO Holding & Finance C.V., which is owned 50 percent by the Company and 50 percent by BASF.

## Table of Contents

### Distribution

The Performance Materials & Chemicals segment markets its products primarily through the Company's sales force and also utilizes distributors worldwide.

### Joint Ventures

The Performance Materials & Chemicals segment includes a portion of the Company's share of the results of the following joint ventures:

EQUATE Petrochemicals Company K.S.C. ("EQUATE") - a Kuwait-based company that manufactures ethylene, polyethylene and ethylene glycol; owned 42.5 percent by the Company.

The Kuwait Olefins Company K.S.C. - a Kuwait-based company that manufactures ethylene and ethylene glycol; owned 42.5 percent by the Company.

Map Ta Phut Olefins Company Limited - effective ownership is 32.77 percent of which the Company directly owns 20.27 percent (aligned with Performance Materials & Chemicals) and indirectly owns 12.5 percent through its equity interest in Siam Polyethylene Company Limited and Siam Synthetic Latex Company Limited (both part of The SCG-Dow Group and aligned with Performance Plastics). This Thailand-based company manufactures propylene and ethylene.

Sadara Chemical Company - a development-stage Saudi Arabian company that will manufacture chlorine, ethylene and propylene for internal consumption and will produce and sell high-value added chemical products and performance plastics; owned 35 percent by the Company.

On December 23, 2015, the Company sold its 50 percent ownership interest in MEGlobal, a manufacturer and marketer of monoethylene glycol, diethylene glycol and polyethylene terephthalate resins headquartered in Dubai, United Arab Emirates, to EQUATE. MEGlobal was aligned 100 percent with Performance Materials & Chemicals through the date of divestiture. Dow has retained 42.5 percent ownership stake in MEGlobal through its ownership in EQUATE. The Performance Materials & Chemicals segment will continue to include a portion of the equity earnings from EQUATE, which will include the results of MEGlobal.

### Divestitures

On January 30, 2015, the Company sold its global Sodium Borohydride business to Vertellus Specialty Materials LLC. On February 2, 2015, the Company sold ANGUS Chemical Company to Golden Gate Capital. On October 5, 2015, the Company completed the split-off of its U.S. Gulf Coast Chlor-Alkali and Vinyl, Global Chlorinated Organics and Global Epoxy businesses to Olin Corporation in a tax-efficient Reverse Morris Trust transaction. These businesses were reported in the Performance Materials & Chemicals segment through the date of divestiture.

## PERFORMANCE PLASTICS

The Performance Plastics segment is the world's leading plastics franchise, and is a market-oriented portfolio composed of five global businesses: Dow Elastomers, Dow Electrical and Telecommunications, Dow Packaging and Specialty Plastics, Energy and Hydrocarbons. The segment is advantaged through its low cost position into key feedstocks and broad geographic reach, with sales in 115 countries and manufacturing facilities located in all geographic areas. It also benefits from Dow's R&D expertise to deliver leading-edge technology that provides a competitive benefit to customers in key strategic markets.

Details on Performance Plastics' 2015 sales, by business and geographic area, are as follows:

Dow Elastomers, Dow Electrical and Telecommunications, and Dow Packaging and Specialty Plastics serve high-growth, high-value sectors where Dow's world-class technology and rich innovation pipeline creates competitive advantages for customers

12

---

Table of Contents

and the entire value chain. Together, these three global businesses have complimentary market reach, asset capabilities and technology platforms that provide the Company with immediate and long-term growth synergies. Market growth is expected to be driven by major shifts in population demographics, improving socioeconomic status in emerging geographies, consumer and brand owner demand for increased consumer convenience, efforts to reduce food waste, growth in telecommunications networks, specifically broadband and LTE networks, and global development of electrical transmission and distribution infrastructure and renewable energy applications. Market segments served by these businesses include adhesives, construction, food and specialty packaging, footwear, industrial and consumer packaging, hygiene and medical, infrastructure, pipe, telecommunications and transportation.

The Energy business is one of the world's largest industrial energy producers. This business produces or procures the energy used by Dow, sells energy to customers located on Dow manufacturing sites and also engages in opportunistic merchant sales driven by market conditions. Because of its unparalleled scale, purchasing power and global reach, the Energy business offers Dow tremendous knowledge of world energy markets and the agility to respond to sudden changes in conditions.

The Hydrocarbons business is one of the largest global producers of ethylene, an internal feedstock that is consumed primarily within Performance Plastics. The Hydrocarbons business is also a large purchaser and producer of propylene. The Company strategically locates its polyethylene production facilities near its ethylene production facilities to optimize integration benefits and drive low costs. Dow's global scale, operational discipline and feedstock flexibility create a cost-advantaged foundation for the Company's downstream, market-driven businesses. In North America, shale gas opportunities - and the resulting increased supplies of natural gas and natural gas liquids ("NGLs") - remain a key, cost-competitive position for the Company's ethane- and propane-based production. The Company's U.S. and European ethylene production facilities allow Dow to use different feedstocks in response to price conditions. Meanwhile, the Company's U.S. Gulf Coast investments will strengthen ethylene and propylene integration and establish a platform for growth of Dow's downstream businesses.

### Products

Major applications/market segments and products are listed below by business:

Business	Applications/Market Segments	Major Products
Dow Elastomers	Adhesives, footwear, housewares, infrastructure, sports recreation, toys and infant products, transportation	Elastomers, polyolefin plastomers, ethylene propylene diene monomer elastomers ("EPDMs")
Dow Electrical and Telecommunications	Building and construction, electrical transmission and distribution infrastructure, telecommunications infrastructure	Wire and cable insulation, semiconductive and jacketing compound solutions, bio-based plasticizers
Dow Packaging and Specialty Plastics	Adhesives, food and specialty packaging, hygiene and medical, industrial and consumer packaging, photovoltaic	Acrylics, polyethylene, low-density polyethylene, linear low-density polyethylene, high-density polyethylene, polyolefin emulsions, polyolefin plastomers
Energy	Principally for use in Dow's global operations	Power, steam and other utilities
Hydrocarbons	Purchaser of feedstocks; production of cost competitive monomers utilized by Dow's derivative businesses	Ethylene, propylene, benzene, butadiene, octene, aromatics co-products, crude C4
		Advantaged feedstock positions in the United States, Canada, Argentina and the Middle East

### Competition



Competition for the Performance Plastics segment includes chemical divisions of major national and international oil companies, which provide competition in the United States and abroad. Dow competes worldwide on the basis of product quality, product supply, technology, price and customer service. Performance Plastics will continue to benefit from an advantaged feedstock position, including favorable shale gas dynamics in the United States, which will further strengthen the Company's low-cost position and enhance global cost competitiveness. Key competitors include Borealis, ExxonMobil, INEOS, LyondellBasell, Mitsui and SABIC.

#### Joint Ventures

Joint ventures play an integral role within the Performance Plastics segment by dampening earnings cyclicality and improving earnings growth. Principal joint ventures impacting Performance Plastics are noted in the following section.

## Table of Contents

Aligned 100 percent with Performance Plastics:

• The Kuwait Styrene Company K.S.C. - a Kuwait-based company that manufactures styrene monomer; owned 42.5 percent by the Company.

• The SCG-Dow Group consists of Siam Polyethylene Company Limited; Siam Polystyrene Company Limited; Siam Styrene Monomer Co., Ltd.; and Siam Synthetic Latex Company Limited. These Thailand-based companies manufacture polyethylene, polystyrene, styrene and latex; owned 50 percent by the Company.

Performance Plastics includes a portion of the results of:

• EQUATE Petrochemicals Company K.S.C. ("EQUATE") - a Kuwait-based company that manufactures ethylene, polyethylene and ethylene glycol; owned 42.5 percent by the Company.

• The Kuwait Olefins Company K.S.C. - a Kuwait-based company that manufactures ethylene and ethylene glycol; owned 42.5 percent by the Company.

• Map Ta Phut Olefins Company Limited - effective ownership is 32.77 percent of which the Company directly owns 20.27 percent (aligned with Performance Materials & Chemicals) and indirectly owns 12.5 percent through its equity interest in Siam Polyethylene Company Limited and Siam Synthetic Latex Company Limited (both part of The SCG-Dow Group and aligned with Performance Plastics). This Thailand-based company manufactures propylene and ethylene.

• Sadara Chemical Company - a development-stage Saudi Arabian company that will manufacture chlorine, ethylene and propylene for internal consumption and will produce and sell high-value added chemical products and performance plastics; owned 35 percent by the Company.

• On May 5, 2015, Univation Technologies, LLC, previously a 50:50 joint venture between Dow and ExxonMobil Chemical Company, became a wholly owned subsidiary of Dow.

• On December 23, 2015, the Company sold its 50 percent ownership interest in MEGlobal, a manufacturer and marketer of monoethylene glycol, diethylene glycol and polyethylene terephthalate resins headquartered in Dubai, United Arab Emirates, to EQUATE. MEGlobal was aligned 100 percent with the Performance Materials & Chemicals segment through the date of divestiture. Dow has retained 42.5 percent ownership stake in MEGlobal through its ownership in EQUATE.

### Divestitures

• On December 2, 2013, the Company sold its Polypropylene Licensing and Catalysts business to W. R. Grace & Co. This business was reported in the Performance Plastics segment through the date of divestiture.

### Future Investments

• The Company announced a number of investments in the U.S. Gulf Coast to take advantage of increasing supplies of low-cost natural gas and NGLs derived from shale gas. As a result of these investments, the Company's exposure to purchased ethylene and propylene is expected to decline, offset by increased exposure to ethane and propane based feedstocks. The Company announced investments in a new on-purpose propylene production facility, which commenced operations in December 2015, and a new, world-scale ethylene production facility, which is expected to start-up in the first half of 2017, both located in Freeport, Texas. As a result of these U.S. Gulf Coast investments, Dow's ethylene production capabilities are expected to increase by as much as 20 percent.

• The Company announced the location of four new Performance Plastics production facilities to be built on the U.S. Gulf Coast, which include an ELITE™ Polymer production facility in Freeport, Texas; a Low Density Polyethylene (LDPE) production facility in Plaquemine, Louisiana; a NORDEL™ Metallocene EPDM production facility in Plaquemine, Louisiana; and a High Melt Index (HMI) AFFINITY™ Polymer production facility in Freeport, Texas. Leveraging a low cost ethylene supply from advantaged feedstock positions from U.S. shale gas, these production facilities will support expected profitable growth of the Company's high value Performance Plastics franchise.

**CORPORATE**

Corporate includes certain enterprise and governance activities (including insurance operations, geographic management, risk management such as foreign currency hedging activities, audit fees, donations, Company branding initiatives, etc.); the results of Ventures (including business incubation platforms and non-business aligned joint ventures); environmental operations; gains and losses on the sales of financial assets; severance costs; non-business aligned litigation expenses (including asbestos-related defense costs and reserve adjustments); and, foreign exchange results.

Table of Contents

## INDUSTRY SEGMENTS AND GEOGRAPHIC AREA RESULTS

See Note 26 to the Consolidated Financial Statements for information regarding sales, EBITDA and total assets by segment as well as sales and total assets by geographic area.

## SIGNIFICANT CUSTOMERS AND PRODUCTS

All products and services are marketed primarily through the Company's sales force, although in some instances more emphasis is placed on sales through distributors. No significant portion of any operating segment's sales is dependent upon a single customer. No single product accounted for more than five percent of the Company's consolidated net sales in 2015.

## RAW MATERIALS

The Company operates in an integrated manufacturing environment. Basic raw materials are processed through many stages to produce a number of products that are sold as finished goods at various points in those processes. The two major raw material streams that feed the production of the Company's finished goods are hydrocarbon-based and chlorine-based raw materials. The Company also produces a portion of its electricity needs in Louisiana and Texas; Alberta, Canada; and Germany.

The Company purchases hydrocarbon raw materials including ethane, propane, butane, naphtha and condensate as feedstocks. These raw materials are used in the production of both saleable products and energy. The Company also purchases certain monomers, primarily ethylene and propylene, to supplement internal production. The Company purchases natural gas, primarily to generate electricity, and purchases electric power to supplement internal generation. Expenditures for hydrocarbon feedstocks and energy accounted for 27 percent of the Company's production costs and operating expenses for the year ended December 31, 2015. The Company purchases these raw materials on both short- and long-term contracts.

The Company had adequate supplies of raw materials during 2015, and expects to continue to have adequate supplies of raw materials in 2016. Significant raw materials, by operating segment, are listed below:

Significant Raw Materials					
Raw Material	Agricultural Sciences	Consumer Solutions	Infrastructure Solutions	Performance Materials & Chemicals	Performance Plastics
Acetone			x		
Ammonia			x	x	x
Aniline				x	
Benzene				x	x
Butadiene			x		x
Butanol (1)			x		
Butene				x	x
Carbon Black		x		x	
Carbon Monoxide				x	x
Chlorine	x	x	x	x	
Condensate					x
Electric Power				x	x
Ethane					x
Ethanol	x	x	x	x	x
Ethylene (1)			x	x	x
Formaldehyde		x	x	x	

Hexene					X
Hydrogen Peroxide (2)				X	
Liquified Petroleum Gases					X
Methanol	X		X	X	X
Naphtha					X
Natural Gas					X
Octene					X
Polystyrene			X		X
Propane		X			X
Propylene (1)		X	X	X	X
Pygas					X
Styrene			X	X	
Wood Pulp		X			

(1) Produced by the Company and procured from external sources for internal consumption.

(2) Primarily produced and procured by a consolidated variable interest entity.

Table of Contents**RESEARCH AND DEVELOPMENT**

The Company 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 \$1,598 million in 2015, \$1,647 million in 2014 and \$1,747 million in 2013. At December 31, 2015, the Company employed approximately 6,800 people in various research and development activities.

**PATENTS, LICENSES AND TRADEMARKS**

The Company continually applies for and obtains U.S. and foreign patents and has a substantial number of pending patent applications throughout the world. At December 31, 2015, the Company owned 4,651 active U.S. patents and 19,541 active foreign patents as follows:

## Patents Owned at December 31, 2015

	United States	Foreign
Agricultural Sciences	940	3,886
Consumer Solutions	1,187	3,686
Infrastructure Solutions	950	5,185
Performance Materials & Chemicals	363	1,994
Performance Plastics	1,102	4,559
Corporate	109	231
Total	4,651	19,541

## Remaining Life of Patents Owned at December 31, 2015

	United States	Foreign
Within 5 years	969	3,053
6 to 10 years	1,023	5,540
11 to 15 years	1,479	8,209
16 to 20 years	1,180	2,739
Total	4,651	19,541

Dow's primary purpose in obtaining patents is to protect the results of its research for use in operations and licensing. Dow is also party to a substantial number of patent licenses and other technology agreements. The Company had revenue related to patent and technology royalties totaling \$357 million in 2015, \$388 million in 2014 and \$327 million in 2013. The Company incurred royalties to others of \$198 million in 2015, \$170 million in 2014 and \$198 million in 2013. Dow also has a substantial number of trademarks and trademark registrations in the United States and in other countries, including the "Dow in Diamond" trademark. Although the Company 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.

Table of Contents

## PRINCIPAL PARTLY OWNED COMPANIES

Dow's principal nonconsolidated affiliates at December 31, 2015, including direct or indirect ownership interest for each, are listed below:

Principal Nonconsolidated Affiliate	Ownership Interest	Business Description
Dow Corning Corporation (1)	50.00	% A U.S. company that manufactures silicone and silicone products
EQUATE Petrochemical Company K.S.C. (2)	42.50	% A Kuwait-based company that manufactures ethylene, polyethylene and ethylene glycol, and manufactures and markets monoethylene glycol, diethylene glycol and polyethylene terephthalate resins
The Kuwait Olefins Company K.S.C.	42.50	% A Kuwait-based company that manufactures ethylene and ethylene glycol
The Kuwait Styrene Company K.S.C.	42.50	% A Kuwait-based company that manufactures styrene monomer
Map Ta Phut Olefins Company Limited (3)	32.77	% A Thailand-based company that manufactures propylene and ethylene
Sadara Chemical Company	35.00	% A development-stage Saudi Arabian company that will manufacture chlorine, ethylene and propylene for internal consumption and will produce and sell high-value added chemical products and performance plastics
The SCG-Dow Group:		
Siam Polyethylene Company Limited	50.00	% A Thailand-based company that manufactures polyethylene
Siam Polystyrene Company Limited	50.00	% A Thailand-based company that manufactures polystyrene
Siam Styrene Monomer Co., Ltd.	50.00	% A Thailand-based company that manufactures styrene
Siam Synthetic Latex Company Limited	50.00	% A Thailand-based company that manufactures latex

On December 10, 2015, the Company entered into a definitive agreement to restructure the ownership of Dow (1) Corning. Under the terms of the agreement, Dow will become the 100 percent owner of Dow Corning, currently a 50:50 joint venture between Dow and Corning. Dow and Corning will maintain their current equity stake in the Hemlock Semiconductor Group. The transaction is expected to close in the first half of 2016.

On December 23, 2015, the Company sold its 50 percent ownership interest in MEGlobal to EQUATE. Dow (2) indirectly owns 42.5 percent of MEGlobal through its equity interest in EQUATE. MEGlobal was treated as a separate principal nonconsolidated affiliate through the date of divestiture.

The Company's effective ownership of Map Ta Phut Olefins Company Limited is 32.77 percent, of which the (3) Company directly owns 20.27 percent and indirectly owns 12.5 percent through its equity interest in Siam Polyethylene Company Limited and Siam Synthetic Latex Company Limited.

See Note 9 to the Consolidated Financial Statements for additional information regarding nonconsolidated affiliates.

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

In 2015, the Company derived 65 percent of its sales and had 38 percent of its property investment outside the United States. While the Company's international operations may be subject to a number of additional risks, such as changes in currency exchange rates and geopolitical risks in emerging geographies, the Company does not regard its foreign operations, on the whole, as carrying any greater risk than its operations in the United States. Information on sales and long-lived assets by geographic area for each of the last three years appears in Note 26 to the Consolidated Financial

Statements, and discussions of the Company's risk management program for foreign exchange and interest rate risk management appear in Part I, Item 1A. Risk Factors; Part II, Item 7A. Quantitative and Qualitative Disclosures About Market Risk; and Note 11 to the Consolidated Financial Statements.

#### PROTECTION OF THE ENVIRONMENT

Matters pertaining to the environment are discussed in Part I, Item 1A. Risk Factors; Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations; and Notes 1 and 15 to the Consolidated Financial Statements. In addition, detailed information on Dow's performance regarding environmental matters and goals can be found online on Dow's Sustainability webpage at [www.dow.com](http://www.dow.com). The Company's website and its content are not deemed incorporated by reference into this report.



Table of Contents

## EMPLOYEES

As of December 31, 2015, the Company employed approximately 49,500 people on a full-time basis, with approximately 50 percent located in North America, 25 percent located in Europe, Middle East, Africa and India, and 25 percent located in other locations.

## OTHER ACTIVITIES

Dow engages in the property and casualty insurance and reinsurance business primarily through its Liana Limited subsidiaries.

## EXECUTIVE OFFICERS OF THE REGISTRANT

Set forth below is information related to the Company's executive officers as of February 12, 2016.

Name - Age	Present Position with Registrant	Year Elected to be an Officer	Other Business Experience since January 1, 2011
Ronald C. Edmonds, 58	Vice President and Controller	2009	Vice President and Controller 2009 to date.  Dow Executive Vice President and President, Plastics and Hydrocarbons August 2010 to September 2011. Executive Vice President and President, Feedstocks & Energy and Corporate Development September 2011 to September 2012. Executive Vice President, Feedstocks, Performance Plastics, Asia and Latin America September 2012 to December 2013. Executive Vice President, Feedstocks, Performance Plastics and Supply Chain December 2013 to October 2014. Vice Chairman, Business Operations October 2014 to October 2015. Vice Chairman and Chief Operating Officer October 2015 to February 2016. Present position held since February 2016.
James R. Fitterling, 54	President and Chief Operating Officer	2010	Executive Vice President and Chief Commercial Officer August 2010 to September 2012. Present position held since September 2012.  Executive Vice President of Consumer & Office Business, 3M Company 2009 to August 2011. Executive Vice President, Performance Materials September 2011 to September 2012. Executive Vice President, Chemicals, Energy and Performance Materials September 2012 to October 2014. Chief Commercial Officer and Vice Chairman, Market Businesses October 2014 to October 2015. Present position held since October 2015.
Heinz Haller, 60	Executive Vice President and President of Dow Europe, Middle East, Africa and India	2006	Global Manufacturing Vice President, Hydrocarbons May 2009 to October 2012. Vice President for Manufacturing and Engineering Europe, Middle East and Africa May 2009 to October 2012. Vice President of Operations for
Joe E. Harlan, 56	Vice Chairman and Chief Commercial Officer	2011	
Peter Holicki, 55	Senior Vice President, Operations, Manufacturing & Engineering,	2014	

Edgar Filing: DOW CHEMICAL CO /DE/ - Form 10-K

	Environment, Health & Safety Operations, and Emergency Services & Security		Europe, Middle East and Africa and the Ethylene Envelope October 2012 to December 2013. Emergency Services and Security Expertise September 2014 to present. Corporate Vice President October 2014 to October 2015. Present position held since 2015.
Charles J. Kalil, 64	General Counsel and Executive Vice President	2004	General Counsel 2004 to date. Executive Vice President 2008 to date. Corporate Secretary 2005 to February 2015.
Andrew N. Liveris, 61	Chief Executive Officer and Chairman of the Board	2003	President 2004 to February 2016. Chief Executive Officer 2004 to date. Chairman 2006 to date.
Fernando Ruiz, 60	Corporate Vice President and Treasurer	2001	Vice President 2001 to 2005. Treasurer 2001 to date. Corporate Vice President 2005 to date.
Johanna Söderström, 44	Corporate Vice President, Human Resources and Aviation	2015	Global Human Resources Director, Performance Materials Division January 2011 to October 2012. Vice President, Human Resource Center of Expertise October 2012 to January 2015. Present position held since January 2015.
A. N. Sreeram, 48	Senior Vice President, Research & Development and Chief Technology Officer	2013	Vice President, Research & Development, Dow Advanced Materials 2009 to October 2013. Corporate Vice President, Research & Development October 2013 to October 2015. Present position held since October 2015.
Howard I. Ungerleider, 47	Vice Chairman and Chief Financial Officer	2011	Vice President, Investor Relations 2008 to March 2011. Senior Vice President and President, Performance Plastics March 2011 to September 2012. Executive Vice President, Advanced Materials September 2012 to October 2014. Chief Financial Officer and Executive Vice President October 2014 to October 2015. Present position held since October 2015.

Table of Contents

The Dow Chemical Company and Subsidiaries

PART I, Item 1A. Risk Factors.

**RISK FACTORS**

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

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

The Company sells its broad range of products and services in a competitive, global environment, and competes worldwide for sales on the basis of product quality, price, technology and customer service. Increased levels of competition could result in lower prices or lower sales volume, which could have a negative impact on the Company's results of operations. Sales of the Company'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 of additional regulations, controls and duties and tariffs or the enactment of bilateral and regional trade agreements could result in lower sales volume which could negatively impact the Company's results of operations.

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

In addition, volatility and disruption of financial markets could limit customers' ability to obtain adequate financing to maintain operations, which could result in a decrease in sales volume and have a negative impact on Dow's results of operations. The Company's global business operations also give rise to market risk exposure related to changes in foreign exchange rates, interest rates, commodity prices and other market factors such as equity prices. To manage such risks, Dow enters into hedging transactions pursuant to established guidelines and policies. If Dow fails to effectively manage such risks, it could have a negative impact on the Company's results of operations.

**Financial Commitments and Credit Markets:** Market conditions could reduce the Company's flexibility to respond to changing business conditions or fund capital needs.

Adverse economic conditions could reduce the Company'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 the Company. This could result in higher borrowing costs.

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

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

Feedstock and energy costs generally follow price trends in crude oil and natural gas, which are sometimes volatile. While the Company uses its feedstock flexibility and financial and physical hedging programs to help mitigate feedstock cost increases, the Company is not always able to immediately raise selling prices. 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 Company's results of operations.

The Company has a number of investments in the U.S. Gulf Coast to take advantage of increasing supplies of low-cost natural gas and natural gas liquids ("NGLs") from shale gas including a new, on-purpose propylene production facility in Freeport, Texas, which commenced operations in December 2015; and a new, world-scale ethylene production facility in Freeport, Texas, with start-up expected in the first half of 2017. As a result of these and other investments, the Company's exposure to purchased ethylene and propylene is expected to decline, offset by increased exposure to ethane and propane feedstocks.

## Table of Contents

While the Company expects abundant and cost-advantaged supplies of 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 Company's results of operations and future investments. Also, if the Company'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 Company's results of operations.

**Supply/Demand Balance:** Earnings generated by the Company's products 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 Company's results of operations.

**Litigation:** The Company 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.

Certain of the claims and lawsuits facing the Company purport to be class actions and seek damages in very large amounts. All such claims are contested. With the exception of the possible effect of the asbestos-related liability of Union Carbide Corporation ("Union Carbide") and certain urethane matters, described below, it is the opinion of the Company's management that the possibility is remote that the aggregate of all such claims and lawsuits will have a material adverse impact on the Company's consolidated financial statements.

Union Carbide 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, 2015, Union Carbide's asbestos-related liability for pending and future claims was \$437 million (\$513 million at December 31, 2014) and its receivable for insurance recoveries related to the asbestos liability was \$10 million (\$10 million at December 31, 2014). At December 31, 2015, Union Carbide also had receivables of \$51 million (\$69 million at December 31, 2014) for insurance recoveries for defense and resolution costs. It is the opinion of the Company's management that it is reasonably possible that the cost of Union Carbide disposing of its asbestos-related claims, including future defense costs, could have a material impact on the Company's results of operations and cash flows for a particular period and on the consolidated financial position of the Company.

The Company, among others, was named as a defendant in multiple civil class action lawsuits alleging a conspiracy to fix the price of various urethane chemical products, namely polyurethane chemicals, including methylene diphenyl diisocyanate, toluene diisocyanate, polyether polyols and system house products. These lawsuits were consolidated in the U.S. District Court for the District of Kansas (the "District Court") or have been tolled. On July 29, 2008, the District Court certified a class of purchasers of the products for the six-year period from 1999 through 2004. In January 2013, the class action lawsuit went to trial in the District Court with the Company as the sole remaining defendant, the other defendants having previously settled. On February 20, 2013, the jury returned a damages verdict of approximately \$400 million against the Company, which ultimately was trebled by the District Court under applicable antitrust laws, less offsets from other settling defendants, resulting in a judgment entered in July 2013 in the amount of \$1.06 billion. The Company appealed this judgment to the U.S. Tenth Circuit Court of Appeals ("Tenth Circuit" or "Court of Appeals"), and on September 29, 2014, the Court of Appeals issued an opinion affirming the District Court judgment. On October 14, 2014, the Company filed a petition for Rehearing or Rehearing En Banc (collectively the "Rehearing Petition") with the Court of Appeals, which was denied on November 7, 2014.

On March 9, 2015, the Company filed a petition for writ of certiorari ("Writ Petition") with the U.S. Supreme Court, seeking judicial review by the Supreme Court and requesting that it correct fundamental errors in the Circuit Court opinion. While it is unknowable whether or not the Supreme Court will accept the Writ Petition for review, there are several compelling reasons why the Supreme Court should grant the Writ Petition and, if it is accepted, the Company

believes it is likely that the District Court judgment will be vacated. Specifically, it is the Company's position that the Tenth Circuit decision violates the law as expressed by the Supreme Court as set out in *Wal-Mart Stores, Inc. v. Dukes*, 131 S. Ct. 2541 (2011) and *Comcast Corp. v. Behrend*, 133 S. Ct. 1426 (2013). The Tenth Circuit also did not follow accepted law from other federal circuits on dispositive case issues, including legal precedent from the U.S. First, Second, Third, Fifth, Ninth and D.C. Circuit Courts. Finally, the Company argues that the erroneous law applied by the Tenth Circuit is not supported by any other federal circuit court. In April 2015, six amici filed amicus briefs in support of the Company's Writ Petition. The parties briefing is now complete. Dow filed its reply brief on May 22, 2015. On June 8, 2015, the Supreme Court granted a petition for a writ of certiorari in another case, *Tyson Foods, Inc. v. Bouaphakeo, PEG, et al.*, ("Tyson Foods") (Supreme Court No. 14-1146), which presented an issue core to the questions presented in the Company's Writ Petition: whether class-wide damages can be determined by simply applying the average injury observed in a sample. The Company's case was considered by the Supreme Court in conference on June 11, 2015. On June 15, 2015, the Supreme Court issued its decisions from its conference and did not rule on the Company's Writ Petition. Subsequently, the Writ Petition has not been listed for further consideration by the Supreme Court at its weekly

Table of Contents

conferences. The Company has been advised that this means that the Supreme Court is withholding further consideration of the Company's Writ Petition while it considers the Tyson Foods case on the merits. As a result, the Company does not expect any further action on its Writ Petition until sometime in 2016. The Company believes that the Supreme Court has accepted Tyson Foods for the compelling reasons also advanced by the Company in its Writ Petition and that the Supreme Court will issue an opinion in Tyson Foods that is favorable to the Company's case. Accordingly, on August 14, 2015, the Company filed an amicus brief in Tyson Foods supporting Tyson Foods' position. The Tyson Foods oral argument occurred before the Supreme Court on November 10, 2015. The Company expects a decision from the Supreme Court on Tyson Foods in the first half of 2016, after which, depending on the result, the Supreme Court likely will consider the Company's Writ Petition. The Company has concluded it is not probable that a loss has been incurred and, therefore, a liability has not been recorded with respect to this matter. While the Company believes it is not probable a loss will occur, the existence of the jury verdict, the Court of Appeals' opinion, and subsequent denial of the Company's Rehearing Petition indicate that it is reasonably possible that a loss could occur.

Shortly after the July 2008 class certification ruling, a series of "opt-out" cases were filed by a number of large volume purchasers who elected not to be class members. These opt-out cases are substantively identical to the class action lawsuit, but expanded the period of time to include 1994 through 1998. On September 30, 2014, the opt-out cases, which had been consolidated with the class action lawsuit for purposes of pre-trial proceedings were remanded from the District Court to the U.S. District Court for the District of New Jersey. A consolidated trial of the opt-out cases is set to begin on March 7, 2016. As with the class case, the Company denies plaintiffs' allegations of price fixing and maintains that the opt-out plaintiffs cannot prove a compensable injury. As a result, the Company has concluded it is not probable a loss has been incurred and, therefore, a liability is not recorded with respect to these cases.

In addition to the matters described above, there are two separate but inter-related matters in Ontario and Quebec, Canada. In March 2014, the Superior Court of Justice in London, Ontario, ruled in favor of the plaintiffs' motion for class certification. The Company filed its Notice of Motion for Leave to Appeal in March 2014, which was subsequently denied. This matter is currently in the pretrial stage, but no trial date has been set. The Quebec case has been stayed pending the outcome of the Ontario case. For the same reasons stated above, a liability has not been recorded with respect to either Canadian matter.

**Environmental Compliance:** The costs of complying with evolving regulatory requirements could negatively impact the Company'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 Company 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, 2015, the Company had accrued obligations of \$670 million (\$706 million at December 31, 2014) for probable environmental remediation and restoration costs, including \$74 million (\$78 million at December 31, 2014) 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 Company has accrued liabilities, although it is reasonably possible that the ultimate cost with respect to these particular matters could range up to approximately two and a half 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 Company's operations, or require modifications to its facilities. Accordingly, environmental, health or safety regulatory matters could result in significant unanticipated costs or liabilities.

Chemical Safety: Increased concerns regarding the safe use of chemicals in commerce and their potential impact on the environment as well as perceived impacts of plant biotechnology on health and the environment have resulted in more restrictive regulations from local, state and federal governments and could lead to new regulations.

Concerns regarding the safe use of chemicals in commerce and their potential impact on health and the environment and the perceived impacts of plant biotechnology 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, delays or failures in obtaining or retaining regulatory approvals, delayed product launches, lack of market acceptance, continued pressure for more stringent regulatory intervention and litigation. These concerns could also influence public perceptions, the viability of the Company's products, the Company'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 Company's results of operations.

Local, state and federal 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.



## Table of Contents

**Operational Event:** A significant operational event could negatively impact the Company's results of operations. As a diversified chemical manufacturing company, the Company'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 Company's results of operations.

Major hurricanes have caused significant disruption in Dow'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 Dow's products. Due to the Company's substantial presence on the U.S. Gulf Coast, similar severe weather conditions or other natural phenomena in the future could negatively affect Dow's results of operations.

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

Cyber attacks or security breaches could compromise confidential, business critical information, cause a disruption in the Company's operations or harm the Company's reputation. The Company has attractive information assets, including intellectual property, trade secrets and other sensitive, business critical information. While the Company 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 Company's financial results.

**Company Strategy:** Implementing certain elements of the Company's strategy could negatively impact the Company's financial results.

The Company currently has manufacturing operations, sales and marketing activities, joint ventures, as well as proposed and existing projects of varying size in emerging geographies. Activities in these geographies are accompanied by uncertainty and risks including: navigating different government regulatory environments; relationships with new, local partners; project funding commitments and guarantees; expropriation, military actions, war, terrorism and political instability; sabotage; uninsurable risks; suppliers not performing as expected resulting in increased risk of extended project timelines; and determining raw material supply and other details regarding product movement. If the manufacturing operations, sales and marketing activities, and/or implementation of these projects is not successful, it could adversely affect the Company's financial condition, cash flows and results of operations.

The Company has also announced a number of portfolio management actions as part of Dow's ongoing transformation, including a proposed all-stock merger of equals transaction with E.I. du Pont de Nemours and Company as well as transactions to restructure the Company's ownership interest in certain joint ventures. If the execution or implementation of these transactions is not successful, it could adversely impact the Company's financial condition, cash flows and results of operations.

**Goodwill:** An impairment of goodwill could negatively impact the Company's financial results.

At least annually, the Company assesses goodwill for impairment. If an initial qualitative assessment identifies that it is more likely than not that the carrying value of a reporting unit exceeds its estimated fair value, additional quantitative testing is performed. The Company may also elect to skip the qualitative testing and proceed directly to quantitative testing. If the quantitative testing indicates that goodwill is impaired, the carrying value of goodwill is written down to fair value with a charge against earnings. Since the Company utilizes a discounted cash flow methodology to calculate the fair value of its reporting units, continued weak demand for a specific product line or business could result in an impairment. Accordingly, any determination requiring the write-off of a significant portion of goodwill could negatively impact the Company's results of operations.

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

The Company has defined benefit pension plans and other postretirement benefit plans (the "plans") in the United States and a number of other countries. The assets of the Company's funded plans are primarily invested in fixed income and equity securities of U.S. and foreign issuers. Changes in the market value of plan assets, investment returns, discount rates, mortality rates, regulations and the rate of increase in compensation levels may affect the funded status of the Company'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 Company's obligations or future funding requirements could have a negative impact on the Company's results of operations and cash flows for a particular period and on the Company's financial condition.

Table of Contents

The Dow Chemical Company and Subsidiaries  
PART I, Item 1B. Unresolved Staff Comments.  
UNRESOLVED STAFF COMMENTS  
None.

23

---

Table of Contents

The Dow Chemical Company and Subsidiaries

PART I, Item 2. Properties.

**PROPERTIES**

The Company operates 179 manufacturing sites in 35 countries. Properties of Dow include facilities which, in the opinion of management, are suitable and adequate for the manufacture and distribution of Dow's products. During 2015, the Company's production facilities and plants operated at 85 percent of capacity. The Company's major production sites, including consolidated variable interest entities, are as follows:

Location	Agricultural Sciences	Consumer Solutions	Infrastructure Solutions	Performance Materials & Chemicals	Performance Plastics
Bahia Blanca, Argentina					x
Candeias, Brazil				x	
Canada:					
Fort Saskatchewan, Alberta					x
Joffre, Alberta					x
Germany:					
Boehlen			x	x	x
Leuna					x
Schkopau		x	x	x	x
Stade	x	x	x	x	x
Terneuzen, The Netherlands		x	x	x	x
Tarragona, Spain			x	x	x
Map Ta Phut, Thailand			x	x	x
United States:					
Louisville, Kentucky			x		
Hahnville (St. Charles), Louisiana			x	x	x
Plaquemine, Louisiana		x	x	x	x
Midland, Michigan	x	x	x	x	x
Deer Park, Texas			x	x	
Freeport, Texas	x		x	x	x
Seadrift, Texas		x	x	x	x
Texas City, Texas			x	x	

Including the major production sites, the Company has plants and holdings in the following geographic areas:

Asia Pacific:	39 manufacturing locations in 11 countries.
Canada:	6 manufacturing locations in 3 provinces.
Europe, Middle East, Africa and India:	51 manufacturing locations in 18 countries.
Latin America:	28 manufacturing locations in 4 countries.
United States:	55 manufacturing locations in 22 states.

All of Dow's plants are owned or leased, subject to certain easements of other persons which, in the opinion of management, do not substantially interfere with the continued use of such properties or materially affect their value. A summary of properties, classified by type, is provided in Note 8 to the Consolidated Financial Statements. Additional information regarding leased properties can be found in Note 19 to the Consolidated Financial Statements.



Table of Contents

The Dow Chemical Company and Subsidiaries

PART I, Item 3. Legal Proceedings.

LEGAL PROCEEDINGS

Asbestos-Related Matters of Union Carbide Corporation

Union Carbide Corporation ("Union Carbide"), a wholly owned subsidiary of the Company, 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 Union Carbide sold in the past, alleged exposure to asbestos-containing products located on Union Carbide's premises, and Union Carbide's responsibility for asbestos suits filed against a former Union Carbide subsidiary, Amchem Products, Inc.

It is the opinion of Dow's management that it is reasonably possible that the cost of Union Carbide disposing of its asbestos-related claims, including future defense costs, could have a material impact on the Company's results of operations and cash flows for a particular period and on the consolidated financial position of the Company.

For additional information, see Part II, Item 7. Other Matters, Asbestos-Related Matters of Union Carbide Corporation in Management's Discussion and Analysis of Financial Condition and Results of Operations, and Note 15 to the Consolidated Financial Statements.

Environmental Matters

In a meeting on July 22, 2015, Rohm and Haas Company and Rohm and Haas Chemicals LLC (collectively, "ROH"), wholly owned subsidiaries of the Company, were informed by representatives of the U.S. Environmental Protection Agency ("EPA") of the EPA's intent to seek injunctive relief and assess a civil penalty in excess of \$100,000 for alleged violations of the General Duty Clause of the Clean Air Act at ROH's Louisville, Kentucky, site. Discussions between ROH and the EPA are ongoing.

Dow Benelux B.V. ("Dow Benelux"), a Netherlands-based wholly owned subsidiary of the Company, received a summons dated July 20, 2012 from the Public Prosecutor in The Netherlands to appear before the criminal section of the District Court in Breda, The Netherlands (which venue was subsequently changed to the District Court of Middelburg) (the "Court"). The allegations contained in the summons relate to seven process safety incidents and environmental spills that occurred between 2005 and 2008 at Dow Benelux's Terneuzen manufacturing facility. The Public Prosecutor alleges that each of the incidents constitutes a violation of certain Netherlands safety procedures and environmental regulations, notably Section 5 of the Major Accidents Decree 1999 and/or Section 18.18 of the Environmental Act. In addition, five of the incidents allegedly also constitute a violation of Section 173a of the Dutch Criminal Code. The trial in the first instance on this matter was held from January 14, 2014 through February 7, 2014. On March 24, 2014, the Court issued a guilty verdict and imposed a Euro 1.8 million fine against Dow Benelux. The Court's judgment is subject to an appeal with the Court of Appeal in Den Bosch ("Court of Appeal"), and Dow Benelux has filed a notice of appeal. A new and independent trial will be held by the Court of Appeal. As a first procedural step in the appeal, a pre-trial hearing was held on January 18, 2016, to discuss scheduling of the proceedings on the merits, which Dow Benelux expects to occur during the second half of 2016.

Derivative Litigation

On March 6, 2013, Jeffrey Kaufman ("Kaufman"), purportedly in the name of and on behalf of the Company, commenced an action in the United States District Court for the District of Delaware (the "Court") against the Company and certain officers and directors of the Company (the "Defendants") alleging, among other things, that between 2007-2012, Defendants violated federal securities and state law surrounding equity awards and disclosures involving the 1988 Award and Option Plan and the 2012 Stock Incentive Plan ("2012 Plan") (collectively, the "Plans")

with respect to the tax-deductible nature of certain awards under the Plans. The relief sought in this litigation includes the recovery of certain equity awards and injunctive relief, as well as attorneys' fees. The Company first moved to dismiss the complaint on May 14, 2013 and, in response to the subsequent filing by Kaufman of an amended complaint, the Company filed an amended motion to dismiss on August 30, 2013. On September 30, 2014, the Court entered an order in favor of the Defendants dismissing the complaint in its entirety. On November 18, 2014, the Court granted Plaintiff's motion for reargument on one count, alleging that the 2012 proxy failed to include the approximate number of persons eligible to receive awards under the 2012 Plan. The Company believes the lawsuit to be without merit, has filed an answer on the remaining count, and will continue to vigorously defend the lawsuit.

Table of Contents

The Dow Chemical Company and Subsidiaries

PART I, Item 4. Mine Safety Disclosures.

MINE SAFETY DISCLOSURES

Not applicable.

26

---



Table of Contents

The Dow Chemical Company and Subsidiaries

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

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

The principal market for the Company's common stock is the New York Stock Exchange, traded under the symbol "DOW."

Quarterly market and dividend information can be found in Quarterly Statistics at the end of Part II, Item 8. Financial Statements and Supplementary Data.

At December 31, 2015, there were 61,001 registered common stockholders. The Company estimates that there were an additional 682,435 stockholders whose shares were held in nominee names at December 31, 2015. At January 31, 2016, there were 60,390 registered common stockholders.

On October 21, 2015, the Board of Directors declared a quarterly dividend of \$0.46 per share, payable January 29, 2016, to stockholders of record on December 31, 2015. On February 11, 2016, the Board of Directors announced the declaration of a quarterly dividend of \$0.46 per share, payable April 29, 2016, to stockholders of record on March 31, 2016. Since 1912, the Company has maintained or increased the amount of the quarterly dividend, adjusted for stock splits, with the exception of February 12, 2009. During this 104-year period, Dow has increased the amount of the quarterly dividend 52 times (approximately 13 percent of the time), reduced the dividend once and maintained the amount of the quarterly dividend approximately 87 percent of the time.

See Part III, Item 11. Executive Compensation for information relating to the Company's equity compensation plans.

**Issuer Purchases of Equity Securities**

The following table provides information regarding purchases of the Company's common stock by the Company during the three months ended December 31, 2015:

Issuer Purchases of Equity Securities			Total number of shares purchased as part of the Company's publicly announced share repurchase program (1)	Approximate dollar value of shares that may yet be purchased under the Company's publicly announced share repurchase program (1) (In millions)
Period	Total number of shares purchased	Average price paid per share		
October 2015 (2)	35,098,198	\$44.81	35,098,198	\$2,927
November 2015	9,630,236	\$51.93	9,630,236	\$2,427
December 2015	2,195,537	\$52.63	2,195,537	\$2,312
Fourth quarter 2015	46,923,971	\$46.63	46,923,971	\$2,312

(1) On February 13, 2013, the Board of Directors approved a share buy-back program, authorizing up to \$1.5 billion to be spent on the repurchase of the Company's common stock. On January 29, 2014, the Board of Directors announced an expansion of the Company's share buy-back authorization, authorizing an additional amount not to exceed \$3 billion to be spent on the repurchase of the Company's common stock over a period of time. On November 12, 2014, the Board of Directors announced a new \$5 billion tranche to its share buy-back program. As

a result of these actions, the total authorized amount of the share repurchase program is \$9.5 billion.

On October 5, 2015, (i) the Company completed the transfer of its U.S. Gulf Coast Chlor-Alkali and Vinyl, Global Chlorinated Organics and Global Epoxy businesses ("chlorine value chain") into a new company ("Splitco"), (ii) participating Dow shareholders tendered, and the Company accepted, Dow shares for Splitco shares in a public exchange offer, and (iii) Splitco merged with a wholly owned subsidiary of Olin Corporation in a tax-efficient Reverse Morris Trust transaction (collectively, the "Transaction"). Dow shareholders who participated in the public exchange offer tendered 34.1 million shares of Dow common stock in exchange for 100 million shares of Splitco. As a result of this non-cash share exchange offer, the Company included the 34.1 million tendered shares as part of the share repurchase program and recorded an increase of \$1,523 million in "Treasury stock at cost" in the consolidated balance sheets, which was valued based on Dow's opening stock price on October 5, 2015. See Note 6 to the Consolidated Financial Statements for additional information on this Transaction.

Table of Contents

On December 11, 2015, the Company and E. I. du Pont de Nemours and Company announced that their boards of directors unanimously approved a definitive agreement under which the companies will combine in an all-stock merger of equals strategic combination. The combined company will be named DowDuPont. This transaction is expected to close in the second half of 2016, subject to customary closing conditions, including regulatory approvals. As a result of this pending transaction, the Company will not repurchase shares under the share repurchase program until after the shareholder vote on the DowDuPont merger. The Company expects to complete approximately \$2 billion of share repurchases in 2016.

Table of Contents

The Dow Chemical Company and Subsidiaries  
PART II, Item 6. Selected Financial Data.

## SELECTED FINANCIAL DATA

In millions, except as noted (Unaudited)	2015	2014	2013	2012	2011	
Summary of Operations						
Net sales	\$48,778	\$58,167	\$57,080	\$56,786	\$59,985	
Net income	\$7,783	\$3,839	\$4,816	\$1,100	\$2,784	
Per share of common stock (in dollars):						
Net income per common share - basic	\$6.45	\$2.91	\$3.72	\$0.71	\$2.06	
Net income per common share - diluted	\$6.15	\$2.87	\$3.68	\$0.70	\$2.05	
Cash dividends declared per share of common stock	\$1.72	\$1.53	\$1.28	\$1.21	\$0.90	
Book value per share of common stock	\$23.06	\$19.71	\$22.59	\$17.73	\$19.28	
Year-end Financial Position						
Total assets (1)	\$68,026	\$68,687	\$69,402	\$69,492	\$69,119	
Long-term debt (1)	\$16,215	\$18,741	\$16,732	\$19,819	\$18,219	
Financial Ratios						
Research and development expenses as percent of net sales	3.3	%2.8	%3.1	%3.0	%2.7	%
Income before income taxes as percent of net sales	20.4	%9.1	%11.9	%2.9	%6.0	%
Return on stockholders' equity	34.4	%18.6	%19.4	%5.0	%13.1	%
Debt as a percent of total capitalization (1)	39.7	%45.5	%38.9	%48.7	%47.8	%

(1) Adjusted for reclassification of debt issuance costs related to the adoption of ASU 2015-03. See Note 2 to the Consolidated Financial Statements for further information.

Table of Contents

The Dow Chemical Company and Subsidiaries  
 PART II, Item 7. Management's Discussion and  
 (Unaudited) Analysis of Financial Condition and Results of Operations.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS  
 OF OPERATIONS

	Page
Table of Contents	
<u>2015 Overview</u>	<u>31</u>
<u>Results of Operations</u>	<u>34</u>
<u>Segment Results</u>	<u>41</u>
<u>Sales Volume and Price Charts</u>	<u>42</u>
<u>Agricultural Sciences</u>	<u>43</u>
<u>Consumer Solutions</u>	<u>44</u>
<u>Infrastructure Solutions</u>	<u>45</u>
<u>Performance Materials &amp; Chemicals</u>	<u>47</u>
<u>Performance Plastics</u>	<u>48</u>
<u>Corporate</u>	<u>51</u>
<u>Liquidity and Capital Resources</u>	<u>52</u>
<u>Other Matters</u>	<u>58</u>
<u>Critical Accounting Policies</u>	<u>58</u>
<u>Environmental Matters</u>	<u>63</u>
<u>Asbestos-Related Matters of Union Carbide Corporation</u>	<u>66</u>
<u>K-Dow Arbitration</u>	<u>67</u>

ABOUT DOW

Dow combines the power of science and technology to passionately innovate what is essential to human progress. The Company is driving innovations that extract value from materials, polymers, chemicals and biological sciences to help address many of the world's most challenging problems such as the need for clean water, clean energy generation and conservation, and increasing agricultural productivity. Dow's integrated, market-driven, industry-leading portfolio of specialty chemical, advanced materials, agrosiences and plastics businesses delivers a broad range of technology-based products and solutions to customers in approximately 180 countries and in high-growth sectors such as packaging, electronics, water, coatings and agriculture. In 2015, Dow had annual sales of nearly \$49 billion and employed approximately 49,500 people worldwide. The Company's more than 6,000 product families are manufactured at 179 sites in 35 countries across the globe. The Company conducts its worldwide operations through global businesses, which are reported in five operating segments: Agricultural Sciences, Consumer Solutions, Infrastructure Solutions, Performance Materials & Chemicals and Performance Plastics.

In 2015, 38 percent of the Company's sales were to customers in North America; 31 percent were in Europe, Middle East, Africa and India ("EMEAI"); while the remaining 31 percent were to customers in Asia Pacific and Latin America.

In 2015, the Company and its consolidated subsidiaries did not operate in countries subject to U.S. economic sanctions and export controls as imposed by the U.S. State Department or in countries designated by the U.S. State Department as state sponsors of terrorism, including Cuba (until September 2015), Iran, Sudan and Syria. The Company has policies and procedures in place designed to ensure that it and its consolidated subsidiaries remain in compliance with applicable U.S. laws and regulations.



## Table of Contents

### 2015 OVERVIEW

In 2015, Dow had another strong year of earnings growth in a challenging and volatile macroeconomic environment that included significant declines in crude oil and feedstock prices and currency headwinds from a strengthening U.S. dollar. In this economic environment, the Company demonstrated financial discipline and executed against its priorities - divesting of non-strategic businesses, completing the split-off of the chlorine value chain and initiating the restructure of the Company's joint ventures.

Net sales for 2015 were \$48.8 billion, down 16 percent from \$58.2 billion in 2014, with volume up 1 percent and price down 17 percent. Sales decreased in all operating segments and geographic areas.

Volume increased 1 percent in 2015 compared with 2014, as increases in Performance Plastics (up 5 percent), Infrastructure Solutions (up 2 percent) and Consumer Solutions (up 1 percent) more than offset volume declines in Performance Materials & Chemicals (down 6 percent) and Agricultural Sciences (down 4 percent). Volume increased in Asia Pacific (up 3 percent) and remained flat in EMEA, North America and Latin America. Excluding the impact of recent acquisitions and divestitures<sup>(1)</sup>, Performance Materials & Chemicals volume was up 1 percent and Agricultural Sciences volume was down 3 percent. Volume increased in all geographic areas led by Asia Pacific (up 4 percent).

Price was down 17 percent in 2015 compared with 2014, driven primarily by a decline in crude oil prices and the unfavorable impact of currency, which represented nearly 30 percent of the price decline. Double-digit price declines were reported in all geographic areas and all operating segments, except Agricultural Sciences (down 8 percent) and Consumer Solutions (down 7 percent).

Dow's Board of Directors approved actions to further streamline the organization and optimize the Company's footprint as a result of the split-off of the chlorine value chain. These actions, which will further accelerate Dow's value growth and productivity targets, will result in a reduction of approximately 2,250 positions across a number of businesses and functions and adjustments to the Company's asset footprint to enhance competitiveness. As a result of these actions, the Company recorded pretax restructuring charges of \$415 million in 2015. These actions are expected to be completed primarily by March 31, 2017.

Dow's earnings from nonconsolidated affiliates totaled \$674 million in 2015, down from \$835 million in 2014. In 2015, equity earnings decreased as higher earnings at The SCG-Dow Group and Map Ta Phut Olefins Company Limited were more than offset by increased equity losses from Sadara Chemical Company ("Sadara"), lower equity earnings from Univation Technologies, LLC ("Univation") resulting from the May 5, 2015, step acquisition and lower earnings from EQUATE Petrochemicals Company K.S.C. ("EQUATE"), The Kuwait Olefins Company K.S.C. ("TKOC") and MEGlobal.

Sundry income (expense) - net was net sundry income of \$4,592 million in 2015, up from net sundry expense of \$27 million in 2014, primarily due to a gain on the split-off of the chlorine value chain, a gain on the sale of the Company's interest in MEGlobal, a gain on the Univation step acquisition and gains from the divestitures of AgroFresh and ANGUS Chemical Company.

The Company delivered \$7.5 billion of cash flows from operating activities in 2015 and ended the year with \$8.6 billion of cash and cash equivalents.

The Company reduced gross debt in 2015 by \$2.5 billion, primarily due to the split-off of the chlorine value chain which resulted in a \$1.7 billion reduction in debt, and the early redemption of \$724 million in InterNotes with various interest rates and maturities between 2016 and 2024.

On October 22, 2015, the Company announced the Board of Directors declared a 10 percent increase in the Company's quarterly dividend, from \$0.42 per share to \$0.46 per share.

During 2015, the Company executed \$2.7 billion in share repurchases which included \$1.5 billion of shares redeemed as part of the Company's split-off of the chlorine value chain. At December 31, 2015, the Company had \$2.3 billion of common stock

Excludes prior period sales of recent divestitures including the chlorine value chain, divested on October 5, 2015 (primarily Performance Materials & Chemicals and Performance Plastics), the AgroFresh business, divested on July 31, 2015 (Agricultural Sciences), ANGUS Chemical Company, divested on February 2, 2015 (Performance Materials & Chemicals), the global Sodium Borohydride business, divested on January 30, 2015 (Performance Materials & Chemicals). Also excludes current period sales of recent acquisitions including Univation Technologies, LLC, acquired on May 5, 2015 (Performance Plastics) and Cooperativa Central de Pesquisa Agrícola, acquired on February 1, 2015 (Agricultural Sciences).



Table of Contents

available to repurchase under the share buy-back program. Due to the pending transaction with DuPont, the Company will not repurchase shares under the share repurchase program until after the shareholder vote on the DowDuPont merger. The Company expects to complete approximately \$2 billion of share repurchases in 2016.

Other notable events and highlights from 2015 include:

On January 30, 2015, the Company completed the divestiture of its global Sodium Borohydride business, part of the Performance Materials & Chemicals segment, to Vertellus Performance Chemicals LLC.

On January 30, 2015, Dow AgroSciences LLC completed the acquisition of Cooperativa Central de Pesquisa Agricola's ("Coodetec") seed business. The acquisition of Coodetec's seed business is expected to advance the development of Dow AgroSciences' soybean program and strengthen the Company's position in the corn market segment.

On February 2, 2015, the Company completed the divestiture of ANGUS Chemical Company, part of the Performance Materials & Chemicals segment, to Golden Gate Capital.

On April 15, 2015, the Company announced its 2025 Sustainability Goals, the third set of sustainability-related goals since 1995. The 2025 Sustainability Goals include aggressive sustainability targets designed to develop breakthrough product innovations, positively impact the lives of one billion people and deliver \$1 billion in cost savings or new cash flow for the Company by valuing nature in business decisions.

On April 28, 2015, Dow's Polyurethanes business announced the successful start-up of a new state-of-the-art polyether polyols plant in Asia Industrial Estate, Rayong, Thailand.

On May 5, 2015, the Company completed the step acquisition of Univation, previously a 50:50 joint venture between Dow and ExxonMobil Chemical Company ("ExxonMobil").

On July 31, 2015, the Company completed the divestiture of its AgroFresh business, part of the Agricultural Sciences segment, to Boulevard Acquisition Corp., subsequently renamed AgroFresh Solutions, Inc. ("AFSI").

On October 5, 2015, the Company completed the split-off of its chlorine value chain including the U.S. Gulf Coast Chlor-Alkali and Vinyl, Global Chlorinated Organics and Global Epoxy businesses to Olin Corporation ("Olin").

On December 8, 2015, the Company announced that its joint venture in the Middle East – Sadara – had achieved its first polyethylene production. Sadara's 26 manufacturing assets remain on schedule for a sequenced start-up process, beginning with the polyolefins envelope to maximize timing in the ethylene cycle, followed by ethylene oxide/propylene oxide and their derivatives.

On December 10, 2015, the Company entered into a definitive agreement to restructure the ownership of Dow Corning Corporation ("Dow Corning"). Under the terms of the agreement, Dow will become the 100 percent owner of Dow Corning, currently a 50:50 joint venture between Dow and Corning Incorporated ("Corning"). Dow and Corning will maintain their current equity stake in Hemlock Semiconductor Group. The transaction is expected to close in the first half of 2016.

On December 11, 2015, the Company and DuPont announced that their boards of directors unanimously approved a definitive agreement under which the companies will combine in an all-stock merger of equals strategic combination. The combined company will be named DowDuPont. This transaction is expected to close in the second half of 2016, subject to customary closing conditions, including regulatory approvals. The parties intend to subsequently pursue a

separation of DowDuPont into three independent, publicly traded companies through tax-efficient transactions, including a leading global pure-play agriculture company, a leading global pure-play material science company and a leading technology and innovation-driven specialty products company.

On December 18, 2015, the Company announced its new, on-purpose propylene production facility, located at the Oyster Creek site in Freeport, Texas, commenced operations.

On December 23, 2015, the Company announced that it sold its ownership interest in MEGlobal to EQUATE for \$1.5 billion in pretax proceeds.

## Table of Contents

James R. Fitterling was appointed Vice Chairman and Chief Operating Officer. In this capacity, he will have accountability for all of Dow's businesses, except Dow AgroSciences; Operations, including Environment, Health & Safety and Sustainability, Manufacturing and Engineering, and Supply Chain; as well as, Research & Development.

Howard I. Ungerleider added the position of Vice Chairman to his existing role as Chief Financial Officer. He will also assume responsibility for leading Dow AgroSciences. Dow's Corporate Strategy Development, Corporate Planning, Finance, and Information Technology & Business Services functions will also now report to Ungerleider.

Dow was recognized as a leader in climate change reporting and disclosure by Climate Disclosure Project. Dow earned the highest possible disclosure score of 100 percent. Dow was also selected to the S&P 500 Climate Disclosure Leadership Index (CDLI) in 2015, which recognizes only the top 10 percent of companies reporting for disclosure of high-quality carbon emissions and energy data.

Dow's ACRY SOL™ RM-725 Rheology Modifier, BETAMATE™ Structural Adhesives, DOW ENDURANCE™ HFDC-4202 EC Insulation Compound, PacXpert™ Packaging Technology, Polyethylene (PE) Stand-up Pouch and SOLDERON™ BP TS6000 Tin-Silver were honored by R&D Magazine as part of its R&D 100 Awards.

Dow announced it signed an agreement with King Abdullah University of Science and Technology (KAUST) to expand its facilities at the KAUST Research & Technology Park with the construction of a new Dow Middle East Research and Development Center.

Working Mother magazine named Dow to the 2015 Working Mother 100 Best Companies list.

Dow was named to the Dow Jones Sustainability Index - the 15th time the Company has received this recognition since the index was launched. This year's announcement ties Dow as the longest-standing representative in the chemical category since the list's inception in 1999.

Dow was honored for the 11th consecutive year by the Human Rights Campaign (HRC) for achieving a 100 percent rating on its corporate equality index (CEI) - a global benchmarking tool on corporate policies and practices related to lesbian, gay, bisexual and transgender (LGBT) employees.

Dow was named Manufacturer of the Year, large enterprise, at the 11th Annual Manufacturing Leadership Summit.

Announcements made in 2016 include:

On February 2, 2016, James R. Fitterling was appointed President and Chief Operating Officer. He succeeds Andrew N. Liveris as President with Mr. Liveris continuing as the Company's Chairman and Chief Executive Officer.

On February 2, 2016, Dow announced the planned transition out of the Company of Chairman and Chief Executive Officer Andrew N. Liveris. The transition will occur on the earlier of the material completion of the anticipated spins following the closing of the announced DowDuPont merger transaction or June 30, 2017.

Dow's results of operations and financial condition for the year ended December 31, 2015 are described in further detail in the following discussion and analysis.

Table of Contents

## RESULTS OF OPERATIONS

## Net Sales

Net sales for 2015 were \$48.8 billion, down 16 percent from \$58.2 billion in 2014, with volume up 1 percent and price down 17 percent. Price decreased in all operating segments and geographic areas, driven primarily by a decline in average crude oil prices of approximately 45 percent and the unfavorable impact of currency, which represented nearly 30 percent of the price decline. Double-digit price declines were reported in all geographic areas and all operating segments, except Agricultural Sciences (down 8 percent) and Consumer Solutions (down 7 percent). Volume increases in Performance Plastics (up 5 percent), Infrastructure Solutions (up 2 percent) and Consumer Solutions (up 1 percent) more than offset lower volume in Performance Materials & Chemicals (down 6 percent) and Agricultural Sciences (down 4 percent). Volume increased in Asia Pacific (up 3 percent) and remained flat in North America, EMEAI and Latin America. Excluding recent acquisitions and divestitures<sup>(1)</sup>, Performance Materials & Chemicals volume was up 1 percent and Agricultural Sciences volume was down 3 percent. Volume increased in all geographic areas, led by Asia Pacific (up 4 percent).

Net sales for 2014 were \$58.2 billion, up 2 percent from \$57.1 billion in 2013, with volume up 2 percent and price flat. Volume increased in all operating segments, except Performance Plastics which remained flat, with notable increases in Agricultural Sciences and Consumer Solutions (both up 3 percent). Excluding the impact of recent divestitures, Performance Plastics volume was up 1 percent. Volume increased in all geographic areas, led by EMEAI (up 4 percent). Price was flat as increased selling prices were offset by the unfavorable impact of currency. Price increases in Performance Plastics (up 2 percent) were offset by price declines in Agricultural Sciences and Consumer Solutions (both down 1 percent). Infrastructure Solutions and Performance Materials & Chemicals price remained flat. Price increased in North America (up 2 percent) and Latin America (up 1 percent), which was offset by a decline in EMEAI (down 1 percent). Price in Asia Pacific remained flat.

Sales in the United States accounted for 35 percent of total sales in 2015, 33 percent of total sales in 2014 and 33 percent of total sales in 2013. See the Sales Volume and Price tables at the beginning of the section titled “Segment Results” for details regarding the change in sales by operating segment and geographic area. In addition, sales and other information by operating segment and geographic area are provided in Note 26 to the Consolidated Financial Statements.

## Gross Margin

Gross margin was \$10.9 billion in 2015, \$10.7 billion in 2014 and \$9.5 billion in 2013. Gross margin increased in 2015 driven by an \$8,542 million decrease in purchased feedstock and energy costs and the favorable impact of currency on costs which was partially offset by lower selling prices, including the unfavorable impact of currency. In 2015, gross margin was reduced by \$91 million of pretax charges for asset impairments and related costs, including the shutdown of manufacturing assets and facilities in the Dow Building & Construction, Energy & Water Solutions and Dow Packaging and Specialty Plastics businesses and the abandonment of certain capital projects in the Dow Building & Construction and Dow Coating Materials businesses, which was reflected in the following segments: Infrastructure Solutions (\$34 million) and Performance Plastics (\$57 million). Gross margin was also reduced by \$24 million of pretax charges for nonrecurring transaction costs associated with portfolio and productivity actions (reflected in Corporate) and a \$12 million pretax loss related to Univation for the fair value step-up of inventories assumed in the step acquisition (reflected in Performance Plastics). See Notes 4 and 12 to the Consolidated Financial Statements for additional information regarding these items.

Gross margin in 2014 was positively impacted by increased sales volume, a \$392 million decrease in purchased feedstock and energy costs, lower other raw material costs and increased operating rates. Gross margin in 2014 was reduced by a \$100 million warranty accrual adjustment related to an exited business (reflected in Infrastructure Solutions) and by \$23 million for asset impairments related to the Dow Electronic Materials business (reflected in Consumer Solutions). See Notes 12 and 15 to the Consolidated Financial Statements for additional information

regarding these items.

Gross margin in 2013 was positively impacted by higher selling prices, lower maintenance turnaround costs, and lower expenses resulting from the 2012 Restructuring activities which more than offset a \$319 million increase in purchased feedstock and energy costs and increased performance-based compensation costs. Gross margin in 2013 was reduced by \$181 million for asset impairments and related costs, including the shutdown of manufacturing facilities in the Chlor-Alkali and Vinyl business, Energy & Water Solutions business, Polyurethanes business, Performance Monomers business, Epoxy business

Excludes prior period sales of recent divestitures including the chlorine value chain, divested on October 5, 2015 (primarily Performance Materials & Chemicals and Performance Plastics), the AgroFresh business, divested on July 31, 2015 (Agricultural Sciences), ANGUS Chemical Company, divested on February 2, 2015 (Performance Materials & Chemicals), the global Sodium Borohydride business, divested on January 30, 2015 (Performance Materials & Chemicals), the Polypropylene Licensing and Catalysts business, divested on December 2, 2013 (Performance Plastics) and sales related to Nippon Unicar Company Limited, divested on July 1, 2013. Also excludes current period sales of recent acquisitions including Univation Technologies, LLC, acquired on May 5, 2015 (Performance Plastics) and Coodetec, acquired on February 1, 2015 (Agricultural Sciences).

Table of Contents

and Corporate. The asset impairments and related costs were reflected in the following segments: Infrastructure Solutions

(\$95 million), Performance Materials & Chemicals (\$70 million) and Corporate (\$16 million). Gross margin in 2013 was also reduced by \$40 million in implementation costs related to the Company's 2012 Restructuring programs (reflected in Corporate). See Note 12 to the Consolidated Financial Statements for additional information regarding these asset impairments.

**Operating Rate**

Dow's global plant operating rate was 85 percent of capacity in 2015, compared with 85 percent in 2014 and 81 percent in 2013. Operating rates improved in 2014 primarily due to increased demand and actions taken by management to increase asset utilization.

**Personnel Count**

Personnel count was 49,495 at December 31, 2015, down from 53,216 at December 31, 2014. Headcount decreased in 2015 primarily due to the separation of employees as a result of divestitures and the Company's 2015 restructuring program. Personnel count at December 31, 2014, increased from 52,731 at December 31, 2013, as hiring to support the Company's growth initiatives more than offset declines due to the Company's 2012 Restructuring programs.

**Research and Development Expenses**

Research and development ("R&D") expenses were \$1,598 million in 2015, compared with \$1,647 million in 2014 and \$1,747 million in 2013. R&D expenses decreased 3 percent in 2015 primarily due to cost reduction initiatives, notably in Agricultural Sciences, which were partially offset by increased performance-based compensation costs. In 2014, R&D expenses decreased primarily due to cost reduction initiatives, notably in Performance Materials & Chemicals. In 2013, R&D expenses were impacted by increased performance-based compensation costs and \$2 million of implementation costs related to the Company's restructuring programs (reflected in Corporate).

**Selling, General and Administrative Expenses**

Selling, general and administrative ("SG&A") expenses were \$2,971 million in 2015, compared with \$3,106 million in 2014 and \$3,024 million in 2013. In 2015, SG&A expenses decreased 4 percent from 2014, as lower expenses, notably in Agricultural Sciences and from the impact of divestitures, more than offset increased performance-based compensation costs. In 2015, SG&A expenses were also impacted by \$51 million in pretax charges for costs associated with portfolio and productivity actions (reflected in Corporate). In 2014, SG&A expenses increased 3 percent from 2013, due to increased spending on growth initiatives, primarily in Agricultural Sciences, and increased spending on Company branding initiatives. In 2013, SG&A expenses were impacted by \$2 million of implementation costs related to the Company's Restructuring programs (reflected in Corporate).

**Production Costs and Operating Expenses**

The following table illustrates the relative size of the primary components of total production costs and operating expenses of Dow. More information about each of these components can be found in other sections of Management's Discussion and Analysis of Financial Condition and Results of Operations, and Notes to the Consolidated Financial Statements.

**Production Costs and Operating Expenses**

Cost components as a percent of total	2015	2014	2013	
Hydrocarbon feedstocks and energy	27	% 38	% 38	%
Salaries, wages and employee benefits	18	15	15	
Maintenance	5	4	4	
Depreciation	4	4	4	
Restructuring charges	1	—	—	

Supplies, services and other raw materials	45	39	39	
Total	100	% 100	% 100	%

#### Amortization of Intangibles

Amortization of intangibles was \$419 million in 2015, \$436 million in 2014 and \$461 million in 2013. In 2013, amortization of intangibles was impacted by a \$3 million asset impairment charge (reflected in Corporate). See Notes 10 and 12 to the Consolidated Financial Statements for additional information on this impairment.

#### Goodwill and Other Intangible Asset Impairment Losses

The Company performs annual goodwill impairment tests during the fourth quarter of the year. In 2015, the Company performed qualitative testing for 9 of the 12 reporting units carrying goodwill and quantitative testing for the remaining three reporting units. As a result of this testing, no goodwill impairments were identified. See Critical Accounting Policies in Other

## Table of Contents

Matters in Management's Discussion and Analysis of Financial Condition and Results of Operations and Note 10 to the Consolidated Financial Statements for additional information regarding goodwill and the impairment tests conducted.

In 2014, the Company performed qualitative testing for 9 of the 14 reporting units carrying goodwill and quantitative testing for the remaining five reporting units. As a result of this testing, no goodwill impairments were identified.

In the fourth quarter of 2014, the Company recognized a pretax charge of \$50 million related to the impairment of intangible assets in the Dow Electronic Materials business, which is included in "Goodwill and other intangible asset impairment losses" in the consolidated statements of income and reflected in Consumer Solutions. See Notes 10 and 12 to the Consolidated Financial Statements for additional information on this impairment.

In 2013, the Company performed qualitative testing for 14 of the 19 reporting units carrying goodwill and quantitative testing for the remaining five reporting units. As a result of this testing, no goodwill impairments were identified.

### Restructuring Charges (Credits)

On April 29, 2015, Dow's Board of Directors approved actions to further streamline the organization and optimize the Company's footprint as a result of the split-off of the chlorine value chain. These actions, which will further accelerate Dow's value growth and productivity targets, will result in a reduction of approximately 1,750 positions across a number of businesses and functions and adjustments to the Company's asset footprint to enhance competitiveness. These actions are expected to be completed primarily by March 31, 2017. As a result of these actions, the Company recorded pretax restructuring charges of \$375 million in the second quarter of 2015 consisting of costs associated with exit or disposal activities of \$10 million, severance costs of \$196 million and asset write-downs and write-offs of \$169 million. During the fourth quarter of 2015, the Company recorded a restructuring charge adjustment of \$40 million, primarily related to severance costs for the separation of approximately 500 additional positions. The impact of these charges is shown as "Restructuring charges (credits)" in the consolidated statements of income and reflected in the Company's segment results as follows: \$16 million in Agricultural Sciences, \$67 million in Consumer Solutions, \$26 million in Infrastructure Solutions, \$12 million in Performance Plastics and \$294 million in Corporate. See Note 3 to the Consolidated Financial Statements for details on the Company's 2015 restructuring program.

In 2014, the Company recognized a pretax gain of \$3 million for adjustments to contract cancellation fees related to the 4Q12 Restructuring plan. The gain was included in "Restructuring charges (credits)" in the consolidated statements of income and reflected in Performance Materials & Chemicals.

In 2013, the Company recognized a pretax gain of \$16 million for adjustments to asbestos abatement costs and contract cancellation fees related to the 1Q12 Restructuring plan and a \$6 million pretax gain for adjustments to contract cancellation fees related to the 4Q12 Restructuring plan. These gains were included in "Restructuring charges (credits)" in the consolidated statements of income and reflected in Performance Materials & Chemicals (\$15 million), Performance Plastics (\$6 million) and Infrastructure Solutions (\$1 million).

### Asbestos-related Charge

In 2014, the Company recorded a pretax charge of \$78 million (reflected in Corporate) for an increase in the asbestos-related liability for pending and future claims (excluding defense and processing costs). Union Carbide Corporation, a wholly owned subsidiary of the Company, determined that an adjustment to the asbestos accrual was required due to an increase in mesothelioma claim activity compared with what had been previously forecasted. See Note 15 to the Consolidated Financial Statements for details on the asbestos-related charge.

### Equity in Earnings of Nonconsolidated Affiliates



Dow's share of the earnings of nonconsolidated affiliates in 2015 was \$674 million, compared with \$835 million in 2014 and \$1,034 million in 2013. In 2015, equity earnings decreased as higher earnings at The SCG-Dow Group and Map Ta Phut Olefins Company Limited were more than offset by increased equity losses from Sadara, lower equity earnings from Univation resulting from the May 5, 2015, step acquisition and lower earnings from EQUATE, TKOC and MEGlobal. Equity earnings in 2015 were also impacted by a \$29 million loss related to AgroFresh Solutions' fair value step-up of its inventories and start-up costs and a loss recognized by Sadara related to the write-off of design engineering work for an Epoxy Plant, of which Dow's share was \$27 million. In 2014, equity earnings decreased primarily due to lower earnings at EQUATE, TKSC and MEGlobal and increased losses at Sadara which were partially offset by increased earnings at Dow Corning. In 2013, equity earnings included a \$10 million loss related to asset impairment charges at a formulated electrolytes manufacturing joint venture (reflected in Corporate).

Table of Contents

In January 2014, the Chinese Ministry of Commerce issued a final determination that China's solar-grade polycrystalline silicon industry suffered material damage because of dumping, which resulted in antidumping duties of 53.3 percent and countervailing duties of 2.1 percent on future imports from Dow Corning's Hemlock Semiconductor Group into China. During the fourth quarter of 2014, Dow Corning determined its polycrystalline silicon plant expansion in Clarksville, Tennessee, which was delayed in 2012, would not be economically viable and made the decision to permanently abandon the assets. This decision was made after review of sustained adverse market conditions and continued oversupply, the cost of operating the facility and the ongoing impact of tariffs on polycrystalline silicon imported into China. Dow's share of the charge related to this asset abandonment was \$500 million (reflected in Infrastructure Solutions). As a result of the significant change in the use of this asset, Dow Corning assessed whether the carrying value of all remaining polycrystalline silicon assets might be impaired. Dow Corning's estimates of future undiscounted cash flows indicated the polycrystalline silicon asset group was recoverable.

In May 1995, Dow Corning filed for protection under Chapter 11 of the U.S Bankruptcy Code to address pending and claimed liabilities arising from breast implant product lawsuits. On June 1, 2004, Dow Corning's Joint Plan of Reorganization (the "Plan") became effective and Dow Corning emerged from bankruptcy. Under the Plan, Dow Corning established and agreed to fund a products liability settlement program (the "Settlement Facility"). The Plan contains a cap on the amount of payments required from Dow Corning to fund the Settlement Facility. During the fourth quarter of 2014, Dow Corning, with the assistance of a third-party advisor, developed an estimate of the future Implant Liability based on evidence that the actual funding required for the Settlement Facility is expected to be lower than the full funding cap set forth in the Plan. As a result, Dow Corning reduced its Implant Liability by approximately \$1.3 billion. The revised Implant Liability reflected Dow Corning's best estimate of its remaining obligations under the Plan. Dow's share of the Implant Liability reduction was \$407 million (\$155 million reflected in Consumer Solutions and \$252 million reflected in Infrastructure Solutions). In the fourth quarter of 2015, Dow Corning further reduced its Implant Liability. Dow's share of the Implant Liability reduction was \$20 million (\$8 million reflected in Consumer Solutions and \$12 million reflected in Infrastructure Solutions). See Note 9 to the Consolidated Financial Statements for additional information on nonconsolidated affiliates.

On December 10, 2015, the Company entered into a definitive agreement to restructure the ownership of Dow Corning. Under the terms of the agreement, Dow will become the 100 percent owner of Dow Corning, currently a 50:50 joint venture between Dow and Corning. Dow and Corning will maintain their current equity stake in Hemlock Semiconductor Group. The transaction is expected to close in the first half of 2016.

#### 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, dividends from investments, and gains and losses on sales of investments and assets. Sundry income (expense) - net for 2015 was net income of \$4,592 million, compared with net expense of \$27 million in 2014 and net income of \$2,554 million in 2013.

In 2015, sundry income (expense) - net included a \$2,233 million gain on the split-off of the Company's chlorine value chain (reflected in Performance Materials & Chemicals (gain of \$1,984 million), Performance Plastics (gain of \$317 million), and Corporate (loss of \$68 million)), a \$723 million gain on the sale of MEGlobal (reflected in Performance Materials & Chemicals), a \$682 million gain on the divestiture of ANGUS Chemical Company (reflected in Performance Materials & Chemicals), a \$20 million gain on the divestiture of the global Sodium Borohydride business (reflected in Performance Materials & Chemicals), a \$618 million gain related to the divestiture of the AgroFresh business (net of an \$8 million loss for mark-to-market adjustments on the fair value of warrants receivable and reflected in Agricultural Sciences), a \$361 million gain on the Univation step acquisition (reflected in Performance Plastics) and gains on sales of assets and investments. These gains more than offset foreign currency exchange losses, including a \$98 million loss related to the impact of the Argentine peso devaluation (reflected in

Corporate), a \$53 million loss on asset impairments and related costs (reflected in Infrastructure Solutions), an \$8 million loss related to the early extinguishment of debt (reflected in Corporate) and \$119 million of costs associated with portfolio and productivity actions (reflected in Corporate). See Notes 4, 5, 6, 9, 12, 13 and 17 to the Consolidated Financial Statements for additional information.

In 2014, sundry income (expense) - net included a gain related to the termination of an off-take agreement and gains on asset sales which were more than offset by foreign currency exchange losses, venture capital investment losses and \$49 million of costs associated with portfolio and productivity actions (reflected in Corporate).

In 2013, sundry income (expense) - net included a gain of \$2,161 million related to damages awarded to the Company in the K-Dow arbitration proceeding (reflected in Corporate), a \$451 million gain on the sale of the Polypropylene Licensing and Catalysts business (reflected in Performance Plastics), an \$87 million gain on the sale of a 7.5 percent ownership interest in Freeport LNG Development, L.P. (reflected in Performance Plastics), a \$26 million gain on the sale of the Company's

## Table of Contents

ownership interest in Dow Kokam (reflected in Corporate), gains on asset sales and equity method investments and a \$326 million loss on the early extinguishment of debt (reflected in Corporate). See Notes 5, 13 and 17 to the Consolidated Financial Statements for additional information.

### Net Interest Expense

Net interest expense (interest expense less capitalized interest and interest income) was \$875 million in 2015, down from \$932 million in 2014 and \$1,060 million in 2013. In 2015, net interest expense decreased due to the impact of higher capitalized interest as a result of increased capital spending, primarily related to U.S. Gulf Coast projects, which more than offset higher interest expense related to the issuance of \$2 billion of debt in 2014. In 2014, net interest expense decreased reflecting the impact of the Company's 2013 deleveraging activities and lower debt financing costs. Interest income was \$71 million in 2015, \$51 million in 2014 and \$41 million in 2013. Interest expense (net of capitalized interest) and amortization of debt discount totaled \$946 million in 2015, \$983 million in 2014 and \$1,101 million in 2013. See Liquidity and Capital Resources in Management's Discussion and Analysis of Financial Condition and Results of Operations and Note 17 to the Consolidated Financial Statements for additional information related to debt financing activity.

### Provision for Income Taxes

The provision for income taxes was \$2,147 million in 2015, compared with \$1,426 million in 2014 and \$1,988 million in 2013. The Company's effective tax rate fluctuates based on, among other factors, where income is earned, reinvestment assertions regarding earned income and the level of income relative to tax credits available. For example, as the percentage of foreign sourced income increases, the Company's effective tax rate declines. The Company's tax rate is also influenced by the level of equity earnings, since most of the earnings from the Company's equity method investments are taxed at the joint venture level. The underlying factors affecting the Company's overall tax rate are summarized in Note 23 to the Consolidated Financial Statements.

The tax rate for 2015 was positively impacted by portfolio actions, specifically the tax-efficient split-off of the Company's chlorine value chain, the non-taxable gain from the Univation step acquisition, and the sale of MEGlobal. The geographic mix of earnings favorably impacted the tax rate with the gain from the ANGUS Chemical Company divestiture and continued profitability improvement in Europe and Asia Pacific providing most of the benefit. The tax rate was unfavorably impacted by foreign subsidiaries repatriating cash to the United States which was primarily derived from divestiture proceeds. Reduced equity earnings and continued increases in statutory income in Latin America and Canada due to local currency devaluations also unfavorably impacted the tax rate. These factors resulted in an effective tax rate of 21.6 percent for 2015.

The tax rate for 2014 was positively impacted by the geographic mix of earnings, with the most notable components being improved profitability in Europe and Asia Pacific. Equity earnings remained strong, providing additional favorable impact on the tax rate. The tax rate was also favorably impacted by a reduction in the tax impact on remittances by foreign subsidiaries to the United States. The tax rate was negatively impacted by a continued increase in statutory income in Latin America due to local currency devaluations, and increases in valuation allowances, primarily in Asia Pacific. These factors resulted in an effective tax rate of 27.1 percent for 2014.

The tax rate for 2013 was favorably impacted by increased equity earnings; the K-Dow arbitration award, due to favorable tax treatment of certain components of the award; and changes in valuation allowances in the United States on state income tax attributes and capital loss carryforwards. The tax rate was unfavorably impacted by adjustments to uncertain tax positions related to court rulings on two separate tax matters and the establishment of valuation allowances outside the United States. Additionally, the tax rate was unfavorably impacted by an increase in statutory taxable income in Latin America, primarily due to local currency devaluation. These factors resulted in an effective tax rate of 29.2 percent for 2013.

Net Income Attributable to Noncontrolling Interests

Net income attributable to noncontrolling interests was \$98 million in 2015, \$67 million in 2014 and \$29 million in 2013. Net income attributable to noncontrolling interests increased in 2015 compared with 2014, primarily due to higher earnings at most of the Company's consolidated joint ventures which was partially offset by an after-tax loss related to the exercise of an equity option by a noncontrolling interest in a variable interest entity. In addition to the items previously discussed, 2015 was also impacted by noncontrolling interests' portion of the 2015 restructuring charge. Net income attributable to noncontrolling interests increased in 2014 compared with 2013, primarily due to increased earnings at certain Performance Materials & Chemicals joint ventures and the 2013 divestiture of Dow Kokam. See Notes 3, 5, 20 and 25 to the Consolidated Financial Statements for additional information on these matters.

Table of Contents

Preferred Stock Dividends

Preferred stock dividends of \$340 million were recognized in 2015, 2014 and 2013. These dividends related to the Company's Cumulative Convertible Perpetual Preferred Stock, Series A. See Note 22 to the Consolidated Financial Statements for additional information.

Net Income Available for Common Stockholders

Net income available for common stockholders was \$7,345 million (\$6.15 per share) in 2015, compared with \$3,432 million (\$2.87 per share) in 2014 and \$4,447 million (\$3.68 per share) in 2013.

Certain Items Impacting Results

The Company's management believes that measures of income adjusted to exclude certain items ("non-GAAP" financial measures) provide relevant and meaningful information to investors about the ongoing operating results of the Company. Such financial measures are not recognized in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and should not be viewed as an alternative to U.S. GAAP financial measures of performance.

Table of Contents

The following table summarizes the impact of certain items recorded in 2015, 2014 and 2013:

Certain Items Impacting Results In millions, except per share amounts	Pretax Impact (1)			Impact on Net Income (2)			Impact on EPS (3) (4)		
	2015	2014	2013	2015	2014	2013	2015	2014	2013
Adjusted to exclude certain items (non-GAAP measures)				\$4,054	\$3,709	\$2,981	\$3.47	\$3.11	\$2.48
Certain items:									
Cost of sales:									
Asset impairments and related costs	\$(91 )	\$(23 )	\$(181 )	(70 )	(14 )	(124 )	(0.06 )	(0.01 )	(0.10 )
Warranty accrual adjustment of exited business	—	(100 )	—	—	(63 )	—	—	(0.05 )	—
Univation step acquisition	(12 )	—	—	(8 )	—	—	(0.01 )	—	—
Restructuring plan implementation costs	—	—	(40 )	—	—	(29 )	—	—	(0.03 )
Portfolio and productivity actions	(24 )	—	—	(16 )	—	—	(0.01 )	—	—
R&D:									
Restructuring plan implementation costs	—	—	(2 )	—	—	(1 )	—	—	—
SG&A:									
Restructuring plan implementation costs	—	—	(2 )	—	—	(2 )	—	—	—
Portfolio and productivity actions	(51 )	—	—	(38 )	—	—	(0.03 )	—	—
Amortization of intangibles:									
Asset impairments and related costs	—	—	(3 )	—	—	(2 )	—	—	—
Goodwill and other intangible asset impairment losses	—	(50 )	—	—	(33 )	—	—	(0.03 )	—
Restructuring (charges) credits	(415 )	—	22	(274 )	—	21	(0.24 )	—	0.02
Asbestos-related charge	—	(78 )	—	—	(49 )	—	—	(0.04 )	—
Equity in earnings of nonconsolidated affiliates:									
Joint venture actions	(36 )	(93 )	—	(26 )	(87 )	—	(0.02 )	(0.08 )	—
Asset impairments at a formulated electrolytes joint venture	—	—	(10 )	—	—	(6 )	—	—	(0.01 )
Sundry income (expense) - net:									
Gain on split-off of chlorine value chain	2,233	—	—	2,215	—	—	1.96	—	—
Gain on sale of MEGlobal	723	—	—	589	—	—	0.52	—	—
Gain on 2015 business divestitures	1,320	—	—	823	—	—	0.71	—	—
Gain on Univation step acquisition	361	—	—	359	—	—	0.31	—	—
Gain from K-Dow settlement	—	—	2,161	—	—	1,647	—	—	1.37

Gain on sale of Polypropylene Licensing and Catalysts business	—	—	451	—	—	356	—	—	0.29
Gain on sale of a 7.5 percent interest in Freeport LNG Development, L.P.	—	—	87	—	—	69	—	—	0.06
Gain on sale of ownership interest in Dow Kokam	—	—	26	—	—	18	—	—	0.01
Asset impairments and related costs	(53 )	—	—	(53 )	—	—	(0.05 )	—	—
Impact of Argentine peso devaluation	(98 )	—	—	(106 )	—	—	(0.09 )	—	—
Loss on early extinguishment of debt	(8 )	—	(326 )	(5 )	—	(205 )	—	—	(0.17 )
Portfolio and productivity actions	(119 )	(49 )	—	(99 )	(31 )	—	(0.09 )	(0.03 )	—
Provision for income taxes: Uncertain tax position adjustments	—	—	—	—	—	(276 )	—	—	(0.23 )
Total certain items	\$3,730	\$(393 )	\$2,183	\$3,291	\$(277 )	\$1,466	\$2.90	\$(0.24 )	\$1.21
Dilutive effect of assumed preferred stock conversion into shares of common stock							\$(0.22 )	\$—	\$(0.01 )
Reported U.S. GAAP Amounts (5) (6)				\$7,345	\$3,432	\$4,447	\$6.15	\$2.87	\$3.68

(1) Impact on "Income Before Income Taxes."

(2) Impact on "Net Income Available for The Dow Chemical Company Common Stockholders."

(3) Impact on "Earnings per common share - diluted."

(4) For the years ended December 31, 2015 and 2013, conversion of the Company's Cumulative Convertible Perpetual Preferred Stock, Series A ("Preferred Stock") into shares of the Company's common stock was excluded from the calculation of "Diluted earnings per share adjusted to exclude certain items" as well as the earnings per share impact of certain items because the effect of including them would have been antidilutive.

(5) For the years ended December 31, 2015 and 2013, an assumed conversion of the Company's Preferred Stock into shares of the Company's common stock was included in the calculation of diluted earnings per share (reported U.S. GAAP amount).

(6) The Company used "Net Income Attributable to The Dow Chemical Company" when calculating diluted earnings per share (reported U.S. GAAP amount) for the years ended December 31, 2015 and 2013, as it excludes preferred dividends of \$340 million.



Table of Contents

SEGMENT RESULTS

The Company uses EBITDA (which Dow defines as earnings (i.e., "Net Income") before interest, income taxes, depreciation and amortization) as its measure of profit/loss for segment reporting purposes. EBITDA by operating segment includes all operating items relating to the businesses; items that principally apply to the Company as a whole are assigned to Corporate. Additional information regarding the Company's operating segments and a reconciliation of EBITDA to "Income Before Income Taxes" can be found in Note 26 to the Consolidated Financial Statements.

The Company's management believes that measures of income, including EBITDA, adjusted to exclude certain items ("non-GAAP" financial measures) provide relevant and meaningful information to investors about the ongoing operating results of the Company. Such financial measures are not recognized in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and should not be viewed as an alternative to U.S. GAAP financial measures of performance.

Due to the completion of several acquisitions and divestitures (see Notes 4 and 5 to the Consolidated Financial Statements), the change in sales volume from 2014 to 2015, 2013 to 2014 and 2012 to 2013 excluding acquisitions and divestitures is also provided by operating segment, where applicable.

Table of Contents

## SALES VOLUME AND PRICE BY OPERATING SEGMENT AND GEOGRAPHIC AREA

## Sales Volume and Price by Operating Segment and Geographic Area

Percent change from prior year	2015			2014			2013			
	Volume	Price	Total	Volume	Price	Total	Volume	Price	Total	
<b>Operating Segments:</b>										
Agricultural Sciences	(4 )%	(8 )%	(12 )%	3	(1 )%	2	% 11	% 1	% 12	%
Consumer Solutions	1	(7 )	(6 )	3	(1 )	2	3	(2 )	1	
Infrastructure Solutions	2	(14 )	(12 )	1	—	1	4	(1 )	3	
Performance Materials & Chemicals	(6 )	(15 )	(21 )	2	—	2	(2 )	1	(1 )	
Performance Plastics	5	(23 )	(18 )	—	2	2	(4 )	1	(3 )	
<b>Total</b>	<b>1</b>	<b>% (17 )%</b>	<b>(16 )%</b>	<b>2</b>	<b>% —</b>	<b>% 2</b>	<b>% —</b>	<b>% 1</b>	<b>% 1</b>	<b>%</b>
<b>Geographic Areas:</b>										
United States	—	% (14 )%	(14 )%	2	% 2	% 4	% —	% 2	% 2	%
Europe, Middle East, Africa and India	—	(22 )	(22 )	3	(1 )	2	(4 )	—	(4 )	
Rest of World	1	(13 )	(12 )	(1 )	—	(1 )	4	—	4	
<b>Total</b>	<b>1</b>	<b>% (17 )%</b>	<b>(16 )%</b>	<b>2</b>	<b>% —</b>	<b>% 2</b>	<b>% —</b>	<b>% 1</b>	<b>% 1</b>	<b>%</b>

## Sales Volume and Price by Operating Segment and Geographic Area

## Excluding Acquisitions and Divestitures (1)

Percent change from prior year	2015			2014			2013			
	Volume	Price	Total	Volume	Price	Total	Volume	Price	Total	
<b>Operating Segments:</b>										
Agricultural Sciences	(3 )%	(8 )%	(11 )%	3	(1 )%	2	% 11	% 1	% 12	%
Consumer Solutions	1	(7 )	(6 )	3	(1 )	2	3	(2 )	1	
Infrastructure Solutions	2	(14 )	(12 )	1	—	1	4	(1 )	3	
Performance Materials & Chemicals	1	(16 )	(15 )	2	—	2	(2 )	1	(1 )	
Performance Plastics	5	(23 )	(18 )	1	2	3	(3 )	1	(2 )	
<b>Total</b>	<b>2</b>	<b>% (17 )%</b>	<b>(15 )%</b>	<b>2</b>	<b>% —</b>	<b>% 2</b>	<b>% —</b>	<b>% 1</b>	<b>% 1</b>	<b>%</b>
<b>Geographic Areas:</b>										
United States	2	% (14 )%	(12 )%	2	% 2	% 4	% —	% 2	% 2	%
Europe, Middle East, Africa and India	3	(23 )	(20 )	4	(1 )	3	(4 )	—	(4 )	
Rest of World	2	(13 )	(11 )	—	—	—	6	—	6	
<b>Total</b>	<b>2</b>	<b>% (17 )%</b>	<b>(15 )%</b>	<b>2</b>	<b>% —</b>	<b>% 2</b>	<b>% —</b>	<b>% 1</b>	<b>% 1</b>	<b>%</b>

(1) Excludes prior period sales of recent divestitures including the chlorine value chain, divested on October 5, 2015 (primarily Performance Materials & Chemicals and Performance Plastics), the AgroFresh business, divested on July 31, 2015 (Agricultural Sciences), ANGUS Chemical Company, divested on February 2, 2015 (Performance Materials & Chemicals), the global Sodium Borohydride business, divested on January 30, 2015 (Performance

Materials & Chemicals), the Polypropylene Licensing and Catalysts business, divested on December 2, 2013 (Performance Plastics) and sales related to Nippon Unicar Company Limited, divested on July 1, 2013 (Performance Plastics). Also excludes current period sales of recent acquisitions including Univation Technologies, LLC, acquired on May 5, 2015 (Performance Plastics) and Coodetec, acquired on February 1, 2015 (Agricultural Sciences).

Table of Contents

## AGRICULTURAL SCIENCES

The Agricultural Sciences segment is a global leader in providing crop protection and seed/plant biotechnology products and technologies, urban pest management solutions and healthy oils. The business invents, develops, manufactures and markets products for use in agricultural, industrial and commercial pest management, and food service. Agricultural Sciences consists of two businesses - Crop Protection and Seeds.

On January 30, 2015, DAS acquired Coodetec's seed business. See Note 4 to the Consolidated Financial Statements for additional information on this acquisition.

On July 31, 2015, the Company sold its AgroFresh business to AFSI. The AgroFresh business was reported in the Agricultural Sciences segment through the date of divestiture. The Company has retained a minority interest in AFSI which is also reported in the Agricultural Sciences segment. See Note 5 to the Consolidated Financial Statements for additional information on this divestiture.

Agricultural Sciences In millions	2015	2014	2013	
Sales	\$6,381	\$7,290	\$7,137	
Price change from comparative period	(8	)% (1	)% 1	%
Volume change from comparative period	(4	)% 3	% 11	%
Volume change, excluding acquisitions and divestitures	(3	)% 3	% 11	%
Equity earnings (losses)	\$(15	) \$4	\$5	
EBITDA	\$1,432	\$962	\$894	
Certain items impacting EBITDA	\$573	\$—	\$—	
EBITDA excluding certain items	\$859	\$962	\$894	

## 2015 Versus 2014

Agricultural Sciences sales were \$6,381 million in 2015, down 12 percent from \$7,290 million in 2014. Compared with the same period last year, volume decreased 4 percent and price decreased 8 percent, including the unfavorable impact of currency which represented approximately 40 percent of the price decline. Sales declined in all geographic areas and both businesses, impacted by lower crop commodity prices, which drove a flat agricultural market, coupled with currency headwinds. Despite a 6 percent increase in new product sales, Crop Protection sales decreased 13 percent compared with 2014, partly driven by declines in glyphosate and the divestiture of AgroFresh. Seeds reported an 11 percent decline in sales compared with 2014 as soybean seeds and canola seeds growth was more than offset by lower sales of corn, primarily due to lower sales in the Americas as a result of shifting acreage from corn to soybeans. Excluding acquisitions and divestitures, volume for the segment was down 3 percent.

EBITDA for 2015 was \$1,432 million, up \$470 million from \$962 million in 2014. Compared with the same period last year, EBITDA for 2015 was positively impacted by a pretax gain of \$618 million related to the divestiture of AgroFresh and negatively impacted by \$16 million of restructuring charges and \$29 million of charges related to AFSI's fair value step-up of its inventories and start-up costs. See Notes 3 and 5 to the Consolidated Financial Statements for additional information on these items. Excluding these certain items, EBITDA declined from 2014 as lower selling prices, softer demand due to lower crop commodity prices and the absence of earnings from the divestiture of the AgroFresh business more than offset the favorable impact of currency on costs, lower R&D and SG&A spending driven by productivity measures and gains from the sales of product lines and a subsidiary.

## 2014 Versus 2013

Agricultural Sciences sales were \$7,290 million in 2014, up 2 percent from \$7,137 million in 2013, a record for the segment and both businesses. Compared with 2013, volume was up 3 percent and price was down 1 percent due to the unfavorable impact of currency. Sales gains were reported in both businesses, driven by the introduction and ramp up

of new products and technologies, and in all geographic areas, except North America. Crop Protection sales were up 3 percent due to increased demand for new products, which increased 20 percent, and continued strong demand for rice and cereal herbicides. Seeds sales increased 1 percent as volume gains in soybean seeds and cotton seeds and the favorable impact of a one-time gain related to the end of a licensing agreement were partially offset by volume declines in corn, canola and sunflower seeds.

EBITDA for 2014 was \$962 million, a record for the segment and the Crop Protection business, compared with \$894 million in 2013. EBITDA increased as volume growth in Crop Protection and Seeds more than offset a decline in selling prices (driven

Table of Contents

almost entirely by the unfavorable impact of currency) and increased investment in SG&A to support continuing growth initiatives.

## Agricultural Sciences Outlook for 2016

Agricultural Sciences sales for 2016 are expected to be flat with the levels achieved in 2015, despite a projected decline in the global agriculture industry. A continuation of the market dynamics experienced in 2015 are expected in 2016 and will sustain low crop commodity prices and declining industry growth rates in the short-term. Currency headwinds are also expected to continue in the short-term due to the strengthening U.S. dollar. The Crop Protection business expects continued sales growth from new insecticides, N-SERVE™ Nitrogen Stabilizer and cereal, corn and soybean herbicides. The Seeds business expects modest growth in corn and soybean seeds and lower sales of cotton seeds.

U.S. federal regulatory approvals have been obtained for the commercialization of ENLIST™ Corn, Soybeans and Cotton, including the U.S. Environmental Protection Agency's ("EPA") registration of ENLIST DUO™ for use with ENLIST™ Corn and Soybeans in 15 key states. The Company has also secured approval of the registration of ENLIST E3™ Soybeans in Argentina and approval of the registration of ENLIST™ Soybean Seeds and Corn Seeds in Brazil. Regulatory approvals for ENLIST™ products in certain other countries are still pending. After the EPA's registration of ENLIST DUO™ for use with ENLIST™ Corn and Soybeans, the National Resources Defense Council, Center for Food Safety and other organizations filed suit against the EPA to set aside the registration in the United States Court of Appeals for the Ninth Circuit (the "Court"), and Dow AgroSciences intervened in the cases. In late November 2015, the EPA filed a motion to vacate and remand the registration to the EPA. Dow AgroSciences opposed the motion to vacate the registration. On January 25, 2016, the Court denied the EPA's motion to vacate the registration, so the ENLIST DUO™ registration for use with ENLIST™ Corn and Soybeans remains fully intact.

## CONSUMER SOLUTIONS

The Consumer Solutions segment consists of three global businesses – Consumer Care, Dow Automotive Systems and Dow Electronic Materials – and includes a portion of the Company's share of the results of Dow Corning, a joint venture of the Company. Consumer Care includes Dow Home, Institutional & Personal Care Solutions; Dow Pharma and Food Solutions; and SAFECHEM. Dow Automotive Systems includes Adhesives and Performance Solutions. Dow Electronic Materials includes Semiconductor Technologies, Interconnect Technologies, Display Technologies and Growth Technologies.

Consumer Solutions In millions	2015	2014	2013			
Sales	\$4,379	\$4,639	\$4,562			
Price change from comparative period	(7	)%	(1	)%	(2	)%
Volume change from comparative period	1	%	3	%	3	%
Equity earnings	\$91	\$281	\$107			
EBITDA	\$1,048	\$1,130	\$933			
Certain items impacting EBITDA	\$(59	)	\$82	\$—		
EBITDA excluding certain items	\$1,107	\$1,048	\$933			

## 2015 Versus 2014

Consumer Solutions sales were \$4,379 million in 2015, down from \$4,639 million in 2014. Sales decreased 6 percent from 2014, with volume up 1 percent and price down 7 percent (with more than 60 percent of the price decline due to the unfavorable impact of currency). Volume increases in North America and EMEAI were partially offset by decreases in Asia Pacific and Latin America. Consumer Care volume increased as higher demand in the personal care market sector and for cellulose used in the pharmaceutical applications more than offset lower demand in the home

care market sector and for cellulose used in industrial applications, which declined ahead of a plant closure in Institute, West Virginia. Dow Automotive Systems reported volume growth in both businesses and in all geographic areas, except Latin America, as customer demand for light-weighting technologies and lower oil prices drove automotive industry growth, most notably in North America and Europe. Dow Electronic Materials volume decreased slightly due to weakened demand for Interconnect Technologies and Display Technologies which more than offset healthy demand in Semiconductor Technologies resulting from strong silicon wafer growth in mobile device applications, notably in Asia Pacific, and Growth Technologies. Price declined in all businesses and all geographic areas. Price declined in Consumer Care and Dow Automotive Systems due to continued competitive pricing and the unfavorable impact of currency in EMEA. Price declined in Dow Electronic Materials due to the continued competitive pricing and the unfavorable impact of currency, primarily the Japanese yen.

Table of Contents

EBITDA for 2015 was \$1,048 million, down from \$1,130 million in 2014. EBITDA in 2015 was impacted by \$67 million of restructuring charges and an \$8 million gain related to Dow Corning's adjustment of its implant liability. EBITDA in 2014 was impacted by a \$155 million gain related to Dow Corning's adjustment of its implant liability and a \$73 million charge related to asset impairments in Dow Electronic Materials. See Notes 3, 9, 10, and 12 to the Consolidated Financial Statements for additional information on these items. Excluding these certain items, EBITDA increased in 2015 as lower feedstock, energy and other raw material costs, the favorable impact of currency on costs, lower operating expenses and higher sales volume more than offset lower selling prices and decreased equity earnings from Dow Corning.

## 2014 Versus 2013

Consumer Solutions sales were \$4,639 million in 2014, up from \$4,562 million in 2013. Sales increased 2 percent from 2013, with volume up 3 percent and price down 1 percent (with more than one-third of the price decline due to currency). Volume increased in all businesses and all geographic areas, except Latin America. Volume gains in Dow Automotive Systems were driven by continued recovery in the North America transportation sector and modest recovery in Europe. Dow Electronic Materials volume increased primarily due to higher demand for photolithography materials and chemical mechanical planarization pads, which more than offset lower demand for films and filters and organic light-emitting diode ("OLED") materials. Volume increased in Consumer Care due to strong demand for cellulose used in food and pharmaceutical applications. Price declines were driven by Dow Electronic Materials, primarily in Asia Pacific due to continued competitive pricing pressure and the weakening Japanese yen. Price remained flat in Consumer Care and Dow Automotive Systems. Price gains in North America were more than offset by declines in EMEA and Asia Pacific.

EBITDA for 2014 was \$1,130 million, up from \$933 million in 2013. Compared with 2013, EBITDA increased as higher sales volume, increased equity earnings from Dow Corning and lower R&D expenses more than offset lower selling prices. EBITDA in 2014 was positively impacted by \$82 million of certain items, as previously discussed.

## Consumer Solutions Outlook for 2016

Consumer Solutions sales are expected to grow in 2016, driven by volume growth. Consumer Care expects modest volume gains from increased demand for home care and personal care products while sales of cellulose used in food and pharma applications are expected to remain stable. Sales growth is expected in Dow Automotive Systems, as continued low oil prices are expected to drive increased demand, primarily for larger vehicles. Dow Electronic Materials expects modest volume growth in all businesses with steady growth in smart phones, wearable and home devices as well as automotive electronics more than offsetting expected declines in television monitors, personal computers and tablets. The change in consumer preference towards hybrid/clamshell devices is also expected to deliver demand growth in 2016.

On December 10, 2015, the Company entered into a definitive agreement to restructure the ownership of Dow Corning. Under the terms of the agreement, Dow will become the 100 percent owner of Dow Corning, currently a 50:50 joint venture between Dow and Corning. Dow and Corning will maintain their current equity stake in the Hemlock Semiconductor Group. The transaction is expected to close in the first half of 2016.

## INFRASTRUCTURE SOLUTIONS

The Infrastructure Solutions segment consists of the following businesses: Dow Building & Construction, Dow Coating Materials, Energy & Water Solutions, and Performance Monomers; and includes a portion of the Company's share of the results of Dow Corning, a joint venture of the Company.

Infrastructure Solutions	2015	2014	2013
In millions			



Edgar Filing: DOW CHEMICAL CO /DE/ - Form 10-K

Sales	\$7,394		\$8,429		\$8,339
Price change from comparative period	(14	)%	—		% (1 )%
Volume change from comparative period	2		% 1		% 4 %
Equity earnings (losses)	\$203		\$(6	)	\$126
EBITDA	\$1,021		\$817		\$941
Certain items impacting EBITDA	\$(101	)	\$(348	)	\$(94 )
EBITDA excluding certain items	\$1,122		\$1,165		\$1,035

2015 Versus 2014

Infrastructure Solutions sales were \$7,394 million in 2015, down 12 percent from \$8,429 million in 2014. Price decreased 14 percent, including the unfavorable impact of currency which represented one-third of the price decline, and volume increased 2 percent. Price declined in all businesses, most notably in Performance Monomers, and all geographic areas in

Table of Contents

response to lower raw material costs. Volume increased in all geographic areas, except North America, and all businesses, except Energy & Water Solutions. Dow Building & Construction reported volume growth in EMEAI and North America, as demand continued to be strong for innovative product offerings, primarily in construction chemicals. Dow Coating Materials volume increased due to higher demand for architectural coatings in EMEAI and higher demand for industrial coatings in North America. Volume increased in Performance Monomers due to higher demand and improved asset utilization for vinyl acetate monomers and acrylic monomers. In Energy & Water Solutions, volume declines in North American energy exploration and fracturing market sectors and slow global demand for ion exchange resins used in industrial water applications more than offset strong demand for reverse osmosis technologies.

EBITDA for 2015 was \$1,021 million, compared with \$817 million in 2014. EBITDA in 2015 included a \$12 million gain related to Dow Corning's adjustment of its implant liability, \$87 million of asset impairments and related costs in all businesses and \$26 million of restructuring charges. EBITDA in 2014 included a \$500 million loss related to Dow Corning's abandonment of a polycrystalline silicon plant expansion in Clarksville, Tennessee, and a \$252 million gain related to Dow Corning's adjustment of its implant liability. EBITDA in 2014 was also impacted by a \$100 million charge for a warranty accrual adjustment related to an exited business. See Notes 3, 9, 12 and 15 to Consolidated Financial Statements for additional information on these certain items. Excluding these certain items, EBITDA decreased in 2015 as lower selling prices and lower equity earnings from Dow Corning more than offset lower propylene and other raw material costs, the favorable impact of currency on costs, lower operating costs and higher sales volume.

2014 Versus 2013

Infrastructure Solutions sales were \$8,429 million in 2014, up from \$8,339 million in 2013. Sales increased 1 percent, entirely due to volume. Volume was higher in all geographic areas, except EMEAI which was impacted by weakened demand. Dow Building & Construction volume increased due to higher demand for insulation products in North America. Dow Coating Materials volume increased in all geographic areas due to higher demand for architectural and industrial coatings. Energy & Water Solutions volume increased across most geographic areas due to strong demand fundamentals in the oil and gas industry as well as higher demand for specialty materials used in energy and industrial water applications. Performance Monomers volume decreased due to long acrylate market conditions, extended planned and unplanned maintenance turnarounds in vinyl acetate monomers, and a plastic additives plant closure which reduced market participation. Price was flat as selling price gains were offset by the unfavorable impact of currency. Price was mixed by geographic area as gains in Latin America and North America were offset by declines in EMEAI and Asia Pacific. Price was down in all businesses, except Performance Monomers.

EBITDA for 2014 was \$817 million, compared with \$941 million in 2013. EBITDA in 2014 was negatively impacted by \$348 million of certain items, as previously discussed. EBITDA in 2013 included \$95 million of asset impairments and related costs in the Energy & Water Solutions and Performance Monomers businesses and a \$1 million gain in Dow Building & Construction for an adjustment to asbestos abatement costs related to the 1Q12 Restructuring program. See Notes 3 and 12 to the Consolidated Financial Statements for additional information on these certain items. Excluding these certain items, EBITDA increased in 2014 as higher equity earnings from Dow Corning and higher sales volume more than offset increased propylene costs and higher freight expenses.

Infrastructure Solutions Outlook for 2016

Infrastructure Solutions sales are expected to grow modestly in 2016 due to higher demand partially offset by pressure on selling prices as a result of unfavorable currency impacts due to the strengthening U.S. dollar. Dow Building & Construction sales are expected to increase due to higher demand in the acrylics envelope, cellulose chain and growth in construction end markets. Dow Coating Materials expects strong sales growth driven by volume gains from innovative products and stable raw material prices. Energy & Water Solutions expects sales consistent with 2015 levels with strong demand for water solutions, primarily reverse osmosis technologies, while demand for products

used in energy exploration and fracturing market sectors will follow oil prices. Performance Monomers sales are expected to decline driven by lower sales of vinyl acetate monomers, primarily due to increased internal consumption by downstream businesses, and lower sales of acrylates resulting from the shutdown of 20 percent of the acrylate capacity at the Company's Deer Park, Texas, manufacturing facility.

On December 10, 2015, the Company entered into a definitive agreement to restructure the ownership of Dow Corning. Under the terms of the agreement, Dow will become the 100 percent owner of Dow Corning, currently a 50:50 joint venture between Dow and Corning. Dow and Corning will maintain their current equity stake in the Hemlock Semiconductor Group. The transaction is expected to close in the first half of 2016.

Table of Contents**PERFORMANCE MATERIALS & CHEMICALS**

The Performance Materials & Chemicals segment consists of the following businesses: Chlor-Alkali and Vinyl, Industrial Solutions and Polyurethanes. The segment also includes the results of MEGlobal and a portion of the results of EQUATE, TKOC, Map Ta Phut Olefins Company Limited and Sadara, all joint ventures of the Company.

On January 30, 2015, the Company sold its global Sodium Borohydride business to Vertellus Specialty Materials LLC. On February 2, 2015, the Company sold ANGUS Chemical Company to Golden Gate Capital. On October 5, 2015, the Company completed the split-off of its U.S. Gulf Coast Chlor-Alkali and Vinyl, Global Chlorinated Organics and Global Epoxy businesses to Olin Corporation in a tax-efficient Reverse Morris Trust transaction. These businesses were reported in the Performance Materials & Chemicals segment through the date of divestiture. See Notes 5 and 6 to the Consolidated Financial Statements for additional information.

On December 23, 2015, the Company sold its 50 percent ownership interest in MEGlobal to EQUATE. MEGlobal was aligned 100 percent with Performance Materials & Chemicals through the date of divestiture. Dow has retained a 42.5 percent ownership stake in MEGlobal through its ownership in EQUATE. The Performance Materials & Chemicals segment will continue to include a portion of the equity earnings from EQUATE, which will include the results of MEGlobal. See Notes 5 and 9 to the Consolidated Financial Statements for additional information.

Performance Materials & Chemicals	2015	2014	2013	
In millions				
Sales	\$11,973	\$15,114	\$14,824	
Price change from comparative period	(15	)% —	% 1	%
Volume change from comparative period	(6	)% 2	% (2	)%
Volume change, excluding divestitures	1	% 2	% (2	)%
Equity earnings	\$225	\$322	\$480	
EBITDA	\$5,479	\$2,193	\$1,913	
Certain items impacting EBITDA	\$3,409	\$—	\$(55	)
EBITDA excluding certain items	\$2,070	\$2,193	\$1,968	

**2015 Versus 2014**

Performance Materials & Chemicals sales were \$11,973 million in 2015, down 21 percent from \$15,114 million in 2014, with price down 15 percent, including the unfavorable impact of currency which represented more than one-third of the price decline, and volume down 6 percent. Price declined in all geographic areas and all businesses. Lower raw material costs and the unfavorable impact of currency drove price declines in Epoxy, Polyurethanes and Industrial Solutions. Chlor-Alkali and Vinyl reported lower prices as a result of the decline in ethylene prices and increased availability of caustic soda. Volume was impacted by recent divestitures, including the divestitures of ANGUS Chemical Company and the global Sodium Borohydride business and the split-off of the chlorine value chain. Excluding these divestitures, volume increased 1 percent. Volume increased in Polyurethanes driven by increased demand, lower raw material costs and growth in energy efficiency, consumer and industrial market sectors in North America and EMEAI, and in Asia Pacific due to the start up of a polyols plant in Thailand. Industrial Solutions reported volume declines across all geographic areas, except Asia Pacific, due to weakness in the agriculture and energy market sectors and a change in a long-term supply arrangement. Epoxy volume was up in all areas, except Asia Pacific, driven by increased demand for phenolics. Chlor-Alkali and Vinyl reported decreased volume in EMEAI and Latin America, partially offset by increases in Asia Pacific and North America, due to unfavorable supply and demand fundamentals and the expiration of a long-term supply agreement in EMEAI.

EBITDA for 2015 was \$5,479 million, compared with \$2,193 million in 2014. EBITDA was favorably impacted by a pretax gain of \$682 million on the divestiture of ANGUS Chemical Company, a pretax gain of \$20 million on the divestiture of the global Sodium Borohydride business, a pretax gain of \$1,984 million on the split-off of the chlorine

value chain and a pretax gain of \$723 million on the sale of the Company's interest in MEGlobal. See Notes 5 and 6 to the Consolidated Financial Statements for additional information on these transactions. Excluding these certain items, EBITDA decreased due to the impact of lower sales volume, lower selling prices including the impact of currency, the absence of earnings from divested businesses, lower equity earnings from TKOC, EQUATE and MEGlobal and higher equity losses from Sadara which more than offset lower feedstock, energy and other raw material costs, lower SG&A and R&D spending, the favorable impact of currency on costs and higher equity earnings from Map Ta Phut Olefins Company Limited.

#### 2014 Versus 2013

Performance Materials & Chemicals sales were \$15,114 million in 2014, up 2 percent from \$14,824 million in 2013, with volume up 2 percent and price flat. Compared with 2013, volume was higher primarily due to increases in EMEAI and Latin

## Table of Contents

America, which were partially offset by a decrease in Asia Pacific. Improved economic conditions and favorable supply and demand fundamentals for polyols and propylene oxide/propylene glycol ("PO/PG") drove volume increases in Polyurethanes across all geographic areas. Industrial Solutions reported lower volume, primarily due to the expiration of a low margin marketing agreement in Asia Pacific in 2013. Chlor-Alkali and Vinyl volume increased in all geographic areas, except North America, driven by higher downstream demand in the chlorine chain. Epoxy reported volume increases across all geographic areas, except Latin America. Chlorinated Organics reported lower volume primarily driven by the shutdown of a chloromethanes plant in North America at the end of 2013. Price was flat as increases in North America and Asia Pacific were offset by decreases in EMEAI and Latin America. Polyurethanes reported higher prices in Asia Pacific, North America and EMEAI due to tight supply as a result of planned and unplanned events across the industry. Favorable supply and demand balances drove price gains in Industrial Solutions in North America and Latin America. Price decreases were reported by Chlor-Alkali and Vinyl due to lower caustic soda prices. Excess industry capacity and lower raw material costs drove price down in Epoxy across all geographic areas.

EBITDA for 2014 was \$2,193 million, compared with \$1,913 million in 2013. EBITDA increased in 2014 driven by higher sales volume, lower other raw material costs and improved operating rates which more than offset reduced equity earnings from MEGlobal and EQUATE and higher equity losses from Sadara. EBITDA in 2013 included \$70 million of asset impairment charges and costs related primarily to the shutdown of certain assets in the Chlor-Alkali and Vinyl, Epoxy and Polyurethanes businesses, and a \$15 million gain for the adjustment of contract cancellation fees related to the 1Q12 Restructuring program. See Notes 3 and 12 to the Consolidated Financial Statements for additional information on these charges.

### Performance Materials & Chemicals Outlook for 2016

Performance Materials & Chemicals sales are expected to be slightly lower in 2016, reflecting the impact of the October 5, 2015, split-off of the chlorine value chain which includes the Global Chlorinated Organics and Epoxy businesses and the U.S. Gulf Coast Chlor-Alkali and Vinyl business. Price is expected to remain flat across most businesses as feedstock and energy costs are expected to be consistent with 2015 levels. The Chlor-Alkali and Vinyl business expects sales to be slightly lower due to sales volume divested in the U.S. which will be partially offset by increased volume in Europe resulting from new supply agreements with Olin and increased demand for caustic soda. The Industrial Solutions business expects volume growth to follow GDP. Polyurethanes volume is expected to grow at slightly above GDP driven by increased demand for polyols and polyurethane systems products used in specialty applications. Equity earnings are expected to decline in 2016, primarily due to lower earnings from EQUATE as a result of a reduced indirect equity interest in MEGlobal and the impact of the fair value step-up of MEGlobal's assets and increased financing costs.

### PERFORMANCE PLASTICS

The Performance Plastics segment is a market-oriented portfolio comprised of Dow Elastomers, Dow Electrical and Telecommunications, Dow Packaging and Specialty Plastics, Energy and Hydrocarbons. The segment also includes the results of TKSC and The SCG-Dow Group as well as a portion of the results of EQUATE, TKOC, Map Ta Phut Olefins Company Limited and Sadara, all joint ventures of the Company.

On December 23, 2015, the Company sold its 50 percent ownership interest in MEGlobal to EQUATE. MEGlobal was aligned 100 percent with the Performance Materials & Chemicals segment through the date of divestiture. Dow has retained a 42.5 percent ownership stake in MEGlobal through its ownership in EQUATE. See Note 5 to the Consolidated Financial Statements for additional information.

On May 5, 2015, Univation, previously a 50:50 joint venture between Dow and ExxonMobil, became a wholly owned subsidiary of Dow. Prior to this transaction, the Company's share of Univation's results of operations was reported as

"Equity in earnings of nonconsolidated affiliates" in the consolidated statements of income. Beginning in May 2015, Univation's results of operations are fully consolidated in the Company's consolidated statements of income. See Note 4 to the Consolidated Financial Statements for additional information on this step acquisition.

On December 2, 2013, the Company sold its global Polypropylene Licensing and Catalysts business to W. R. Grace & Co. This business was reported in the Performance Plastics segment through the date of divestiture. See Note 5 to the Consolidated Financial Statements for additional information on these divestitures.

Sales for the Energy business are primarily opportunistic merchant sales driven by market conditions and sales to customers located on Dow manufacturing sites. Sales for the Hydrocarbons business are comprised primarily of monomers and ethylene by-products that are not required for internal use. Hydrocarbons sales can fluctuate significantly based on ethylene production facility feedslates and operating rates, derivative demand and market prices for monomers and by-products. The Hydrocarbons

Table of Contents

business transfers materials to Dow's derivative businesses and the Energy business supplies utilities to Dow's businesses at net cost, resulting in EBITDA that is at or near break-even for both businesses.

Performance Plastics				
In millions	2015	2014	2013	
Sales	\$18,357	\$22,386	\$21,910	
Price change from comparative period	(23	)% 2	% 1	%
Volume change from comparative period	5	% —	% (4	)%
Volume change, excluding acquisitions and divestitures	5	% 1	% (3	)%
Equity earnings	\$220	\$257	\$355	
EBITDA	\$5,399	\$4,422	\$4,503	
Certain items impacting EBITDA	\$597	\$—	\$544	
EBITDA excluding certain items	\$4,802	\$4,422	\$3,959	
Performance Plastics, Excluding Hydrocarbons and Energy				
In millions	2015	2014	2013	
Price change from comparative period	(16	)% 4	% 4	%
Volume change from comparative period	7	% (1	)% (3	)%
Volume change, excluding acquisitions and divestitures	6	% 1	% (1	)%

## 2015 Versus 2014

Performance Plastics sales for 2015 were \$18,357 million, down 18 percent from \$22,386 million in 2014, with price down 23 percent and volume up 5 percent. Price decreased across all geographic areas and all businesses in response to significantly lower raw material costs coupled with the unfavorable impact of currency, which represented approximately 20 percent of the price decline. Double-digit price declines were reported in Hydrocarbons as prices for monomers and ethylene by-products are generally correlated to Brent crude oil prices, which declined approximately 45 percent compared with 2014. Volume increased across all geographic areas and all businesses, except Energy. Volume in Hydrocarbons increased due to new supply agreements with Olin as a result of the split-off of the chlorine value chain. Dow Packaging and Specialty Plastics volume improved across all geographic areas due to improved operating rates and increased demand in the food and specialty packaging, industrial and consumer packaging, and hygiene and medical market sectors. Dow Elastomers volume improved across all geographic areas due to improved raw material supply and higher demand in the transportation, infrastructure and consumer goods market sectors. Volume in Dow Electrical and Telecommunications was flat compared with 2014 as growth in North America was offset by volume declines in EMEAI and Latin America. Volume declined in the Energy business due to reduced sales in North America which more than offset increased volume from new supply agreements with Olin as a result of the split-off of the chlorine value chain. Excluding the impact of acquisitions and divestitures, Hydrocarbons and Energy sales decreased 10 percent with price down 16 percent and volume up 6 percent.

The Company uses derivatives of crude oil and natural gas as feedstock in its ethylene facilities. In addition, the Company purchases electric power, ethylene and propylene to supplement internal production, as well as other raw materials. The Company's cost of purchased feedstock and energy decreased \$8,542 million in 2015, a 42 percent decrease from 2014, primarily due to decreased naphtha, condensate, propane, natural gas and purchased monomers costs in Europe and North America.

EBITDA for 2015 was \$5,399 million, up from \$4,422 million in 2014. EBITDA in 2015 was positively impacted by a pretax gain of \$349 million related to the step acquisition of Univation, a \$317 million pretax gain related to the split-off of the chlorine value chain and negatively impacted by \$57 million of asset impairments and related costs and \$12 million of restructuring charges, consisting of asset write-downs and write-offs. See Notes 3, 4, and 6 to the Consolidated Financial Statements for additional information on these items. Excluding these certain items, EBITDA



improved compared with 2014 as the impact of lower feedstock and energy costs, higher sales volume and increased equity earnings from The SCG-Dow Group more than offset the impact of lower selling prices, higher maintenance turnaround spending and lower equity earnings from EQUATE, TKSC and Univation and increased equity losses from Sadara.

#### 2014 Versus 2013

Performance Plastics sales for 2014 were \$22,386 million, up 2 percent from \$21,910 million in 2013 with price up 2 percent and volume unchanged. Price increased in all geographic areas, except EMEAI, and in all businesses, except Hydrocarbons. Price declined in Hydrocarbons primarily due to a significant drop in crude oil prices which drove monomers and other by-products' prices down, primarily in Europe. Dow Packaging and Specialty Plastics prices were higher in most geographic areas,

Table of Contents

notably North America, due to continued strong demand and tight supply conditions. Volume was mixed by geographic area as increases in North America and EMEA were offset by decreases in Asia Pacific and Latin America. Volume increased in Hydrocarbons due to opportunistic sales of ethylene in North America and Asia Pacific and increased monomer sales in Europe due to higher operating rates and the use of heavier feedstocks. Volume declined in the Energy business due to reduced sales in North America. Volume in Dow Packaging and Specialty Plastics and in Dow Electrical and Telecommunications was impacted by the divestiture of the Polypropylene Licensing and Catalysts business and the Company's 50 percent ownership interest in Nippon Unicar Company Limited ("NUC"). Excluding the impact of these divestitures and Hydrocarbons and Energy sales, price increased 4 percent and volume increased 1 percent. Despite production outages in North America in the second and third quarters of 2014, Dow Packaging and Specialty Plastics volume improved due to price/volume management, most notably in Europe where declining feedstock costs helped increase export sales. Dow Electrical and Telecommunications volume declined slightly due to tight supply resulting from production outages in the first half of 2014 and weaker demand in the telecommunications industry, which was partially offset by increased demand in the power industry.

The Company's cost of purchased feedstock and energy decreased \$392 million in 2014, a 2 percent decrease from 2013, primarily due to decreased naphtha, condensate and propane costs in Europe.

EBITDA for 2014 was \$4,422 million, down from \$4,503 million in 2013. EBITDA in 2013 was favorably impacted by a pretax gain of \$451 million on the sale of the Polypropylene Licensing and Catalysts business, an \$87 million pretax gain on the sale of a 7.5 percent ownership interest in Freeport LNG Development, L.P. and a \$6 million gain for adjustments to contract cancellation fees related to the 4Q12 Restructuring plan. See Notes 3, 5 and 13 to the Consolidated Financial Statements for additional information on these items. Excluding these certain items, EBITDA improved as the impact of higher selling prices and lower feedstock costs more than offset lower equity earnings. Equity earnings were \$257 million in 2014, down from \$355 million in 2013, as a result of significantly lower earnings from EQUATE, TKSC and higher equity losses from Sadara.

#### Performance Plastics Outlook for 2016

In 2016, the Company expects crude oil and natural gas prices, on average, to remain flat with year-end 2015 levels during the first half of the year, with prices slowly rising in the second half of the year. As a result, feedstock and energy costs are expected to be flat to slightly lower than 2015 levels. Global ethylene margins are expected to remain at similar levels with continued strong demand and stable operating rates. Ethylene margins could vary materially from these expectations depending on changes in input costs, global GDP growth and global operating rates. Volume in the Hydrocarbons and Energy businesses is expected to increase due to new supply agreements with Olin as a result of the split-off of the chlorine value chain. Volume is expected to increase in Dow Packaging and Specialty Plastics due to continued strong demand fundamentals and the start-up of the first Sadara polyethylene facility in December 2015 and the remaining Sadara polyethylene and olefins production facilities in 2016. Dow Elastomers is expected to experience volume growth in most market segments despite new global industry capacity coming on-line in 2016. Dow Electrical and Telecommunications volume is expected to grow at or slightly above GDP in all geographic areas, except for Latin America, driven by increased use of fiber optic applications used in telecommunications and increased demand in power transmission, partially offset by new industry capacity in EMEA and Asia Pacific.

The Company has a number of investments in the U.S. Gulf Coast to take advantage of increasing supplies of low-cost natural gas and natural gas liquids derived from shale gas including a new on-purpose propylene production facility, which commenced operations in December 2015, and a new world-scale ethylene production facility (expected start-up in the first half of 2017), both located in Freeport, Texas. As a result of these investments, the Company's exposure to purchased ethylene and propylene is expected to decline, offset by increased exposure to ethane and propane feedstocks. Dow's ethylene production capabilities are expected to increase by as much as 20 percent. In addition, the Company is building four new production facilities on the U.S. Gulf Coast to leverage an advantaged feedstock position to support profitable growth of the Company's high value Performance Plastics franchise which

include an ELITE™ Polymer production facility, a Low Density Polyethylene (LDPE) production facility, a NORDEL™ Metallocene EPDM production facility and a High Melt Index (HMI) AFFINITY™ Polymer production facility.

The new biopolymers manufacturing facility in Santa Vitória, Minas Gerais, Brazil commenced production in second quarter of 2015. This project, which is a consolidated joint venture with Mitsui & Co. Ltd., was announced during the fourth quarter of 2011. In August 2015, the partner exercised its equity option which requires Dow to purchase their equity investment before July 12, 2016. The joint venture's original plans for expansion into downstream derivative products have been postponed. The joint venture is a variable interest entity and included in Dow's consolidated financial statements. See Note 20 to the Consolidated Financial Statements for additional information.

Table of Contents

## CORPORATE

Corporate includes certain enterprise and governance activities (including insurance operations, geographic management, risk management such as foreign currency hedging activities, audit fees, donations, Company branding initiatives, etc.); the results of Ventures (including business incubation platforms and non-business aligned joint ventures); environmental operations; gains and losses on the sales of financial assets; severance costs; non-business aligned litigation expenses (including asbestos-related defense costs and reserve adjustments); and foreign exchange results.

Corporate			
In millions	2015	2014	2013
Sales	\$294	\$309	\$308
Equity losses	\$(50)	) \$(23)	) \$(39)
EBITDA	\$(1,053)	) \$(580)	) \$1,361
Certain items impacting EBITDA	\$(689)	) \$(127)	) \$1,788
EBITDA excluding certain items	\$(364)	) \$(453)	) \$(427)

## 2015 Versus 2014

Sales for Corporate, which primarily relate to insurance operations, were \$294 million in 2015, down slightly from \$309 million in 2014.

EBITDA for 2015 was a loss of \$1,053 million, compared with a loss of \$580 million in 2014. EBITDA in 2015 was negatively impacted by \$294 million of restructuring charges, \$194 million of costs associated with portfolio and productivity actions, a \$98 million loss related to the impact of the Argentine peso devaluation, a \$68 million loss on the early extinguishment of debt related to the split-off of the Company's chlorine value chain, a loss recognized by Sadara related to the write-off of design engineering work for an Epoxy plant of which Dow's share was \$27 million, and an \$8 million loss related to the early extinguishment of debt. EBITDA for 2014 was negatively impacted by \$49 million of costs associated with portfolio and productivity actions and a \$78 million charge related to an increase in the asbestos-related liability. Excluding these certain items, EBITDA improved in 2015 as gains related to Ventures and asset sales more than offset an increase in performance-based compensation costs. See Notes 3, 6, 13, 15 and 17 to the Consolidated Financial Statements for additional information on these matters.

## 2014 Versus 2013

Sales for Corporate were \$309 million in 2014, essentially flat from \$308 million in 2013.

EBITDA for 2014 was a loss of \$580 million, compared with a gain of \$1,361 million in 2013. Compared with 2013, EBITDA was negatively impacted by higher severance costs, losses related to Ventures and higher foreign exchange losses which more than offset lower performance-based compensation costs. EBITDA for 2014 was negatively impacted by \$127 million of certain items, as previously discussed. EBITDA for 2013 was favorably impacted by a \$2.161 billion gain from the K-Dow arbitration and a gain of \$26 million on the sale of the Company's ownership interest in Dow Kokam LLC. EBITDA for 2013 was negatively impacted by a \$326 million loss related to the early extinguishment of debt; \$44 million of implementation costs related to the Company's Restructuring programs; and \$29 million of asset impairments and related costs, including a \$10 million loss related to asset impairment charges at a formulated electrolytes manufacturing joint venture. See Notes 5, 12, 15 and 17 to the Consolidated Financial Statements for additional information on these matters.



Table of Contents

## LIQUIDITY AND CAPITAL RESOURCES

The Company had cash and cash equivalents of \$8,577 million at December 31, 2015 and \$5,654 million at December 31, 2014, of which \$6,494 million at December 31, 2015 and \$3,633 million at December 31, 2014 was held by subsidiaries in foreign countries, including United States territories. For each of its foreign subsidiaries, the Company makes an assertion regarding the amount of earnings intended for permanent reinvestment, with the balance available to be repatriated to the United States. The cash held by foreign subsidiaries for permanent reinvestment is generally used to finance the subsidiaries' operational activities and future foreign investments. A deferred tax liability has been accrued for the funds that are available to be repatriated to the United States. At December 31, 2015, management believed that sufficient liquidity was available in the United States. However, in the unusual event that additional foreign funds are needed in the United States, the Company has the ability to repatriate additional funds. The repatriation could result in an adjustment to the tax liability after considering available foreign tax credits and other tax attributes. It is not practicable to calculate the unrecognized deferred tax liability on undistributed foreign earnings.

The Company's cash flows from operating, investing and financing activities, as reflected in the consolidated statements of cash flows, are summarized in the following table:

Cash Flow Summary	2015	2014	2013
In millions			
Cash provided by (used in):			
Operating activities	\$7,516	\$6,502	\$7,823
Investing activities	(1,350)	(3,105)	(1,469)
Financing activities	(3,041)	(3,583)	(4,731)
Effect of exchange rate changes on cash	(202)	(100)	(1)
Summary			
Increase (decrease) in cash and cash equivalents	\$2,923	\$(286)	\$1,622
Cash and cash equivalents at beginning of year	5,654	5,940	4,318
Cash and cash equivalents at end of year	\$8,577	\$5,654	\$5,940

## Cash Flows from Operating Activities

Cash provided by operating activities increased in 2015 compared with 2014, primarily due to improvements in working capital and increased earnings. Cash provided by operating activities decreased in 2014 compared with 2013, which reflected the absence of the K-Dow arbitration award.

Net Working Capital at December 31	2015	2014
In millions		
Current assets (1)	\$24,475	\$24,255
Current liabilities (1)	11,215	11,581
Net working capital	\$13,260	\$12,674
Current ratio	2.18	:1 2.09
Days-sales-outstanding-in-receivables	47	46
Days-sales-in-inventory	72	69

(1) Presented in accordance with newly implemented ASU 2015-03. See Note 2 to the Consolidated Financial Statements for further information.

Net working capital increased from December 31, 2014 to December 31, 2015, principally due to an increase in cash and cash equivalents and a reduction in accounts payable which was partially offset by a reduction in inventories and accounts receivable. At December 31, 2015, trade receivables were \$4.1 billion, down from \$4.7 billion at December 31, 2014. Days-sales-outstanding-in-receivables (excluding the impact of sales of receivables) was 47 days

at December 31, 2015, up slightly compared with December 31, 2014. At December 31, 2015, total inventories were \$6.9 billion, down from \$8.1 billion at December 31, 2014, due to a reduction in volume from divestitures and declining feedstock and raw material costs. Days-sales-in-inventory at December 31, 2015 was 72 days compared with 69 days at December 31, 2014, reflecting the impact of the split-off of the chlorine value chain as these businesses traditionally had lower than average days-sales-in-inventory.

#### Cash Flows from Investing Activities

Cash used in investing activities in 2015 was primarily for capital expenditures; purchases of investments, including the repayment of outstanding loans issued under company-owned life insurance policies; and investments in and loans made to nonconsolidated affiliates, primarily with Sadara. This was partially offset by proceeds received from divestitures, including the

Table of Contents

divestitures of ANGUS Chemical Company and the AgroFresh business, proceeds from the sale of the Company's interest in MEGlobal and proceeds from sales and maturities of investments. Cash used in investing activities in 2014 was primarily for capital expenditures which was partially offset by proceeds received on the sale-leaseback of assets, including a significant portion of the Company's North American railcar fleet. Cash used in investing activities in 2013 was primarily for capital expenditures which was partially offset by proceeds received from the sale of businesses and assets, including the sale of the Polypropylene Licensing and Catalysts business in the fourth quarter of 2013. Capital spending in 2015, 2014 and 2013 included spending related to certain U.S. Gulf Coast investment projects including an on-purpose propylene production facility, a world-scale ethylene production facility, an ELITE™ Polymer production facility, a NORDEL™ Metallocene EPDM production facility, and a Low Density Polyethylene (LDPE) production facility, all aligned with the Company's Performance Plastics segment.

In the first quarter of 2015, a \$193 million note receivable from Sadara was converted to equity. During 2015, the Company loaned an additional \$753 million to Sadara, of which \$280 million was converted to equity. Approximately \$460 million of the outstanding note receivable is expected to be converted to equity in the first quarter of 2016. The Company expects to loan an additional \$1.2 billion to Sadara during 2016. All or a portion of the outstanding loans to Sadara could potentially be converted into equity in future periods. See Note 9 to the Consolidated Financial Statements for additional information.

The following table summarizes the Company's capital expenditures, which includes capital expenditures of consolidated variable interest entities, along with the approximate percentage of spending by project type. The Company expects capital spending in 2016 to be approximately \$3.7 billion.

## Capital Expenditures Summary

In millions	2015	2014	2013	
Capital expenditures	\$3,703	\$3,572	\$2,302	
Spending by project type:				
Projects related to additional capacity for new and existing products	68	% 68	% 55	%
Projects related to environmental protection, safety, loss prevention and industrial hygiene	9	% 10	% 14	%
Other (primarily shared infrastructure and plant maintenance/health)	23	% 22	% 31	%

See Note 26 to the Consolidated Financial Statements for capital expenditures by operating segment.

## Cash Flows from Financing Activities

Cash used in financing activities in 2015 included dividends paid to stockholders, \$1.2 billion in purchases of treasury stock, and payments on long-term debt, including the early redemption of \$724 million of InterNotes which was partially offset by proceeds from the issuance of long-term debt, including \$875 million related to the split-off of the chlorine value chain. Cash used in financing activities in 2014 included purchases of treasury stock, which totaled \$4.2 billion and resulted in the completion of the Company's initial \$4.5 billion share repurchase program, and increased dividends paid to stockholders which was partially offset by proceeds received from the issuance of new debt, including \$2 billion issued in the third quarter of 2014. Cash used in financing activities in 2013 included dividends paid to stockholders; purchases of treasury stock; payments on short- and long-term debt, including the early redemption of more than \$3 billion in notes and InterNotes; partially offset by proceeds received from the issuance of new debt. See Notes 17 and 22 to the Consolidated Financial Statements for additional information related to the issuance or retirement of debt and the Company's share repurchase program and Note 6 for information on the split-off of the chlorine value chain.

## Free Cash Flow



The Company's management believes that free cash flow, a non-GAAP financial measure, provides relevant and meaningful information to investors about the Company's ability to fund its obligations using its primary source of incremental liquidity - cash provided by operating activities. This financial measure is not recognized in accordance with U.S. GAAP and should not be viewed as an alternative to U.S. GAAP financial measures of performance.

Reconciliation of Free Cash Flow to "Cash Provided by Operating Activities"

In millions	2015	2014	2013
Cash provided by operating activities	\$7,516	\$6,502	\$7,823
- Capital expenditures	(3,703	) (3,572	) (2,302
Free Cash Flow	\$3,813	\$2,930	\$5,521

Table of Contents

## Liquidity &amp; Financial Flexibility

The Company's primary source of incremental liquidity is cash provided by operating activities. The generation of cash from operations and the Company's ability to access capital markets is expected to meet the Company's cash requirements for working capital, capital expenditures, debt maturities, dividend payments, share repurchases, contributions to pension plans and other needs. In addition to cash provided by operating activities, the Company's liquidity sources also include U.S. and Euromarket commercial paper, committed credit facilities, U.S. retail medium-term note program ("InterNotes"), accounts receivable securitization facilities and long-term debt and capital markets. Additional details on these sources of liquidity are as follows:

## Commercial Paper

Dow issues promissory notes under its U.S. and Euromarket commercial paper programs. At December 31, 2015, the Company had no commercial paper outstanding. The Company maintains access to the commercial paper market at competitive rates.

## Committed Credit Facilities

In the event Dow has short-term liquidity needs and is unable to issue commercial paper for any reason, Dow has the ability to access liquidity through its committed and available credit facilities, as summarized below:

## Committed and Available Credit Facilities at December 31, 2015

In millions	Effective Date	Committed Credit	Credit Available	Maturity Date	Interest
Five Year Competitive Advance and Revolving Credit Facility (1)	March 2015	\$ 5,000	\$5,000	March 2020	Floating rate
Bilateral Revolving Credit Facility (2)	March 2015	100	100	March 2016	Floating rate
Bilateral Revolving Credit Facility (2)	August 2015	100	100	March 2020	Floating rate
Bilateral Revolving Credit Facility (2)	August 2015	280	280	March 2020	Floating rate
Bilateral Revolving Credit Facility (2)	August 2015	100	100	March 2020	Floating rate
Bilateral Revolving Credit Facility (2)	August 2015	100	100	March 2020	Floating rate
Bilateral Revolving Credit Facility	August 2015	200	200	March 2020	Floating rate
Bilateral Revolving Credit Facility	August 2015	100	100	August 2016	Floating rate
Total Committed and Available Credit Facilities		\$ 5,980	\$5,980		

(1) The prior credit facility was terminated and replaced with a new credit facility, with substantially similar terms and conditions, on March 24, 2015.

(2) The prior credit facility was amended or replaced in 2015 to extend its maturity date and incorporate substantially similar terms and conditions to the new Five Year Competitive Advance and Revolving Credit Facility.

## Shelf Registration - U.S.

The Company renewed an automatic shelf registration for an unspecified amount of mixed securities with the SEC on February 19, 2013. Under this shelf registration, the Company may offer common stock, preferred stock, depositary shares, debt securities, warrants, stock purchase contracts and stock purchase units with pricing and availability dependent on market conditions. The shelf registration expires on February 19, 2016. The Company expects to renew this shelf registration on or about February 16, 2016. A new prospectus supplement to register an unlimited amount of securities for issuance under the Company's InterNotes program under this shelf registration is expected to be filed on or about February 16, 2016.

## Shelf Registration - Japan

At December 31, 2015, the Company had Japanese yen 50 billion (approximately \$415 million) of securities available for issuance under a shelf registration renewed with the Kanto Local Finance Bureau of the Ministry of Finance of

Japan effective December 13, 2014, which will expire on December 12, 2016. The Company expects to renew this shelf registration in the fourth quarter of 2016.

#### Accounts Receivable Securitization Facilities

The Company has access to committed accounts receivable securitization facilities in the United States, Europe and Asia Pacific, from which amounts available for funding are based upon available and eligible accounts receivable within each of the facilities. The Asia Pacific facilities are renewed annually. The Europe facility was renewed in July 2015 for a term that extends to July 2018. The Company renewed the United States facility in June 2015 for a term that extends to June 2018. See Note 16 to the Consolidated Financial Statements for further information.

Table of Contents

As Dow continues to maintain its strong balance sheet and financial flexibility, management is focused on net debt, as Dow believes this is the best representation of the Company's financial leverage at this point in time. As shown in the following table, net debt is equal to total gross debt minus "Cash and cash equivalents." At December 31, 2015, net debt as a percent of total capitalization decreased to 24.8 percent. This decrease was primarily due to a \$2.5 billion reduction in gross debt and a \$2.9 billion increase in cash and cash equivalents; and a significant increase in earnings, which includes the after-tax gain on the split-off of the Company's chlorine value chain, the sale of the Company's interest in MEGlobal and other business divestitures. See Notes 5 and 6 to the Consolidated Financial Statements for further information on the split-off of the Company's chlorine value chain and other divestitures.

Total Debt at December 31	2015	2014	
In millions			
Notes payable	\$454	\$551	
Long-term debt due within one year (1)	541	382	
Long-term debt (1)	16,215	18,741	
Gross debt	\$17,210	\$19,674	
Cash and cash equivalents	\$8,577	\$5,654	
Net debt	\$8,633	\$14,020	
Gross debt as a percent of total capitalization	39.7	% 45.5	%
Net debt as a percent of total capitalization	24.8	% 37.3	%

(1) Presented in accordance with newly implemented ASU 2015-03. See Note 2 to the Consolidated Financial Statements for further information.

See Note 17 to the Consolidated Financial Statements for information related to the Company's notes payable and long-term debt activity, including debt retired and issued during the year ended December 31, 2015.

Dow's public debt instruments and primary, private credit agreements contain, among other provisions, certain customary restrictive covenant and default provisions. The Company's most significant debt covenant with regard to its financial position is the obligation to maintain the ratio of the Company's consolidated indebtedness to consolidated capitalization at no greater than 0.65 to 1.00 at any time the aggregate outstanding amount of loans under the Five Year Competitive Advance and Revolving Credit Facility Agreement ("Revolving Credit Facility") equals or exceeds \$500 million. The ratio of the Company's consolidated indebtedness to consolidated capitalization as defined in the Revolving Credit Facility was 0.38 to 1.00 at December 31, 2015. At December 31, 2015, management believes the Company was in compliance with all of its covenants and default provisions. For information on Dow's covenants and default provisions, see Note 17 to the Consolidated Financial Statements.

Management expects that the Company will continue to have sufficient liquidity and financial flexibility to meet all of its business obligations.

**Credit Ratings**

As of February 12, 2016, the Company's credit ratings were as follows:

Credit Ratings	Long-Term	Short-Term	Outlook
Rating Agency	Rating	Rating	
Standard & Poor's	BBB	A-2	Watch Developing
Moody's Investors Service	Baa2	P-2	Stable
Fitch Ratings	BBB	F2	Watch Positive

Downgrades in the Company's credit ratings will increase borrowing costs on certain indentures and could have an impact on the Company's ability to access credit markets.



Table of Contents

## Dividends

For the years ended December 31, 2015, 2014, and 2013, the Company paid dividends to common and preferred shareholders as noted below:

Dividends Paid at December 31	2015	2014	2013
In millions, except per share amounts			
Dividends paid, per common share	\$1.68	\$1.43	\$0.96
Dividends paid to common shareholders	\$1,913	\$1,680	\$1,139
Dividends paid to preferred shareholders	\$340	\$340	\$340

On October 21, 2015, the Board of Directors declared a quarterly dividend of \$0.46 per share, payable January 29, 2016, to stockholders of record on December 31, 2015. On February 11, 2016, the Board of Directors announced the declaration of a quarterly dividend of \$0.46 per share, payable April 29, 2016, to stockholders of record on March 31, 2016. Since 1912, the Company has maintained or increased the amount of the quarterly dividend, adjusted for stock splits, with the exception of February 12, 2009. During this 104-year period, Dow has increased the amount of the quarterly dividend 52 times (approximately 13 percent of the time), reduced the dividend once and maintained the amount of the quarterly dividend approximately 87 percent of the time.

On December 10, 2015, the Board of Directors declared a quarterly dividend of \$85 million to Cumulative Convertible Perpetual Preferred Stock, Series A shareholders of record on December 15, 2015, which was paid on January 4, 2016. On February 11, 2016, the Board of Directors declared a quarterly dividend of \$85 million, payable on April 1, 2016, to the Cumulative Convertible Perpetual Preferred Stock, Series A shareholders of record on March 15, 2016. Ongoing dividends related to Cumulative Convertible Perpetual Preferred Stock, Series A will accrue at the rate of \$85 million per quarter, and are payable quarterly subject to Board of Directors' approval.

## Share Repurchase Program

On February 13, 2013, the Board of Directors approved a share buy-back program, authorizing up to \$1.5 billion to be spent on the repurchase of the Company's common stock. On January 29, 2014, the Board of Directors announced an expansion of the Company's share buy-back authorization, authorizing an additional amount not to exceed \$3 billion to be spent on the repurchase of the Company's common stock over a period of time. On November 12, 2014, the Board of Directors announced a new \$5 billion tranche to its share buy-back program, with the repurchase of the Company's common stock timed to proceeds received from portfolio management actions and increases in operating cash flows. As a result of these actions, the total authorized amount of the share repurchase program is \$9.5 billion. As of December 31, 2015, the Company has spent \$7.2 billion on repurchases of common stock under the share buy-back program.

On October 5, 2015, (i) the Company completed the transfer of its U.S. Gulf Coast Chlor-Alkali and Vinyl, Global Chlorinated Organics and Global Epoxy businesses ("chlorine value chain") into a new company ("Splitco"), (ii) participating Dow shareholders tendered, and the Company accepted, Dow shares for Splitco shares in a public exchange offer, and (iii) Splitco merged with a wholly owned subsidiary of Olin Corporation in a tax-efficient Reverse Morris Trust transaction (collectively, the "Transaction"). Dow shareholders who participated in the public exchange offer tendered 34.1 million shares of Dow common stock in exchange for 100 million shares of Splitco. As a result of this non-cash share exchange offer, the Company included the 34.1 million tendered shares as part of the share repurchase program and recorded an increase of \$1,523 million in "Treasury stock at cost" in the consolidated balance sheets, which was valued based on Dow's opening stock price on October 5, 2015. See Note 6 to the Consolidated Financial Statements for additional information on this Transaction.

On December 11, 2015, the Company and DuPont announced that their boards of directors unanimously approved a definitive agreement under which the companies will combine in an all-stock merger of equals strategic combination.

The combined company will be named DowDuPont. This transaction is expected to close in the second half of 2016, subject to customary closing conditions, including regulatory approvals. As a result of this pending transaction, the Company will not repurchase shares under the share repurchase program until after the shareholder vote on the DowDuPont merger. The Company expects to complete approximately \$2 billion of share repurchases in 2016.

For additional information related to the share repurchase program, see Part II. Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities and Note 22 to the Consolidated Financial Statements.

Table of Contents

## Pension Plans

The Company has defined benefit pension plans in the United States and a number of other countries. The Company's funding policy is to contribute to plans when pension laws and/or economics either require or encourage funding. During 2015, 2014 and 2013, the Company contributed \$844 million, \$815 million and \$865 million to its pension plans, including contributions to fund benefit payments for its non-qualified supplemental plans. Dow expects to contribute approximately \$620 million to its pension plans in 2016. See Note 18 to the Consolidated Financial Statements for additional information concerning the Company's pension plans.

## Restructuring

The activities related to the 2015 restructuring program are expected to result in additional cash expenditures of \$153 million, primarily through March 31, 2017, related to severance costs and costs associated with exit and disposal activities, including environmental remediation (see Note 3 to the Consolidated Financial Statements). The Company expects to incur additional costs in the future related to its restructuring activities, as the Company continually looks for ways to enhance the efficiency and cost effectiveness of its operations, and to ensure competitiveness across its businesses and geographic areas. Future costs are expected to include demolition costs related to closed facilities and restructuring plan implementation costs; these costs will be recognized as incurred. The Company 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.

## Contractual Obligations

The following table summarizes the Company's contractual obligations, commercial commitments and expected cash requirements for interest at December 31, 2015. Additional information related to these obligations can be found in Notes 15, 17, 18, 19 and 23 to the Consolidated Financial Statements.

Contractual Obligations at December 31, 2015	Payments Due by Year						Total
	2016	2017	2018	2019	2020	2021 and beyond	
In millions							
Long-term debt – current and noncurrent (1)	\$550	\$644	\$730	\$2,389	\$1,769	\$11,079	\$17,161
Deferred income tax liabilities – noncurrent (2)	—	—	—	—	—	575	575
Pension and other postretirement benefits	766	366	365	370	874	6,230	8,971
Other noncurrent obligations (3)	16	580	379	366	222	2,778	4,341
Uncertain tax positions, including interest and penalties (4)	—	—	—	—	—	378	378
Other contractual obligations:							
Minimum lease commitments	302	277	249	230	215	1,500	2,773
Purchase commitments – take-or-pay and throughput obligations	2,935	2,415	2,262	1,927	1,799	7,827	19,165
Purchase commitments – other (5)	155	69	49	38	24	19	354
Expected cash requirements for interest (6)	929	917	875	766	668	7,145	11,300
Total	\$5,653	\$5,268	\$4,909	\$6,086	\$5,571	\$37,531	\$65,018

(1) Excludes unamortized debt discount and issuance costs of \$405 million. Includes \$76 million of capital lease obligations.

(2) Deferred income tax liabilities may vary according to changes in tax laws, tax rates and the operating results of the Company. As a result, it is impractical to determine whether there will be a cash impact to an individual year. All noncurrent deferred income tax liabilities have been reflected in "2021 and beyond."



(3) Annual payments to resolve asbestos litigation will vary based on changes in defense strategies, changes in state and national law, and claims filing and resolution rates. As a result, it is impractical to determine the anticipated payments in any given year. Therefore, the majority of the noncurrent asbestos-related liability of \$387 million has been reflected in “2021 and beyond.”

(4) Due to uncertainties in the timing of the effective settlement of tax positions with the respective taxing authorities, the Company is unable to determine the timing of payments related to its uncertain tax positions, including interest and penalties. Amounts beyond the current year are therefore reflected in “2021 and beyond.”

(5) Includes outstanding purchase orders and other commitments greater than \$1 million, obtained through a survey conducted within the Company.

(6) Cash requirements for interest was calculated using current interest rates at December 31, 2015, and includes approximately \$733 million of various floating rate notes.

#### Off-Balance Sheet Arrangements

Off-balance sheet arrangements are obligations the Company has with nonconsolidated entities related to transactions, agreements or other contractual arrangements. The Company holds variable interests in joint ventures accounted for under the equity method of accounting. The Company is not the primary beneficiary of these joint ventures and therefore is not required

## Table of Contents

to consolidate the entities (see Note 20 to the Consolidated Financial Statements). In addition, see Note 16 to the Consolidated Financial Statements for information regarding the transfer of financial assets.

Guarantees arise during the ordinary course of business from relationships with customers and nonconsolidated affiliates when the Company undertakes an obligation to guarantee the performance of others if specific triggering events occur. The Company had outstanding guarantees at December 31, 2015 of \$5,822 million, compared with \$5,993 million at December 31, 2014. Additional information related to these guarantees can be found in the “Guarantees” section of Note 15 to the Consolidated Financial Statements.

### Fair Value Measurements

See Note 11 to the Consolidated Financial Statements for information related to other-than-temporary impairments; see Note 12 for additional information concerning fair value measurements, including the Company’s interests held in trade receivable conduits; and, see Note 18 for information related to fair value measurements of pension and other postretirement benefit plan assets.

## OUTLOOK

Looking ahead, 2016 is primed to be another significant year for Dow. The Company is very focused on continuing to deliver against its operational commitments and portfolio priorities.

Dow's teams are moving swiftly to deliver the DowDuPont merger benefits to shareholders. The same teams that delivered the split-off of the chlorine value chain ahead of plan, as well as all of the other portfolio moves implemented over the last five years, have mobilized with three clear priorities: close the DowDuPont merger in the second half of 2016; rapidly deliver the synergies after closing; and accelerate the release of value through the intended market-focused spin-offs.

The Company will also realize strong synergies and benefits from Dow Corning's silicones business, and continue to ramp up many strategic initiatives, with differentiated technology and cost-advantaged expansions such as those on the U.S. Gulf Coast and in Saudi Arabia coming on-line to serve targeted consumer markets across the globe.

The global economy continues to be volatile with consistent demand being driven by the consumer, especially in the U.S. and increasingly from China. The Company believes low energy prices are a net benefit and will help overcome negative investment sentiment in other sectors. Dow has the portfolio that serves these consumer-driven markets, and the Company remains committed to flawless operational and commercial execution.

## OTHER MATTERS

### Recent Accounting Guidance

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

### Critical Accounting Policies

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 the preparation of the consolidated financial statements. Following are the Company’s critical accounting policies impacted by judgments, assumptions and estimates:

### Litigation

The Company is subject to legal proceedings and claims arising out of the normal course of business including product liability, patent infringement, governmental regulation, contract and commercial litigation, and other actions. The Company routinely assesses the legal and factual circumstances of each matter, the likelihood of any adverse 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. Dow has an active risk management program consisting of numerous insurance policies secured from many carriers covering various timeframes. These policies may provide coverage that could be utilized to minimize the financial impact, if any, of certain contingencies. The required reserves may change in the future due to new developments in each matter. For further discussion, see Note 15 to the Consolidated Financial Statements.

## Table of Contents

### Asbestos-Related Matters of Union Carbide Corporation

Union Carbide Corporation ("Union Carbide"), a wholly owned subsidiary of the Company, 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 Union Carbide sold in the past, alleged exposure to asbestos-containing products located on Union Carbide's premises, and Union Carbide's responsibility for asbestos suits filed against a former Union Carbide subsidiary, Amchem Products, Inc. Each year, Analysis, Research and Planning Corporation ("ARPC") performs a review for Union Carbide based upon historical asbestos claims and resolution activity. Union Carbide compares current asbestos claim and resolution activity to the results of the most recent ARPC study at each balance sheet date to determine whether the asbestos-related liability continues to be appropriate.

It is the opinion of Dow's management that it is reasonably possible that the cost of Union Carbide disposing of its asbestos-related claims, including future defense costs, could have a material impact on the Company's results of operations and cash flows for a particular period and on the consolidated financial position of the Company.

For additional information, see Part I, Item 3. Legal Proceedings; Asbestos-Related Matters of Union Carbide Corporation in Management's Discussion and Analysis of Financial Condition and Results of Operations; and Note 15 to the Consolidated Financial Statements.

### Environmental Matters

The Company 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. In the case of landfills and other active waste management facilities, Dow recognizes the costs over the useful life of the facility. At December 31, 2015, the Company had accrued obligations of \$670 million for probable environmental remediation and restoration costs, including \$74 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 Company has accrued liabilities, although it is reasonably possible that the ultimate cost with respect to these particular matters could range up to approximately two and a half times that amount. For further discussion, see Environmental Matters in Management's Discussion and Analysis of Financial Condition and Results of Operations and Notes 1 and 15 to the Consolidated Financial Statements.

### Goodwill

The Company assesses goodwill recoverability through business financial performance reviews, enterprise valuation analysis and impairment tests. Annual goodwill impairment tests are completed by the Company during the fourth quarter of the year in accordance with the measurement provisions of the accounting guidance for goodwill. The tests are performed at the reporting unit level which is defined as one level below operating segment with the exception of Agricultural Sciences, which is both an operating segment and a reporting unit. Reporting units are the level at which discrete financial information is available and reviewed by business management on a regular basis. At December 31, 2015, the Company has defined five operating segments and 16 reporting units; goodwill is carried by 12 of these reporting units.

In addition to the annual goodwill impairment tests, the Company reviews the financial performance of its reporting units over the course of the year to assess whether circumstances have changed that would indicate it is more likely than not that the fair value of a reporting unit has declined below its carrying value. In cases where an indication of impairment is determined to exist, the Company completes an interim goodwill impairment test specifically for that reporting unit.

As part of its annual goodwill impairment testing, the Company has the option to first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. The qualitative assessment is also used as a basis for determining whether it is necessary to perform the quantitative test. Qualitative factors assessed at the Company level include, but are not limited to, GDP growth rates, long-term hydrocarbon and energy prices, equity and credit market activity, discount rates, foreign exchange rates and overall financial performance. Qualitative factors assessed at the reporting unit level include, but are not limited to, changes in industry and market structure, competitive environments, planned capacity and new product launches, cost factors such as raw material prices, and financial performance of the reporting unit. If the Company chooses to not complete a

Table of Contents

qualitative assessment for a given reporting unit or if the initial assessment indicates that it is more likely than not that the carrying value of a reporting unit exceeds its estimated fair value, additional quantitative testing is required. The first step of the quantitative test requires the fair value of the reporting unit to be compared with its carrying value. The Company utilizes a discounted cash flow methodology to calculate the fair value of its reporting units. This valuation technique has been selected by management as the most meaningful valuation method due to the limited number of market comparables for the Company's reporting units. However, where market comparables are available, the Company includes EBIT/EBITDA multiples as part of the reporting unit valuation analysis. The discounted cash flow valuations are completed using the following key assumptions (including certain ranges used for the 2015 testing): projected revenue growth rates, or compounded annual growth rates, over a ten-year cash flow forecast period, which ranged from 4.8 percent to 7.7 percent and varied by reporting unit based on underlying business fundamentals and future expectations; discount rates, which ranged from 9.5 percent to 11.2 percent; tax rates; terminal values, differentiated based on the cash flow projection of each reporting unit and the projected net operating profit after tax ("NOPAT") growth rate, which ranged from 2 percent to 3.5 percent; currency exchange rates for 79 currencies; and forecasted long-term hydrocarbon and energy prices, by geographic area and by year, which included the Company's key feedstocks as well as natural gas and crude oil (due to its correlation to naphtha). Currency exchange rates and long-term hydrocarbon and energy prices are established for the Company as a whole and applied consistently to all reporting units, while revenue growth rates, discount rates and tax rates are established by reporting unit to account for differences in business fundamentals and industry risk.

The second step of the quantitative test is required if the first step of the quantitative test indicates a potential impairment. The second step requires the Company to compare the implied fair value of a reporting unit's goodwill with the carrying amount of goodwill. If the carrying amount of goodwill is greater than its implied fair value, an impairment loss is recorded.

The Company also monitors and evaluates its market capitalization relative to book value. When the market capitalization of the Company falls below book value, management undertakes a process to evaluate whether a change in circumstances has occurred that would indicate it is more likely than not that the fair value of any of its reporting units has declined below carrying value. This evaluation process includes the use of third-party market-based valuations and internal discounted cash flow analysis. As part of the annual goodwill impairment test, the Company also compares market capitalization with the most recent total estimated fair value of its reporting units to ensure that significant differences are understood. At December 31, 2015 and 2014, Dow's market capitalization exceeded book value.

#### 2015 Goodwill Impairment Test

During 2015, there were no events or changes in circumstances identified that warranted interim goodwill impairment testing. During the fourth quarter of 2015, qualitative testing was performed for all but three of the Company's reporting units that carry goodwill. The results of the qualitative testing did not indicate any reporting units where it was more likely than not that the carrying value of the reporting unit was greater than its fair value. As a result, no additional quantitative testing was required for those reporting units.

The Company chose to proceed directly to the first step of the quantitative testing for three reporting units to re-evaluate the reasonableness of the differences between fair value and carrying value under current market conditions. Quantitative testing was conducted for the following reporting units, using key assumptions for the discounted cash flow analysis: Dow Coating Materials, Performance Monomers and Dow Electronic Materials.

Changes in key assumptions can affect the results of goodwill impairment test. The changes made to key assumptions in 2015 did not result in a significant change in the impairment analysis conclusion. The key assumptions with the most significant impact on reporting unit fair value calculations include the discount rate and terminal value NOPAT growth rate. For the 2015 impairment testing, management completed sensitivity analysis on both of these key assumptions using a 100 basis point increase in the discount rate and a 100 basis point decrease in the terminal value NOPAT growth rate for reporting units where a quantitative fair value analysis was completed. In both cases the

resulting fair values, based on discounted cash flows, exceeded the carrying values for all reporting units tested. Additional sensitivity analysis was completed on the combined impact of a 100 basis point increase in the discount rate and a 100 basis point decrease in the terminal value NOPAT growth rate. This analysis resulted in a fair value, based on discounted cash flows, that exceeded the carrying value for Dow Electronic Materials. The fair value for Dow Coating Materials, which carried approximately \$2,243 million of goodwill at December 31, 2015, was \$98 million below carrying value. The fair value for Performance Monomers, which carried approximately \$237 million of goodwill at December 31, 2015, was approximately \$20 million below carrying value.

## Table of Contents

In completing the fair value analysis for the 2015 impairment test, management evaluated the reasonableness of differences noted between fair value and carrying value of each reporting unit. All differences were determined to be reasonable.

Based on the fair value analysis completed by the Company in the fourth quarter of 2015, using the key assumptions defined for the Company as well as the key assumptions defined specifically for each reporting unit, management concluded that fair value exceeded carrying value for all reporting units.

### Pension 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, 2015, 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 18 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. The U.S. pension plans represent 72 percent of the Company's pension plan assets and 71 percent of the pension obligations.

The following information relates to the U.S. plans only; a similar approach is used for the Company's non-U.S. plans.

The Company determines the expected long-term rate of return on assets by performing a detailed analysis of historical and expected returns based on the strategic asset allocation approved by the Company's Investment Committee and the underlying return fundamentals of each asset class. The Company's historical experience with the pension fund asset performance is also considered. The expected return of each asset class is derived from a forecasted future return confirmed by historical experience. 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 2015 was 7.85 percent. This assumption increased to 7.87 percent for determining 2016 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 Company's pension plans.

The discount rates utilized to measure the pension and other postretirement obligations of the U.S. qualified plans are based on the yield on high-quality corporate fixed income investments at the measurement date. Future expected actuarially determined cash flows for Dow's U.S. 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 increased to 4.40 percent at December 31, 2015, from 4.04 percent at December 31, 2014.

At December 31, 2015, the U.S. qualified plans were underfunded on a projected benefit obligation basis by \$3.8 billion. The underfunded amount decreased by approximately \$860 million compared with December 31, 2014. The decrease in 2015 was primarily due to contributions made, the transfer of defined benefit obligations to Olin and the change in the discount rate. The Company contributed \$600 million to the U.S. qualified plans in 2015.

The assumption for the long-term rate of increase in compensation levels for the principal U.S. qualified plans was 4.5 percent. Since 2002, the Company has used a generational mortality table to determine the duration of its pension and other postretirement obligations. In 2014, the Company adopted updated generational mortality tables, which reflect increased life expectancy, for purposes of measuring U.S. pension and other postretirement obligations.

The following discussion relates to the Company's significant pension plans.



The Company 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 plans, both gains and losses have been recognized and amortized. At December 31, 2015, net losses of \$295 million 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.

Table of Contents

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

## Increase (Decrease) in Market-Related Asset Value Due to Recognition of Prior Gains (Losses)

In millions

2016	\$74	
2017	(55	)
2018	(109	)
2019	(205	)
Total	\$(295	)

The Company has elected to adopt a 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 for the U.S. and other selected countries, effective January 1, 2016. Under the spot rate approach, the Company will calculate service costs and interest costs by applying individual spot rates from the Willis Towers Watson RATE:Link yield curve (based on high-quality corporate bond yields) for each selected country to the separate expected cash flow components of service cost and interest cost; service cost and interest cost for all other plans will continue to be determined on the basis of the single equivalent discount rates derived in determining those plan obligations. The Company changed to the new method to provide a more precise measure of interest and service costs for certain countries by improving the correlation between projected benefit cash flows and the discrete spot yield curves. The Company has accounted for this change as a change in accounting estimate and it will be applied prospectively starting in 2016. The adoption of the spot rate approach is expected to decrease the service cost and interest cost components of net periodic benefit costs by approximately \$210 million in 2016.

The Company expects pension expense to decrease in 2016 by more than \$200 million. The decrease in pension expense is primarily due to the impact of higher discount rates and the change to the spot rate approach for measuring service cost and interest cost.

A 25 basis point increase or decrease in the long-term return on assets assumption would change the Company's total pension expense for 2016 by \$47 million. A 25 basis point increase in the discount rate assumption would lower the Company's total pension expense for 2016 by \$50 million. A 25 basis point decrease in the discount rate assumption would increase the Company's total pension expense for 2016 by \$59 million. A 25 basis point change in the long-term return and discount rate assumptions would have an immaterial impact on the other postretirement benefit expense for 2016.

## 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 Company recognizes future tax benefits, such as net operating loss carryforwards and tax credit carryforwards, to the extent that realizing these benefits is considered to be more likely than not.

At December 31, 2015, the Company had a net deferred tax asset balance of \$1,846 million, after valuation allowances of \$1,000 million.

In evaluating the ability to realize the deferred tax assets, the Company 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, 2015, the Company had deferred tax assets for tax loss and tax credit carryforwards of \$1,647 million, \$197 million of which is subject to expiration in the years 2016-2020. In order to realize these deferred tax assets for tax loss and tax credit carryforwards, the Company needs taxable income of approximately \$17,786 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 2016-2020 is approximately \$2,788 million.

## Table of Contents

The Company recognizes the financial statement effects of an uncertain income tax position when it is more likely than not, based on technical merits, that the position will be sustained upon examination. At December 31, 2015, the Company had uncertain tax positions for both domestic and foreign issues of \$280 million.

The Company 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, 2015, the Company had a non-income tax contingency reserve for both domestic and foreign issues of \$64 million.

For additional information, see Notes 1 and 23 to the Consolidated Financial Statements.

### Environmental Matters

#### Environmental Policies

Dow is committed to world-class environmental, health and safety (“EH&S”) performance, as demonstrated by industry-leading performance, a long-standing commitment to Responsible Care®, and a strong commitment to achieve the Company’s 2025 Sustainability Goals – goals that set the standard for sustainability in the chemical industry by focusing on improvements in Dow’s local corporate citizenship and product stewardship, and by actively pursuing methods to reduce the Company’s environmental impact.

To meet the Company’s public commitments, as well as the stringent laws and government regulations related to environmental protection and remediation to which its global operations are subject, Dow has well-defined policies, requirements and management systems. Dow’s EH&S Management System (“EMS”) defines the “who, what, when and how” needed for the businesses to achieve the Company’s policies, requirements, performance objectives, leadership expectations and public commitments. To ensure effective utilization, the EMS is integrated into a company-wide management system for EH&S, Operations, Quality and Human Resources.

It is Dow’s policy to adhere to a waste management hierarchy that minimizes the impact of wastes and emissions on the environment. First, Dow works to eliminate or minimize the generation of waste and emissions at the source through research, process design, plant operations and maintenance. Second, Dow 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. Dow has specific requirements for waste that is transferred to non-Dow facilities, including the periodic auditing of these facilities.

Dow believes third-party verification and transparent public reporting are cornerstones of world-class EH&S performance and building public trust. Numerous Dow sites in Europe, Latin America, Asia Pacific and North America have received third-party verification of Dow’s compliance with Responsible Care® and with outside specifications such as ISO-14001. Dow continues to be a global champion of Responsible Care® and has worked to broaden the application and impact of Responsible Care® around the world through engagement with suppliers, customers and joint venture partners.

Dow’s EH&S policies helped the Company achieve excellent EH&S performance in 2015. Dow’s injury/illness rates and process safety performance were excellent in 2015. Further improvement in these areas, as well as environmental compliance, remains a top management priority, with initiatives underway to further improve performance and compliance in 2016 as Dow begins to implement the Company's 2025 Sustainability Goals.

Detailed information on Dow’s performance regarding environmental matters and goals can be found online on Dow’s Sustainability webpage at [www.dow.com](http://www.dow.com). The Company's website and its content are not deemed incorporated by

reference into this report.

#### Chemical Security

Public and political attention continues to be placed on the protection of critical infrastructure, including the chemical industry, from security threats. Terrorist attacks, natural disasters and cyber incidents have increased concern about the security and safety of chemical production and distribution. Many, including Dow and the American Chemistry Council, have called for uniform risk-based and performance-based national standards for securing the U.S. chemical industry. The Maritime Transportation Security Act of 2002 and its regulations further set forth risk-based and performance-based standards that must be met at U.S. Coast Guard-regulated facilities. U.S. Chemical Plant Security legislation was passed in 2006 and the Department of Homeland Security is now implementing the regulations known as the Chemical Facility Anti-Terrorism Standards. The Company is complying with the requirements of the Rail Transportation Security Rule issued by the U.S.

## Table of Contents

Transportation Security Administration. Dow continues to support uniform risk-based national standards for securing the chemical industry.

The focus on security, emergency planning, preparedness and response is not new to Dow. A comprehensive, multi-level security plan for the Company has been maintained since 1988. This plan, which has been activated in response to significant world and national events since then, is reviewed on an annual basis. Dow continues to improve its security plans, placing emphasis on the safety of Dow communities and people by being prepared to meet risks at any level and to address both internal and external identifiable risks. The security plan includes regular vulnerability assessments, security audits, mitigation efforts and physical security upgrades designed to reduce vulnerability. Dow's security plans also are developed to avert interruptions of normal business operations that could materially and adversely affect the Company's results of operations, liquidity and financial condition.

Dow played a key role in the development and implementation of the American Chemistry Council's Responsible Care® Security Code, which requires that all aspects of security – including facility, transportation and cyberspace – be assessed and gaps addressed. Through the Company's global implementation of the Security Code, Dow has permanently heightened the level of security – not just in the United States, but worldwide. Dow employs several hundred employees and contractors in its Emergency Services and Security department worldwide.

Through the implementation of the Security Code, including voluntary security enhancements and upgrades made since 2002, Dow is well-positioned to comply with U.S. chemical facility regulations and other regulatory security frameworks. Dow is currently participating with the American Chemistry Council to review and update the Responsible Care® Security Code.

Dow continues to work collaboratively across the supply chain on Responsible Care®, Supply Chain Design, Emergency Preparedness, Shipment Visibility and transportation of hazardous materials. Dow is cooperating with public and private entities to lead the implementation of advanced tank car design, and track and trace technologies. Further, Dow's Distribution Risk Review process that has been in place for decades was expanded to address potential threats in all modes of transportation across the Company's supply chain. To reduce vulnerabilities, Dow maintains security measures that meet or exceed regulatory and industry security standards in all areas in which the Company operates.

Dow's initiatives relative to chemical security, emergency preparedness and response, Community Awareness and Emergency Responses and crisis management are implemented consistently at all Dow sites on a global basis. Dow participates with chemical associations globally and participates as an active member of the U.S. delegation to the G7 Global Partnership Sub-Working Group on Chemical Security.

### Climate Change

Climate change matters for Dow are likely to be driven by changes in regulations, public policy 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 Dow's overall energy usage and GHG emissions through new and unfolding projects will decrease the potential impact of these regulatory matters. Dow also has a dedicated commercial group to handle energy contracts and purchases, including managing emissions trading. The Company has not experienced any material impact related to regulated GHG emissions. The Company continues to evaluate and monitor this area for future developments.

#### 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 Dow 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. Dow continues to study the long-term implications of changing climate parameters on water availability, plant siting issues, and impacts and opportunities for products.

Table of Contents

Dow's Energy business and Public Affairs and Sustainability functions are tasked with developing and implementing a comprehensive strategy that addresses the potential challenges of energy security and GHG emissions on the Company. The Company continues to elevate its internal focus and external positions - to focus on the root causes of GHG emissions - including the unsustainable use of energy. Dow's energy plan provides the roadmap:

- ☉ Conserve - aggressively pursue energy efficiency and conservation
- ☉ Optimize - increase and diversify energy resources
- ☉ Accelerate - develop cost-effective, clean, renewable and alternative energy sources
- ☉ Transition - to a sustainable energy future

Through corporate energy efficiency programs and focused GHG management efforts, the Company has and is continuing to reduce its GHG emissions footprint. The Company's manufacturing intensity, measured in Btu per pound of product, has improved by more than 40 percent since 1990. As part of the Company's 2025 Sustainability Goals, Dow will maintain GHG emissions below 2006 levels on an absolute basis for all GHGs.

**Environmental Remediation**

Dow accrues the costs of remediation of its facilities and formerly owned facilities based on current law and regulatory requirements. The nature of such remediation can include management of soil and groundwater contamination and closure of contaminated landfills and other waste management facilities. In the case of landfills and other active waste management facilities, Dow recognizes the costs over the useful life of the facility. The accounting 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 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 the ability to apply remediation technologies. These liabilities are adjusted periodically as remediation efforts progress or as additional technical or legal information becomes available. Dow had an accrued liability of \$596 million at December 31, 2015, related to the remediation of current or former Dow-owned sites. At December 31, 2014, the liability related to remediation was \$628 million.

In addition to current and former Dow-owned sites, under the federal Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") and equivalent state laws (hereafter referred to collectively as "Superfund Law"), Dow is liable for remediation of other hazardous waste sites where Dow 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, Dow 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. The Company's remaining liability for the remediation of Superfund sites was \$74 million at December 31, 2015 (\$78 million at December 31, 2014). The Company has not recorded any third-party recovery related to these sites as a receivable.

Information regarding environmental sites is provided below:

Environmental Sites	Dow-owned Sites (1)		Superfund Sites (2)	
	2015	2014	2015	2014
Number of sites at January 1	184	200	124	121
Sites added during year	7	6	7	5
Sites closed during year	(11	) (22	) (7	) (2
Number of sites at December 31	180	184	124	124

(1)Dow-owned sites are sites currently or formerly owned by Dow. In the United States, remediation obligations are imposed by the Resource Conservation and Recovery Act or analogous state law. At December 31, 2015, 41 of



these sites (46 sites at December 31, 2014) were formerly owned by Dowell Schlumberger, Inc., a group of companies in which the Company previously owned a 50 percent interest. Dow sold its interest in Dowell Schlumberger in 1992.

- (2) Superfund sites are sites, including sites not owned by Dow, where remediation obligations are imposed by Superfund Law.

Additional information is provided below for the Company's Midland, Michigan, manufacturing site and Midland off-site locations (collectively, the "Midland sites"), as well as a Superfund site in Wood-Ridge, New Jersey, the locations for which the Company has the largest potential environmental liabilities.

In the early days of operations at the Midland manufacturing site, wastes were usually disposed of on-site, resulting in soil and groundwater contamination, which has been contained and managed on-site under a series of Resource Conservation and

Table of Contents

Recovery Act permits and regulatory agreements. The Hazardous Waste Operating License for the Midland manufacturing site, issued in 2003, and renewed and replaced in September 2015, also included provisions for the Company to conduct an investigation to determine the nature and extent of off-site contamination from historic Midland manufacturing site operations. In January 2010, the Company, the U.S. Environmental Protection Agency ("EPA") and the State of Michigan ("State") entered into an administrative order on consent that requires the Company to conduct a remedial investigation, a feasibility study and a remedial design for the Tittabawassee River, the Saginaw River and the Saginaw Bay, and pay the oversight costs of the EPA and the State under the authority of CERCLA. See Note 15 to the Consolidated Financial Statements for additional information. At December 31, 2015, the Company had an accrual of \$92 million (\$93 million at December 31, 2014) for environmental remediation and investigation associated with the Midland sites. In 2015, the Company spent \$28 million (\$22 million in 2014) for environmental remediation at the Midland sites.

Rohm and Haas is a PRP at the Wood-Ridge, New Jersey Ventron/Velsicol Superfund Site, and the adjacent Berry's Creek Study Area ("BCSA") (collectively, the "Wood-Ridge sites"). Rohm and Haas is a successor in interest to a company that owned and operated a mercury processing facility, where wastewater and waste handling resulted in contamination of soils and adjacent creek sediments. Currently, the Berry's Creek Study Area PRP group is undertaking a multi-stage Remedial Investigation/Feasibility Study ("RI/FS") pursuant to an Administrative Order on Consent ("AOC") with U.S. EPA Region 2 to identify contamination in surface water, sediment and biota related to numerous contaminated sites in the Berry's Creek watershed. The RI will be submitted to the EPA by June 30, 2016. The FS will be submitted, perhaps in phases as part of an adaptive remedy, on a schedule set by the EPA. The EPA will then review the remedial options presented in the FS, select the remedy and issue a Record of Decision. The PRP group will then attempt to negotiate agreements with the PRP's to fund the selected remedy and with the EPA to perform the remediation. There is currently much uncertainty as to what will be required to remediate the BCSA, and Rohm and Haas's share of these costs has yet to be determined. At December 31, 2015, the Company had an accrual of \$15 million (\$18 million at December 31, 2014) for environmental remediation at the Wood-Ridge sites. In 2015, the Company spent \$6 million (\$6 million in 2014) on environmental remediation at the Wood-Ridge sites.

In total, the Company's accrued liability for probable environmental remediation and restoration costs was \$670 million at December 31, 2015, compared with \$706 million at the end of 2014. This is management's best estimate of the costs for remediation and restoration with respect to environmental matters for which the Company has accrued liabilities, although it is reasonably possible that the ultimate cost with respect to these particular matters could range up to approximately two and half 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 Company's results of operations, financial condition and cash flows. It is the opinion of the Company's management, however, that the possibility is remote that costs in excess of the range disclosed will have a material impact on the Company's results of operations, financial condition and cash flows.

The amounts charged to income on a pretax basis related to environmental remediation totaled \$218 million in 2015, \$227 million in 2014 and \$203 million in 2013. The amounts charged to income on a pretax basis related to operating the Company's current pollution abatement facilities totaled \$770 million in 2015, \$762 million in 2014 and \$720 million in 2013. Capital expenditures for environmental protection were \$49 million in 2015, \$78 million in 2014 and \$102 million in 2013.

#### Asbestos-Related Matters of Union Carbide Corporation

Union Carbide Corporation ("Union Carbide"), a wholly owned subsidiary of the Company, 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 Union Carbide sold in the past,

alleged exposure to asbestos-containing products located on Union Carbide's premises, and Union Carbide's responsibility for asbestos suits filed against a former Union Carbide 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 Union Carbide's products.

It is the opinion of Dow's management that it is reasonably possible that the cost of Union Carbide disposing of its asbestos-related claims, including future defense costs, could have a material impact on the Company's results of operations and cash flows for a particular period and on the consolidated financial position of the Company.

Table of Contents

The table below provides information regarding asbestos-related claims pending against Union Carbide and Amchem based on criteria developed by Union Carbide and its external consultants. Union Carbide 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.

	2015	2014	2013
Claims unresolved at January 1	26,116	29,005	33,449
Claims filed	7,544	8,857	12,069
Claims settled, dismissed or otherwise resolved	(14,882 )	(11,746 )	(16,513 )
Claims unresolved at December 31	18,778	26,116	29,005
Claimants with claims against both UCC and Amchem	(6,804 )	(8,209 )	(8,331 )
Individual claimants at December 31	11,974	17,907	20,674

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 Union Carbide, 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 personal injury cases in which only Union Carbide and/or Amchem are the sole named defendants. For these reasons and based upon Union Carbide's litigation and settlement experience, Union Carbide does not consider the damages alleged against Union Carbide 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 Note 15 to the Consolidated Financial Statements.

**K-Dow Arbitration**

In February 2009, the Company initiated arbitration proceedings against Petrochemical Industries Company (K.S.C.) ("PIC") alleging that PIC breached the Joint Venture Formation Agreement related to the establishment of K-Dow, a proposed 50:50 global petrochemicals joint venture with PIC, by failing to close the transaction. In May 2012, the International Court of Arbitration of the International Chamber of Commerce ("ICC") awarded the Company \$2.161 billion in damages ("Partial Award"), not including pre- and post-award interest and arbitration costs. On March 4, 2013, the ICC released the Final Award in the arbitration case covering the Company's claim for pre- and post-award interest and arbitration costs and awarded the Company \$318 million, as of February 28, 2013. On May 6, 2013, the Company and PIC entered into a Deed providing for payment of the Company's claims against PIC under the K-Dow arbitration. On May 7, 2013, the Company received a \$2.195 billion cash payment from PIC, which included the Partial Award of \$2.161 billion as well as recovery of Dow's costs incurred in the arbitration, including legal fees. In addition, Kuwait Petroleum Corporation provided assurances that no retaliatory or punitive actions would be taken against the Company and its affiliates as a result of the Deed and payment. The K-Dow arbitration is considered final and settled in full.

Table of Contents

The Dow Chemical Company and Subsidiaries

PART II, Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

**QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

Dow's business operations give rise to market risk exposure due to changes in foreign exchange rates, interest rates, commodity prices and other market factors such as equity prices. To manage such risks effectively, the Company enters into hedging transactions, pursuant to established guidelines and policies, that enable it to mitigate the adverse effects of financial market risk. Derivatives used for this purpose are designated as hedges per the accounting guidance related to derivatives and hedging activities, where appropriate. A secondary objective is to add value by creating additional non-specific exposure within established limits and policies; derivatives used for this purpose are not designated as hedges. The potential impact of creating such additional exposures is not material to the Company's results.

The global nature of Dow's business requires active participation in the foreign exchange markets. As a result of investments, production facilities and other operations on a global basis, the Company has assets, liabilities and cash flows in currencies other than the U.S. dollar. The primary objective of the Company'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 Company hedges on a net exposure basis using foreign currency forward contracts, over-the-counter option contracts, cross-currency swaps, and nonderivative instruments in foreign currencies. Exposures primarily relate to assets, liabilities and bonds denominated in foreign currencies, as well as economic exposure, which is derived from the risk that currency fluctuations could affect the dollar value of future cash flows related to operating activities. The largest exposures are denominated in European currencies, the Japanese yen and the Canadian dollar, although exposures also exist in other currencies of Asia Pacific, Latin America, Middle East, Africa and India.

The main objective of interest rate risk management is to reduce the total funding cost to the Company and to alter the interest rate exposure to the desired risk profile. Dow uses interest rate swaps, "swaptions," and exchange-traded instruments to accomplish this objective. The Company's primary exposure is to the U.S. dollar yield curve.

Dow has a portfolio of equity securities derived primarily from the investment activities of its insurance subsidiaries. This exposure is managed in a manner consistent with the Company's market risk policies and procedures.

Inherent in Dow's business is exposure to price changes for several commodities. Some exposures can be hedged effectively through liquid tradable financial instruments. Feedstocks for ethylene production and natural gas constitute the main commodity exposures. Over-the-counter and exchange traded instruments are used to hedge these risks, when feasible.

Dow 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 Company is a variance/covariance model. This model uses a 97.5 percent confidence level and includes at least one year of historical data. The 2015 and 2014 year-end and average daily VAR for the aggregate of all positions are shown below. These amounts are immaterial relative to the total equity of the Company.

Total Daily VAR by Exposure Type at December 31 In millions	2015		2014	
	Year-end	Average	Year-end	Average
Commodities	\$21	\$20	\$13	\$9
Equities	\$15	\$16	\$10	\$10
Foreign exchange	\$1	\$2	\$4	\$5

Interest rate	\$96	\$103	\$119	\$114
Composite	\$133	\$141	\$145	\$138

The Company's daily VAR for the aggregate of all positions decreased from a composite VAR of \$145 million at December 31, 2014 to a composite VAR of \$133 million at December 31, 2015. The primary driver of the lower composite VAR was a decrease in the market value of fixed income holdings. Other contributors were changes in the managed exposures of commodities and foreign exchange as well as increased volatilities in equity markets. See Note 11 to the Consolidated Financial Statements for further disclosure regarding market risk.

Table of Contents

The Dow Chemical Company and Subsidiaries  
PART II, Item 8. Financial Statements and Supplementary Data.

Report of Independent Registered Public Accounting Firm  
To the Board of Directors and Stockholders of  
The Dow Chemical Company:

We have audited the accompanying consolidated balance sheets of The Dow Chemical Company and subsidiaries (the “Company”) as of December 31, 2015 and 2014, and the related consolidated statements of income, comprehensive income, equity, and cash flows for each of the three years in the period ended December 31, 2015. Our audits also included the financial statement schedule listed in the Index at Item 15(a)2. These financial statements and financial statement schedule are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of The Dow Chemical Company and subsidiaries as of December 31, 2015 and 2014, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2015, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, such financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2015, based on the criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 12, 2016 expressed an unqualified opinion on the Company's internal control over financial reporting.

/s/ DELOITTE & TOUCHE LLP  
Deloitte & Touche LLP  
Midland, Michigan  
February 12, 2016

Table of Contents

## The Dow Chemical Company and Subsidiaries

## Consolidated Statements of Income

(In millions, except per share amounts) For the years ended December 31	2015	2014	2013	
Net Sales	\$48,778	\$58,167	\$57,080	
Cost of sales	37,836	47,464	47,594	
Research and development expenses	1,598	1,647	1,747	
Selling, general and administrative expenses	2,971	3,106	3,024	
Amortization of intangibles	419	436	461	
Goodwill and other intangible asset impairment losses	—	50	—	
Restructuring charges (credits)	415	(3	) (22	)
Asbestos-related charge	—	78	—	
Equity in earnings of nonconsolidated affiliates	674	835	1,034	
Sundry income (expense) - net	4,592	(27	) 2,554	
Interest income	71	51	41	
Interest expense and amortization of debt discount	946	983	1,101	
Income Before Income Taxes	9,930	5,265	6,804	
Provision for income taxes	2,147	1,426	1,988	
Net Income	7,783	3,839	4,816	
Net income attributable to noncontrolling interests	98	67	29	
Net Income Attributable to The Dow Chemical Company	7,685	3,772	4,787	
Preferred stock dividends	340	340	340	
Net Income Available for The Dow Chemical Company Common Stockholders	\$7,345	\$3,432	\$4,447	
Per Common Share Data:				
Earnings per common share - basic	\$6.45	\$2.91	\$3.72	
Earnings per common share - diluted	\$6.15	\$2.87	\$3.68	
Dividends declared per share of common stock				
	\$1.72	\$1.53	\$1.28	
Weighted-average common shares outstanding - basic				
	1,130.1	1,170.9	1,186.2	
Weighted-average common shares outstanding - diluted				
	1,241.4	1,187.0	1,290.4	
See Notes to the Consolidated Financial Statements.				



Table of Contents

## The Dow Chemical Company and Subsidiaries

## Consolidated Statements of Comprehensive Income

(In millions) For the years ended December 31

	2015	2014	2013
Net Income	\$7,783	\$3,839	\$4,816
Other Comprehensive Income (Loss), Net of Tax			
Net change in unrealized gains on investments	(94	) (19	) 13
Translation adjustments	(986	) (1,227	) 148
Adjustments to pension and other postretirement benefit plans	552	(1,861	) 2,535
Net losses on cash flow hedging derivative instruments	(122	) (83	) (7
Total other comprehensive income (loss)	(650	) (3,190	) 2,689
Comprehensive Income	7,133	649	7,505
Comprehensive income attributable to noncontrolling interests, net of tax	65	35	29
Comprehensive Income Attributable to The Dow Chemical Company	\$7,068	\$614	\$7,476
See Notes to the Consolidated Financial Statements.			

Table of Contents

## The Dow Chemical Company and Subsidiaries

## Consolidated Balance Sheets

(In millions, except share amounts) At December 31

	2015	2014
Assets		
Current Assets		
Cash and cash equivalents (variable interest entities restricted - 2015: \$158; 2014: \$190)	\$8,577	\$5,654
Accounts and notes receivable:		
Trade (net of allowance for doubtful receivables - 2015: \$94; 2014: \$110)	4,078	4,685
Other	3,768	4,687
Inventories	6,871	8,101
Deferred income tax assets - current	827	812
Other current assets	354	316
Total current assets	24,475	24,255
Investments		
Investment in nonconsolidated affiliates	3,958	4,201
Other investments (investments carried at fair value - 2015: \$1,866; 2014: \$2,009)	2,923	2,439
Noncurrent receivables	765	620
Total investments	7,646	7,260
Property		
Property	50,802	55,230
Less accumulated depreciation	32,948	37,179
Net property (variable interest entities restricted - 2015: \$1,717; 2014: \$2,726)	17,854	18,051
Other Assets		
Goodwill	12,154	12,632
Other intangible assets (net of accumulated amortization - 2015: \$3,770; 2014: \$3,737)	3,617	3,768
Deferred income tax assets - noncurrent	1,694	2,135
Asbestos-related insurance receivables - noncurrent	51	62
Deferred charges and other assets	535	524
Total other assets	18,051	19,121
Total Assets	\$68,026	\$68,687
Liabilities and Equity		
Current Liabilities		
Notes payable	\$454	\$551
Long-term debt due within one year	541	382
Accounts payable:		
Trade	3,577	4,481
Other	2,287	2,299
Income taxes payable	452	361
Deferred income tax liabilities - current	100	105
Dividends payable	592	563
Accrued and other current liabilities	3,212	2,839
Total current liabilities	11,215	11,581
Long-Term Debt (variable interest entities nonrecourse - 2015: \$487; 2014: \$1,216)	16,215	18,741
Other Noncurrent Liabilities		
Deferred income tax liabilities - noncurrent	575	622
Pension and other postretirement benefits - noncurrent	9,119	10,459
Asbestos-related liabilities - noncurrent	387	438
Other noncurrent obligations	4,332	3,290
Total other noncurrent liabilities	14,413	14,809

Edgar Filing: DOW CHEMICAL CO /DE/ - Form 10-K

Redeemable Noncontrolling Interest	—	202
Stockholders' Equity		
Preferred stock, series A (\$1.00 par, \$1,000 liquidation preference, 4,000,000 shares)	4,000	4,000
Common stock (authorized 1,500,000,000 shares of \$2.50 par value each; issued 2015: 1,242,794,836 shares; 2014: 1,242,763,276 shares)	3,107	3,107
Additional paid-in capital	4,936	4,846
Retained earnings	28,425	23,045
Accumulated other comprehensive loss	(8,667)	(8,017)
Unearned ESOP shares	(272)	(325)
Treasury stock at cost (2015: 125,853,161 shares; 2014: 85,168,571 shares)	(6,155)	(4,233)
The Dow Chemical Company's stockholders' equity	25,374	22,423
Non-redeemable noncontrolling interests	809	931
Total equity	26,183	23,354
Total Liabilities and Equity	\$68,026	\$68,687
See Notes to the Consolidated Financial Statements.		

Table of Contents

## The Dow Chemical Company and Subsidiaries

## Consolidated Statements of Cash Flows

(In millions) For the years ended December 31

	2015	2014	2013
Operating Activities			
Net income	\$7,783	\$3,839	\$4,816
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	2,521	2,747	2,681
Provision for deferred income tax	305	466	113
Earnings of nonconsolidated affiliates less than (in excess of) dividends received	142	121	(129 )
Pension contributions	(844 )	(815 )	(865 )
Net gain on sales of investments	(95 )	(76 )	(135 )
Net gain on sales of property, businesses and consolidated companies	(3,811 )	(45 )	(582 )
Net (gain) loss on sales of ownership interests in nonconsolidated affiliates	(749 )	1	(30 )
Net gain on step acquisition of a nonconsolidated affiliate	(361 )	—	—
Goodwill and other intangible asset impairment losses	—	50	—
Asset impairments and related costs	144	23	184
Restructuring charges (credits)	415	(3 )	(22 )
Loss on early extinguishment of debt	8	—	329
Asbestos-related charge	—	78	—
Excess tax benefits from share-based payment arrangements	(41 )	(42 )	(23 )
Other net loss	172	70	37
Changes in assets and liabilities, net of effects of acquired and divested companies:			
Accounts and notes receivable	(84 )	(884 )	(915 )
Proceeds from interests in trade accounts receivable conduits	1,034	1,079	1,028
Inventories	780	224	130
Accounts payable	(681 )	(79 )	(408 )
Other assets and liabilities	878	(252 )	1,614
Cash provided by operating activities	7,516	6,502	7,823
Investing Activities			
Capital expenditures	(3,703 )	(3,572 )	(2,302 )
Construction of assets pending sale-leaseback	—	(48 )	—
Proceeds from sale-leaseback of assets	3	470	42
Proceeds from sales of property, businesses and consolidated companies, net of cash divested	2,383	119	660
Acquisitions of property, businesses and consolidated companies, net of cash acquired	(123 )	—	—
Purchases of previously leased assets	(46 )	—	—
Investments in consolidated companies, net of cash acquired	—	(5 )	(21 )
Investments in and loans to nonconsolidated affiliates	(803 )	(270 )	(137 )
Distributions and loan repayments from nonconsolidated affiliates	17	69	46
Proceeds from sales of ownership interests in nonconsolidated affiliates	1,528	8	66
Purchases of investments	(1,246 )	(643 )	(462 )
Proceeds from sales and maturities of investments	640	767	639
Cash used in investing activities	(1,350 )	(3,105 )	(1,469 )
Financing Activities			
Changes in short-term notes payable	(82 )	74	(37 )

Edgar Filing: DOW CHEMICAL CO /DE/ - Form 10-K

Proceeds from issuance of long-term debt	1,383	2,448	959
Payments on long-term debt	(1,114)	(747)	(4,272)
Purchases of treasury stock	(1,166)	(4,193)	(307)
Proceeds from issuance of common stock	—	679	386
Proceeds from sales of common stock	508	269	—
Transaction financing, debt issuance and other costs	(88)	(20)	(7)
Excess tax benefits from share-based payment arrangements	41	42	23
Distributions to noncontrolling interests	(112)	(91)	(55)
Contributions from noncontrolling interests	17	36	58
Purchases of noncontrolling interests	(175)	(60)	—
Dividends paid to stockholders	(2,253)	(2,020)	(1,479)
Cash used in financing activities	(3,041)	(3,583)	(4,731)
Effect of Exchange Rate Changes on Cash	(202)	(100)	(1)
Summary			
Increase (decrease) in cash and cash equivalents	2,923	(286)	1,622
Cash and cash equivalents at beginning of year	5,654	5,940	4,318
Cash and cash equivalents at end of year	\$8,577	\$5,654	\$5,940
See Notes to the Consolidated Financial Statements.			

Table of Contents

## The Dow Chemical Company and Subsidiaries

## Consolidated Statements of Equity

(In millions, except per share amounts) For the years ended December 31	2015	2014	2013
<b>Preferred Stock</b>			
Balance at beginning of year and end of year	\$4,000	\$4,000	\$4,000
<b>Common Stock</b>			
Balance at beginning of year	3,107	3,054	3,008
Common stock issued	—	53	46
Balance at end of year	3,107	3,107	3,054
<b>Additional Paid-in Capital</b>			
Balance at beginning of year	4,846	3,928	3,281
Common stock issued / sold	508	895	340
Stock-based compensation and allocation of ESOP shares	(429 )	30	307
Other	11	(7 )	—
Balance at end of year	4,936	4,846	3,928
<b>Retained Earnings</b>			
Balance at beginning of year	23,045	21,407	18,495
Net income available for The Dow Chemical Company common stockholders	7,345	3,432	4,447
Dividends declared on common stock (per share - 2015: \$1.72; 2014: \$1.53; 2013: \$1.28)	(1,942 )	(1,777 )	(1,520 )
Dividend equivalents on participating securities	(23 )	(17 )	(15 )
Balance at end of year	28,425	23,045	21,407
<b>Accumulated Other Comprehensive Loss</b>			
Balance at beginning of year	(8,017 )	(4,827 )	(7,516 )
Other comprehensive income (loss)	(650 )	(3,190 )	2,689
Balance at end of year	(8,667 )	(8,017 )	(4,827 )
<b>Unearned ESOP Shares</b>			
Balance at beginning of year	(325 )	(357 )	(391 )
Shares acquired	—	(11 )	(11 )
Shares allocated to ESOP participants	53	43	45
Balance at end of year	(272 )	(325 )	(357 )
<b>Treasury Stock</b>			
Balance at beginning of year	(4,233 )	(307 )	—
Purchases	(2,688 )	(4,193 )	(307 )
Issuances - compensation plans	766	267	—
Balance at end of year	(6,155 )	(4,233 )	(307 )
<b>The Dow Chemical Company's Stockholders' Equity</b>	<b>25,374</b>	<b>22,423</b>	<b>26,898</b>
<b>Non-redeemable Noncontrolling Interests</b>	<b>809</b>	<b>931</b>	<b>1,026</b>
<b>Total Equity</b>	<b>\$26,183</b>	<b>\$23,354</b>	<b>\$27,924</b>

See Notes to the Consolidated Financial Statements.

Table of Contents

The Dow Chemical Company and Subsidiaries  
Notes to the Consolidated Financial Statements  
Table of Contents

Note		Page
1	<u>Summary of Significant Accounting Policies</u>	<u>75</u>
2	<u>Recent Accounting Guidance</u>	<u>78</u>
3	<u>Restructuring</u>	<u>80</u>
4	<u>Acquisitions</u>	<u>82</u>
5	<u>Divestitures</u>	<u>83</u>
6	<u>Reverse Morris Trust Transaction</u>	<u>86</u>
7	<u>Inventories</u>	<u>88</u>
8	<u>Property</u>	<u>88</u>
9	<u>Nonconsolidated Affiliates and Related Company Transactions</u>	<u>89</u>
10	<u>Goodwill and Other Intangible Assets</u>	<u>92</u>
11	<u>Financial Instruments</u>	<u>95</u>
12	<u>Fair Value Measurements</u>	<u>100</u>
13	<u>Supplementary Information</u>	<u>103</u>
14	<u>Earnings Per Share Calculations</u>	<u>105</u>
15	<u>Commitments and Contingent Liabilities</u>	<u>106</u>
16	<u>Transfers of Financial Assets</u>	<u>115</u>
17	<u>Notes Payable, Long-Term Debt and Available Credit Facilities</u>	<u>116</u>
18	<u>Pension Plans and Other Postretirement Benefits</u>	<u>119</u>
19	<u>Leased Property</u>	<u>126</u>
20	<u>Variable Interest Entities</u>	<u>127</u>
21	<u>Stock-Based Compensation</u>	<u>129</u>
22	<u>Stockholders' Equity</u>	<u>133</u>
23	<u>Income Taxes</u>	<u>135</u>
24	<u>Accumulated Other Comprehensive Loss</u>	<u>138</u>
25	<u>Noncontrolling Interests</u>	<u>139</u>
26	<u>Operating Segments and Geographic Areas</u>	<u>139</u>
27	<u>Planned Merger with DuPont</u>	<u>143</u>
28	<u>Planned Restructure of Dow Corning</u>	<u>144</u>

## NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

## Principles of Consolidation and Basis of Presentation

The accompanying consolidated financial statements of The Dow Chemical Company and its subsidiaries (“Dow” or the “Company”) 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 Company exercises control and, when applicable, entities for which the Company has a controlling financial interest or is the primary beneficiary. 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.

As a result of the early adoption of Accounting Standards Update 2015-03 "Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs," certain reclassifications of prior years' footnote disclosure amounts have been made to conform to the 2015 presentation.

#### 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 Company's consolidated financial statements include amounts that are based on management's best estimates and judgments. Actual results could differ from those estimates.

75

---



## Table of Contents

### Foreign Currency Translation

The local currency has been primarily used as the functional currency throughout the world. 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 or when the foreign subsidiary operates in a hyper-inflationary environment, foreign currency translation 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 as “Accounts and notes 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 Company calculates the fair value of financial instruments using quoted market prices whenever available. When quoted market prices are not available for various types of financial instruments (such as forwards, options and swaps), the Company uses standard pricing models with market-based inputs that take into account the present value of estimated future cash flows.

The Company utilizes derivatives to manage exposures to foreign currency exchange rates, commodity prices and interest rate risk. The fair values of all derivatives are recognized as assets or liabilities at the balance sheet date. Changes in the fair value of these instruments are reported in income or AOCL, depending on the use of the derivative and whether it qualifies for hedge accounting treatment.

Gains and losses on derivatives that are designated and qualify as cash flow hedging instruments are recorded in AOCL, to the extent the hedges are effective, until the underlying transactions are recognized in income. To the extent effective, gains and losses on derivative and nonderivative instruments used as hedges of the Company’s net investment in foreign operations are recorded in AOCL as part of the cumulative translation adjustment. The ineffective portions of cash flow hedges and hedges of net investment in foreign operations, if any, are recognized in income immediately.

Gains and losses on derivatives designated and qualifying as fair value hedging instruments, as well as the offsetting losses and gains on the hedged items, are reported in income in the same accounting period. Derivatives not designated as hedging instruments are marked-to-market at the end of each accounting period with the results included in income.

#### Inventories

Inventories are stated at the lower of cost or market. 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.

The Company 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, unless the asset was capitalized before 1997 when the declining balance method was used. Fully depreciated assets are retained in property and accumulated depreciation accounts until they are removed from service. In the case of disposals, assets

## Table of Contents

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 Company 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.

### Goodwill and Other Intangible Assets

The Company records goodwill when the purchase price of a business acquisition exceeds the estimated fair value of net identified tangible and intangible assets acquired. Goodwill is tested for impairment at the reporting unit level annually, or more frequently when events or changes in circumstances indicate that the fair value of a reporting unit has more likely than not declined below its carrying value. When testing goodwill for impairment, the Company may first assess qualitative factors. If an initial qualitative assessment identifies that it is more likely than not that the carrying value of a reporting unit exceeds its estimated fair value, additional quantitative testing is performed. The Company may also elect to skip the qualitative testing and proceed directly to the quantitative testing. If the quantitative testing indicates that goodwill is impaired, the carrying value of goodwill is written down to fair value. The Company primarily utilizes a discounted cash flow methodology to calculate the fair value of its reporting units. See Note 10 for further information on goodwill.

Finite-lived intangible assets such as purchased customer lists, licenses, intellectual property, 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. Intangible assets are reviewed for impairment or obsolescence annually, or more frequently when events or changes in circumstances indicate that the carrying amount of an intangible asset may not be recoverable. If impaired, intangible assets are written down to fair value based on discounted cash flows.

### Asset Retirement Obligations

The Company records asset retirement obligations as incurred and reasonably estimable, including obligations for which the timing and/or method of settlement are conditional on a future event that may or may not be within the control of the Company. The fair values of obligations are recorded as liabilities on a discounted basis and are accreted over time for the change in present value. Costs associated with the liabilities are capitalized and amortized over the estimated remaining useful life of the asset, generally for periods of 10 years or less.

### Investments

Investments in debt and marketable equity securities (including warrants), primarily held by the Company's insurance operations, are classified as trading, available-for-sale or held-to-maturity. Investments classified as trading are reported at fair value with unrealized gains and losses related to mark-to-market adjustments included in income. Those classified as available-for-sale are reported at fair value with unrealized gains and losses recorded in AOCL. Those classified as held-to-maturity are recorded at amortized cost. The cost of investments sold is determined by FIFO or specific identification. The Company routinely reviews available-for-sale and held-to-maturity securities for other-than-temporary declines in fair value below the cost basis. When events or changes in circumstances indicate the carrying value of an asset may not be recoverable, the security is written down to fair value, establishing a new cost

basis.

#### Revenue

Sales are recognized when the revenue is realized or realizable, and the earnings process is complete. Approximately 99 percent of the Company's sales in 2015 related to sales of product (99 percent in 2014 and 99 percent in 2013). The remaining 1 percent in 2015 primarily related to the Company's service offerings, insurance operations, and licensing of patents and technology (1 percent in 2014 and 1 percent in 2013). Revenue for product sales is recognized as risk and title to the product transfer to the customer, which usually occurs at the time shipment is made. As such, title to the product passes when the product is delivered to the freight carrier. Dow'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.

77

---

## Table of Contents

Revenue related to the Company's insurance operations includes third-party insurance premiums, which are earned over the terms of the related insurance policies and reinsurance contracts. 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.

### Legal Costs

The Company expenses legal costs as incurred. Accruals for legal matters are recorded when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated.

### Severance Costs

The Company routinely reviews its operations around the world in an effort to ensure competitiveness across its businesses and geographic areas. 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 Dow's ongoing benefit arrangements. These severance costs are accrued once management commits to a plan of termination including the number of employees to be terminated, their job classifications or functions, their locations and the expected termination date.

### Income Taxes

The Company 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.

Annual tax provisions include amounts considered sufficient to pay assessments that may result from examinations of prior year tax returns; however, the amount ultimately paid upon resolution of issues raised may differ from the amounts accrued.

The Company 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 Company accrues for other 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. The current portion of uncertain income tax positions is included in "Income taxes payable" and the long-term portion is included in "Other noncurrent obligations" in the consolidated balance sheets.

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.

### Earnings per Common Share

The calculation of earnings per common share is based on the weighted-average number of the Company's common shares outstanding for the applicable period. The calculation of diluted earnings per common share reflects the effect of all dilutive potential common shares that were outstanding during the respective periods, unless the effect of doing so is antidilutive.

## NOTE 2 – RECENT ACCOUNTING GUIDANCE

### Recently Adopted Accounting Guidance

During the fourth quarter of 2014, the Company adopted Accounting Standards Update ("ASU") 2014-08, "Presentation of Financial Statements (Topic 205) and Property, Plant and Equipment (Topic 360): Reporting

Discontinued Operations and Disclosures of Disposals of Components of an Entity," which changes the criteria for determining which disposals can be presented as discontinued operations and modifies related disclosure requirements. This ASU was effective for fiscal years beginning on or after December 15, 2014, and interim periods within those years. Early adoption was permitted, but only for disposals (or classifications as held for sale) that had not been reported in the financial statements previously issued or available for issuance. See Notes 5 and 6 for disclosures related to this adoption.

During the fourth quarter of 2015, the Company adopted ASU 2015-03, "Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs," which requires debt issuance costs to be presented in the balance sheet as a direct deduction from the carrying value of the associated debt liability, and amortization of those costs should be reported as interest expense. This ASU is effective for annual and interim periods beginning after December 15, 2015, and early adoption is permitted for financial statements that have not been previously issued. The new guidance should be applied on a retrospective basis for each period presented in the balance sheet. This change is reflected in "Other current assets," "Deferred charges and other assets," "Long-term debt due within one year" and "Long-Term Debt" in the consolidated balance sheets on a retrospective basis and did not have a material impact on the consolidated financial statements.

## Table of Contents

### Accounting Guidance Issued But Not Adopted as of December 31, 2015

In May 2014, the Financial Accounting Standards Board ("FASB") issued 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. The Company is currently evaluating the impact of adopting this guidance.

In February 2015, the FASB issued ASU 2015-02, "Consolidation (Topic 810): Amendments to the Consolidation Analysis," which makes changes to both the variable interest model and voting interest model and eliminates the indefinite deferral of FASB Statement No. 167, included in ASU 2010-10, for certain investment funds. All reporting entities that hold a variable interest in other legal entities will need to re-evaluate their consolidation conclusions as well as disclosure requirements. This ASU is effective for annual periods beginning after December 15, 2015, and early adoption is permitted, including any interim period. The Company does not expect the adoption of this guidance to have an impact on the consolidated financial statements.

In April 2015, the FASB issued ASU 2015-05, "Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40): Customer's Accounting for Fees Paid in a Cloud Computing Arrangement," which provides guidance about whether a cloud computing arrangement includes a software license. If a cloud computing arrangement includes a software license, the customer should account for the software license element of the arrangement consistent with the acquisition of other software licenses. If a cloud computing arrangement does not include a software license, the customer should account for the arrangement as a service contract. This ASU is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2015, and early adoption is permitted. The Company is currently evaluating the impact of adopting this guidance.

In May 2015, the FASB issued ASU 2015-07, "Fair Value Measurement (Topic 820): Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)," which removes the requirement to categorize within the fair value hierarchy all investments for which fair value is measured using the net asset value per share practical expedient. Further, the amendments remove the requirement to make certain disclosures for all investments that are eligible to be measured at fair value using the net asset value per share practical expedient. This ASU is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2015, and early adoption is permitted. The new guidance should be applied on a retrospective basis to all periods presented. The Company is currently evaluating the impact of adopting this guidance.

In July 2015, the FASB issued ASU 2015-11, "Inventory (Topic 330): Simplifying the Measurement of Inventory," which applies to inventory that is measured using first-in, first-out ("FIFO") or average cost. Under the updated guidance, an entity should measure inventory that is within scope at the lower of cost and net realizable value, which is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. Subsequent measurement is unchanged for inventory that is measured using last-in, first-out ("LIFO"). This ASU is effective for annual and interim periods beginning after December 15, 2016, and should be applied prospectively with early adoption permitted at the beginning of an interim or annual reporting period. The Company is currently evaluating the impact of adopting this guidance.

In November 2015, the FASB issued ASU 2015-17, "Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes," which simplifies the presentation of deferred income taxes by requiring that deferred tax liabilities

and assets be classified as noncurrent in a classified statement of financial position. This ASU is effective for financial statements issued for annual periods beginning after December 16, 2016, and interim periods within those annual periods. The Company will early adopt the new guidance in the first quarter of 2016 and apply the new guidance on a retrospective basis.

In January 2016, the FASB issued ASU 2016-01, "Financial Instruments--Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities," which amends the guidance in U.S. GAAP on the classification and measurement of financial instruments. Changes to the current guidance primarily affects the accounting for equity investments, financial liabilities under the fair value option, and the presentation and disclosure requirements for financial instruments. In addition, the ASU clarifies guidance related to the valuation allowance assessment when recognizing deferred tax assets resulting from unrealized losses on available-for-sale debt securities. The new standard is effective for fiscal years and interim periods beginning after December 15, 2017, and upon adoption, an entity should apply the amendments by means of a cumulative-effect adjustment to the balance sheet at the beginning of the first reporting period in which the guidance is



Table of Contents

effective. Early adoption is not permitted except for the provision to record fair value changes for financial liabilities under the fair value option resulting from instrument-specific credit risk in other comprehensive income. The Company is currently evaluating the impact of adopting this guidance.

## NOTE 3 – RESTRUCTURING

On April 29, 2015, Dow's Board of Directors approved actions to further streamline the organization and optimize the Company's footprint as a result of the separation of a significant portion of Dow's chlorine value chain. These actions, which will further accelerate Dow's value growth and productivity targets, will result in a reduction of approximately 1,750 positions across a number of businesses and functions and adjustments to the Company's asset footprint to enhance competitiveness. These actions are expected to be completed primarily by March 31, 2017.

As a result of these actions, the Company recorded pretax restructuring charges of \$375 million in the second quarter of 2015 consisting of costs associated with exit or disposal activities of \$10 million, severance costs of \$196 million and asset write-downs and write-offs of \$169 million. In the fourth quarter of 2015, the Company recorded restructuring charge adjustments of \$40 million, including severance costs of \$39 million for the separation of approximately 500 additional positions as part of the Company's efforts to further streamline the organization, and \$1 million of costs associated with exit and disposal activities. The impact of these charges is shown as "Restructuring charges (credits)" in the consolidated statements of income and reflected in the Company's segment results as shown in the following table. The Company also recorded \$14 million of "Net loss attributable to noncontrolling interests" for noncontrolling interests' portion of the restructuring charges.

2015 Restructuring Charges by Operating Segment	Costs Associated with Exit or Disposal Activities	Severance Costs	Impairment of Long-Lived Assets, Investments and Other Assets	Total
In millions				
Agricultural Sciences	\$6	\$—	\$8	\$14
Consumer Solutions	2	—	65	67
Infrastructure Solutions	2	—	25	27
Performance Plastics	—	—	12	12
Corporate	—	196	59	255
2015 Restructuring Charges	\$10	\$196	\$169	\$375
Adjustments to 2015 Restructuring Charges:				
Agricultural Sciences	1	—	1	2
Infrastructure Solutions	—	—	(1	) (1
Corporate	—	39	—	39
Total 2015 Restructuring Charges	\$11	\$235	\$169	\$415

Details regarding the components of the 2015 restructuring charges are discussed below:

## Costs Associated with Exit and Disposal Activities

The restructuring charges for costs associated with exit and disposal activities, primarily environmental remediation and contract penalties, totaled \$10 million in the second quarter of 2015, impacting Agricultural Sciences (\$6 million), Consumer Solutions (\$2 million) and Infrastructure Solutions (\$2 million). In the fourth quarter of 2015, the Company increased the restructuring reserve for costs associated with exit and disposal activities by \$1 million, impacting Agricultural Sciences.

#### Severance Costs

The restructuring charges recorded in the second quarter of 2015 included severance of \$196 million for the separation of approximately 1,750 employees under the terms of the Company's ongoing benefit arrangements. In the fourth quarter of 2015, the Company recorded an additional charge of \$39 million related to the separation of approximately 500 additional employees, primarily by March 31, 2017. These costs were charged against Corporate. At December 31, 2015, severance of \$92 million was paid, leaving a liability of \$143 million for approximately 1,250 employees.

Table of Contents

## Impairment of Long-Lived Assets, Investments and Other Assets

The restructuring charges related to the write-down and write-off of assets in the second quarter of 2015 totaled \$169 million. Details regarding the write-downs and write-offs are as follows:

As a result of changing market dynamics in certain end-use markets, select manufacturing facilities and non-core assets aligned with the Dow Electronic Materials business will be shut down. The assets impacted include certain display films and metalorganic precursors, including a metalorganic materials manufacturing site in North Andover, Massachusetts, and related operations in Taoyuan, Taiwan, as well as certain display films' manufacturing assets aligned with SKC Haas Display Films Co., Ltd., a majority-owned joint venture located in Cheonan, South Korea. In the second quarter of 2015, the Company recorded a \$51 million charge for asset write-downs and write-offs in the Dow Electronic Materials business, which is reflected in the Consumer Solutions segment. The facilities and assets associated with these charges are expected to be shut down primarily by the end of 2016.

The Company will shut down and/or consolidate manufacturing capacity in the Dow Building & Construction business. As a result, the Company recorded a charge of \$15 million in the second quarter of 2015 for asset write-offs which is reflected in the Infrastructure Solutions segment. The impacted facilities are expected to be shut down by the end of the third quarter of 2016.

A Consumer Care manufacturing facility in Institute, West Virginia, was shut down in the fourth quarter of 2015. As a result, an asset write-down of \$14 million was recorded against the Consumer Solutions segment.

A Dow Packaging and Specialty Plastics plant in Schkopau, Germany, was permanently shut down in the second quarter of 2015, resulting in an asset write-off of \$12 million against the Performance Plastics segment.

Select operations in Agricultural Sciences were shut down, closed or idled in the second half of 2015, resulting in a pretax charge of \$8 million for the write-down of assets. In the fourth quarter of 2015, the Company recorded an additional charge of \$1 million related to the impairment of long-lived assets and other assets.

A decision was made to shut down a number of small manufacturing and administrative facilities to optimize the Company's asset footprint. Write-downs of \$14 million were recorded in the second quarter of 2015, impacting Infrastructure Solutions (\$10 million) and Corporate (\$4 million). These facilities will be shut down no later than the second quarter of 2016. During the fourth quarter of 2015, the Company recorded a favorable adjustment to the restructuring charge related to the impairment of long-lived assets of \$1 million, impacting Infrastructure Solutions.

Due to a change in the Company's strategy to monetize and exit certain Venture Capital portfolio investments, a write-down of \$55 million was recorded in the second quarter of 2015, reflected in Corporate.

The following table summarizes the activities related to the Company's 2015 restructuring reserve, which is included in "Accrued and other current liabilities" and "Other noncurrent obligations" in the consolidated balance sheets as shown in the following table.

2015 Restructuring Activities	Costs Associated with Exit and Disposal Activities	Severance Costs	Impairment of Long-Lived Assets, Investments and Other Assets	Total
In millions				
Restructuring Charges recognized in the second quarter of 2015	\$ 10	\$ 196	\$ 169	\$ 375

Edgar Filing: DOW CHEMICAL CO /DE/ - Form 10-K

Charges against the reserve	—	—	(169	) (169	)
Adjustments to the reserve	1	39	—	40	)
Impact of currency	(1	) —	—	(1	)
Cash payments	—	(92	) —	(92	)
Reserve balance at Dec 31, 2015	\$10	\$143	\$—	\$153	)

Dow expects to incur additional costs in the future related to its restructuring activities, as the Company continually looks for ways to enhance the efficiency and cost effectiveness of its operations, and to ensure competitiveness across its businesses and geographic areas. Future costs are expected to include demolition costs related to closed facilities and restructuring plan implementation costs; these costs will be recognized as incurred. The Company also expects to incur additional employee-

Table of Contents

related costs, including involuntary termination benefits, related to its other optimization activities. These costs cannot be reasonably estimated at this time.

## 2014 Adjustments to the 4Q12 Restructuring Plan

In 2014, the Company reduced the 4Q12 Restructuring reserve related to contract cancellation fees by \$3 million. The impact of this adjustment is shown as "Restructuring charges (credits)" in the consolidated statements of income and reflected in Performance Materials & Chemicals.

## 2013 Adjustments to the 1Q12 and 4Q12 Restructuring Plans

In 2013, the Company reduced the 4Q12 Restructuring reserve related to contract cancellation fees by \$6 million, impacting Performance Plastics. The Company also reduced the 1Q12 Restructuring reserve related to the adjustment of contract cancellation fees and asbestos abatement costs by \$16 million, impacting Infrastructure Solutions (\$1 million) and Performance Materials & Chemicals (\$15 million). These adjustments are shown as "Restructuring charges (credits)" in the consolidated statements of income.

## NOTE 4 – ACQUISITIONS

## Acquisition of Cooperativa Central de Pesquisa Agrícola's Seed Business

On January 30, 2015, Dow AgroSciences LLC ("DAS") acquired Cooperativa Central de Pesquisa Agrícola's ("Coodetec") seed business for \$169 million, with \$121 million settled in 2015 and the remaining portion to be paid by the end of the first quarter of 2017. The acquisition of Coodetec's seed business is expected to advance the development of Dow AgroSciences' soybean program and strengthen the Company's position in the corn market segment.

The following table summarizes the fair values of the assets acquired and liabilities assumed from Coodetec on January 30, 2015. The valuation process was complete at December 31, 2015.

## Assets Acquired and Liabilities Assumed on January 30, 2015

In millions

Purchase Price	\$ 169
Fair Value of Assets Acquired	
Inventories	\$ 24
Property	35
Other intangible assets (1)	81
Total Assets Acquired	\$ 140
Fair Value of Liabilities Assumed	
Accrued and other current liabilities	\$ 2
Goodwill	\$ 31

(1) Includes \$14 million of trademarks, \$1 million of customer-related intangibles, \$20 million of germplasm and \$46 million of in-process research and development. See Note 10 for additional information.

## Step Acquisition of Univation Technologies, LLC

On May 5, 2015, Univation Technologies, LLC ("Univation"), previously a 50:50 joint venture between Dow and ExxonMobil Chemical Company ("ExxonMobil"), became a wholly owned subsidiary of Dow as a result of ExxonMobil redeeming its entire equity interest in Univation in exchange for certain assets and liabilities of Univation. The Company's equity interest in Univation of \$159 million, previously classified as "Investment in nonconsolidated affiliates" in the consolidated balance sheets, was remeasured to fair value which resulted in a non-taxable gain of \$361 million recognized in the second quarter of 2015, included in "Sundry income (expense) -

net" and reflected in the Performance Plastics segment.

82

---

Table of Contents

The following table summarizes the fair values of Univation's remaining assets and liabilities on May 5, 2015, which are fully consolidated by Dow:

## Assets Acquired and Liabilities Assumed on May 5, 2015

In millions

Fair Value of Previously Held Equity Investment	\$520
Fair Value of Assets Acquired	
Current assets	\$113
Property	56
Other intangible assets (1)	433
Total Assets Acquired	\$602
Fair Value of Liabilities Assumed	
Current liabilities	\$102
Long-term debt	9
Deferred income tax liabilities - noncurrent	126
Total Liabilities Assumed	\$237
Goodwill (2)	\$141

(1) Includes \$340 million of licenses and intellectual property, \$5 million of software, \$12 million of trademarks and \$76 million of customer-related intangibles. See Note 10 for additional information.

(2) Net of a \$14 million settlement of an affiliate's pre-existing obligations and not deductible for tax purposes.

Beginning in May 2015, Univation's results of operations were fully consolidated in the Company's consolidated statements of income. Prior to May 2015, the Company's 50 percent share of Univation's results of operations was reported as "Equity in earnings of nonconsolidated affiliates" in the consolidated statements of income.

## NOTE 5 – DIVESTITURES

## Divestiture of the Global Sodium Borohydride Business

On January 30, 2015, the Company sold its global Sodium Borohydride business ("SBH"), part of the Performance Materials & Chemicals segment, to Vertellus Performance Chemicals LLC. The divestiture included a manufacturing facility located in Elma, Washington, as well as the associated business, inventory, customer contracts and lists, process technology, business know-how and certain intellectual property. The sale was completed for \$184 million, net of working capital adjustments and costs to sell, with proceeds subject to customary post-closing adjustments.

Post-closing adjustments were finalized in the fourth quarter of 2015. In 2015, the Company recognized a pretax gain of \$20 million on the sale, including post-closing adjustments of \$2 million. The gain was included in "Sundry income (expense) - net" and reflected in the Performance Materials & Chemicals segment. The Company recognized an after-tax loss of \$10 million on the sale, primarily due to non-deductible goodwill included with this transaction.

## SBH Assets and Liabilities Divested on January 30, 2015

In millions

Inventories	\$23
Property	21
Goodwill	45
Other intangible assets	75
Total assets divested	\$164
Components of accumulated other comprehensive loss divested	\$2
Net carrying value divested	\$166

The Company evaluated the divestiture of the global Sodium Borohydride business and determined it does not represent a strategic shift that has a major effect on the Company's operations and financial results and does not qualify as an individually significant component of the Company. As a result, this divestiture was not reported as discontinued operations.



Table of Contents

## Divestiture of ANGUS Chemical Company

On February 2, 2015, the Company sold ANGUS Chemical Company (“ANGUS”), part of the Performance Materials & Chemicals segment, to Golden Gate Capital. The divestiture included the business headquarters and research and development facility in Buffalo Grove, Illinois; manufacturing facilities located in Sterlington, Louisiana, and Ibbenbueren, Germany; a packaging facility in Niagara Falls, New York; as well as the associated business, inventory, customer contracts, process technology, business know-how and certain intellectual property. The sale was completed for \$1.151 billion, net of working capital adjustments, costs to sell and other transaction expenses, with proceeds subject to customary post-closing adjustments. The proceeds included a \$10 million note receivable included in "Noncurrent receivables" in the consolidated balance sheets.

Post-closing adjustments were finalized in the fourth quarter of 2015. In 2015, the Company recognized a pretax gain of \$682 million on the sale, including post-closing adjustments of \$12 million. The gain was included in "Sundry income (expense) - net" and reflected in the Performance Materials & Chemicals segment.

## ANGUS Assets and Liabilities Divested on February 2, 2015

In millions

Current assets	\$124
Property	101
Goodwill	292
Deferred charges and other assets	8
Total assets divested	\$525
Current liabilities	\$17
Other noncurrent liabilities	37
Total liabilities divested	\$54
Components of accumulated other comprehensive loss divested	\$10
Net carrying value divested	\$481

The Company evaluated the divestiture of the ANGUS Chemical Company and determined it does not represent a strategic shift that has a major effect on the Company’s operations and financial results and does not qualify as an individually significant component of the Company. As a result, this divestiture was not reported as discontinued operations.

## Divestiture of the AgroFresh Business

On July 31, 2015, the Company sold its AgroFresh business, part of the Agricultural Sciences segment, to Boulevard Acquisition Corp., which was subsequently renamed AgroFresh Solutions, Inc. (“AFSI”). The divestiture included trade receivables, inventory, property, customer lists, trademarks and certain intellectual property. The sale was completed for \$859 million, net of working capital adjustments, costs to sell and other transaction expenses, with proceeds subject to customary post-closing adjustments. The proceeds included a \$635 million cash payment; 17.5 million common shares of AFSI, which represents a 35 percent equity interest, valued at \$210 million based on the closing stock price on July 31, 2015, and included in “Investment in nonconsolidated affiliates” in the consolidated balance sheets; and, a receivable for six million warrants to purchase common shares of AFSI, which was valued at \$14 million and classified as “Accounts and notes receivable - other” in the consolidated balance sheets. The warrants will be received by the Company within nine months from the closing date. The Company is also eligible to receive contingent consideration of \$50 million, subject to certain performance conditions. In addition, the Company has a tax receivable agreement with AFSI, where AFSI is obligated to share with Dow potential tax savings associated with the purchase of the AgroFresh business. The Company has not recognized either of these potential future payments as proceeds. See Notes 9 and 20 for further information on the Company’s equity interest and variable interests in AFSI.

In 2015, the Company recognized a pretax gain of \$626 million on the sale, including post-closing adjustments of \$2 million, of which \$128 million relates to the Company's retained equity interest in AFSI. The pretax gain was included in "Sundry income (expense) - net" and reflected in the Agricultural Sciences segment.

Table of Contents

## AgroFresh Assets and Liabilities Divested on July 31, 2015

In millions

Current assets	\$40
Inventories	18
Property	5
Goodwill	101
Other intangible assets	82
Deferred charges and other assets	1
Total assets divested	\$247
Current liabilities	\$8
Other noncurrent obligations	4
Total liabilities divested	\$12
Net carrying value divested	\$235

The Company evaluated the divestiture of the AgroFresh business and determined it does not represent a strategic shift that has a major effect on the Company's operations and financial results and does not qualify as an individually significant component of the Company. As a result, this divestiture was not reported as discontinued operations.

## Divestiture of Investment in MEGlobal

On December 23, 2015, the Company completed the sale of its ownership interest in MEGlobal, a nonconsolidated affiliate, to EQUATE Petrochemical Company K.S.C. ("EQUATE"). The Company received pretax proceeds of \$1,472 million, net of costs to sell and other transaction expenses. The Company eliminated 42.5 percent of the gain on the sale (equivalent to Dow's ownership interest in EQUATE), or \$555 million. The Company recorded a pretax gain of \$723 million on the sale, which is included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Performance Materials & Chemicals. The Company recognized an after-tax gain of \$589 million on the sale. See Note 9 for further information on the Company's equity interest in EQUATE.

## Divestiture of Ownership Interest in Dow Kokam LLC

On November 22, 2013, the Company sold its 67.4 percent ownership interest in Dow Kokam LLC ("Dow Kokam") to MBP Investors, LLC. The Company recorded a pretax gain of \$26 million on the sale, included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Corporate.

As a condition of the sale, Dow acquired the third party lenders' interest in Dow Kokam's \$75 million note, which is included in "Payments on long-term debt" in the consolidated statements of cash flows, and received a \$75 million note from Dow Kokam. At December 31, 2015, \$15 million (zero at December 31, 2014) was classified as "Accounts and notes receivable - other" and \$46 million (\$61 million at December 31, 2014) was classified as "Noncurrent receivables" in the consolidated balance sheets. The note receivable is due to be paid in full by October 31, 2018. Payments received on the note receivable are included in "Proceeds from sales of property, businesses and consolidated companies, net of cash divested" in the consolidated statements of cash flows.

## Divestiture of Polypropylene Licensing and Catalysts Business

On December 2, 2013, the Company sold its global Polypropylene Licensing and Catalysts business to W. R. Grace & Co. for \$490 million, net of working capital adjustments and costs to sell, with proceeds subject to customary post-closing adjustments which were finalized in the fourth quarter of 2014. The carrying value of the net assets divested was \$39 million. The Company recorded a \$451 million pretax gain on the sale, included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Performance Plastics. The Company recorded an after-tax gain of \$356 million on the sale.

Post-closing adjustments were finalized in the fourth quarter of 2014 and the Company recorded a pretax gain of \$5 million (\$3 million after tax) for the post-closing adjustments. The gain was included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Performance Plastics.

Table of Contents

## NOTE 6 – REVERSE MORRIS TRUST TRANSACTION

On October 5, 2015, (i) the Company completed the transfer of its U.S. Gulf Coast Chlor-Alkali and Vinyl, Global Chlorinated Organics and Global Epoxy businesses ("chlorine value chain") into a new company ("Splitco"), (ii) participating Dow shareholders tendered, and the Company accepted, Dow shares for Splitco shares in a public exchange offer, and (iii) Splitco merged with a wholly owned subsidiary of Olin Corporation ("Olin") in a tax-efficient Reverse Morris Trust transaction (collectively, the "Transaction"). The Transaction was subject to Olin shareholder approval, customary regulatory approvals, tax authority rulings including a favorable private letter ruling from the U.S. Internal Revenue Service which confirms the Transaction to be substantially free of U.S. federal income tax, and expiration of the public exchange offer. Dow does not have an ownership interest in Olin as a result of the Transaction.

Under the terms of a debt exchange offer, Dow received \$1,220 million principal amount of new debt instruments from Splitco, which were subsequently transferred to certain investment banks in a non-cash fair value exchange for \$1,154 million principal amount of the Company's outstanding debt instruments owned by such investment banks. As a result of this debt exchange offer and related transactions, the Company retired \$1,161 million of certain notes and recognized a \$68 million loss on the early extinguishment of debt, included in "Sundry income (expense) - net" in the consolidated statements of income as a component of the pretax gain on the Transaction and reflected in Corporate. See Note 17 for additional information on the early extinguishment of debt.

Dow shareholders who elected to participate in the public exchange offer tendered 34.1 million shares of Dow common stock in exchange for 100 million shares of Splitco. Following the merger of Splitco with Olin, each share of Splitco common stock was automatically converted to the right to receive 0.87482759 shares of Olin common stock, or 87.5 million shares, which represented approximately 52.7 percent of Olin's common stock outstanding. As a result of this non-cash share exchange offer, the Company recorded an increase of \$1,523 million in "Treasury stock at cost" in the consolidated balance sheets, which is valued based on Dow's opening stock price on October 5, 2015. The Company's outstanding shares were reduced by 3 percent as a result of the Transaction.

Under the terms of the Transaction, Dow received cash proceeds of \$875 million in the form of a one-time special payment from Splitco from proceeds received from a term loan and included in "Proceeds from issuance of long-term debt" in the consolidated statements of cash flows. The Company also received a \$434 million advance payment from Olin, included in "Other assets and liabilities" in the consolidated statements of cash flows, related to a long-term ethylene supply agreement, of which \$16 million was classified as "Accrued and other current liabilities" and \$418 million was classified as "Other noncurrent obligations" in the consolidated balance sheets at the time of receipt. The Transaction also resulted in numerous long-term supply, service and purchase agreements between Dow and Olin.

In connection with the Transaction, the Company purchased Mitsui & Co. Texas Chlor-Alkali Inc.'s ("Mitsui") 50 percent equity interest in a membrane chlor-alkali joint venture ("JV Entity"), which resulted in Dow becoming the sole equity owner of the JV Entity. The Company purchased Mitsui's equity interest for \$133 million, which resulted in a loss of \$25 million included in "Sundry income (expense) - net" in the consolidated statements of income and included as component of the pretax gain on the Transaction. The JV Entity was included in the transfer of the chlorine value chain to Splitco. See Note 20 for further information on the acquisition of Mitsui's equity interest in the JV Entity.

The Company also transferred \$439 million of net unfunded defined pension benefit and other postretirement benefit obligations in the United States and Germany to Olin. See Note 18 for further details.



Table of Contents

The following table presents the major classes of assets and liabilities divested in the Transaction, by operating segment:

## Dow Chlorine Value Chain Assets and Liabilities Divested

In millions	Performance Materials & Chemicals	Performance Plastics	Corporate	Total
Accounts and notes receivable - trade	\$269	\$—	\$(6	) \$263
Inventories	297	34	7	338
Other current assets	5	6	100	111
Net property	1,268	205	58	1,531
Goodwill	71	—	—	71
Other noncurrent assets	9	1	34	44
Total assets divested	\$1,919	\$246	\$193	\$2,358
Long-term debt due within one year (1)	\$—	\$—	\$51	\$51
Other current liabilities	99	17	—	116
Long-Term Debt (1)	—	—	518	518
Deferred income tax liabilities - noncurrent	—	—	265	265
Pension and other postretirement benefits - noncurrent	—	—	439	439
Total liabilities divested	\$99	\$17	\$1,273	\$1,389
Components of accumulated other comprehensive loss divested	\$—	\$—	\$(215	) \$(215
Net carrying value divested	\$1,820	\$229	\$(865	) \$1,184

(1) Excludes \$1,161 million included as part of the debt exchange offer and \$875 million from a term loan entered into under the terms of the Transaction. See Note 17 for additional information.

In the fourth quarter of 2015, the Company completed the split-off of the chlorine value chain for \$3,510 million, net of working capital adjustments and costs to sell, with proceeds subject to post-closing adjustments. The proceeds included cash received from Splitco in the form of a one-time special payment from proceeds received from a term loan, the principal amount of the Splitco debt included in the debt exchange offer and the market value of the Dow common shares tendered in the public exchange offer. The Company recognized a pretax gain of \$2,233 million on the Transaction, which is the excess of the sum of the net proceeds received over the chlorine value chain's net book value, a loss on the early extinguishment of debt and a loss on the acquisition of Mitsui's noncontrolling interest. The pretax gain is included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in the following operating segments: Performance Materials & Chemicals (gain of \$1,984 million), Performance Plastics (gain of \$317 million), and Corporate (loss of \$68 million). The Company recognized an after-tax gain of \$2,215 million, primarily due to the tax-efficient nature of the Transaction.

The Company will not report the historical results of the chlorine value chain as discontinued operations in Dow's financial statements, as the divestiture of these businesses does not represent a strategic shift that will have a major effect on the Company's operations and financial results. However, the chlorine value chain is considered an individually significant component and select income statement information is presented below:

## Dow Chlorine Value Chain Income Statement Information

In millions	2015 (1)	2014	2013
Income Before Income Taxes (2)	\$139	\$281	\$212
Loss before income taxes attributable to noncontrolling interests	11	5	4
Income Before Income Taxes attributable to The Dow Chemical Company (2)	\$150	\$286	\$216

(1) Income statement information for 2015 includes results through September 30, 2015.

(2) Excludes transaction costs associated with the separation of the chlorine value chain, which are reported below.

In 2015, the Company incurred pretax charges of \$119 million (\$49 million in 2014) for nonrecurring transaction costs associated with the separation of the chlorine value chain, consisting primarily of financial and professional advisory fees, legal fees and information systems infrastructure costs. These charges, which are part of costs associated with portfolio and productivity actions, were included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Corporate.



Table of Contents

## NOTE 7 – INVENTORIES

The following table provides a breakdown of inventories:

Inventories at December 31 In millions	2015	2014
Finished goods	\$3,850	\$4,547
Work in process	1,506	1,905
Raw materials	747	797
Supplies	768	852
Total inventories	\$6,871	\$8,101

The reserves reducing inventories from a FIFO basis to a LIFO basis amounted to \$8 million at December 31, 2015 and \$569 million at December 31, 2014. Inventories valued on a LIFO basis, principally hydrocarbon and U.S. chemicals and plastics product inventories, represented 30 percent of the total inventories at December 31, 2015 and 29 percent of total inventories at December 31, 2014.

A reduction of certain inventories resulted in the liquidation of some of the Company's LIFO inventory layers, increasing pretax income \$3 million in 2015, decreasing pretax income \$23 million in 2014 and increasing pretax income \$55 million in 2013.

## NOTE 8 – PROPERTY

Property at December 31 In millions	Estimated Useful Lives (Years)	2015	2014
Land	—	\$855	\$874
Land and waterway improvements	15-25	1,282	1,374
Buildings	5-55	4,793	4,910
Machinery and equipment	3-20	35,454	39,278
Utility and supply lines	5-20	2,053	2,448
Other property	3-50	2,010	1,940
Construction in progress	—	4,355	4,406
Total property		\$50,802	\$55,230

In millions	2015	2014	2013
Depreciation expense	\$1,908	\$2,136	\$2,051
Manufacturing maintenance and repair costs	\$1,991	\$2,117	\$2,325
Capitalized interest	\$218	\$125	\$78

Total property declined \$4.4 billion from 2014 primarily due to divestitures, including the split-off of the chlorine value chain and divestiture of ANGUS Chemical Company. See Notes 5 and 6 for further information on these transactions.



Table of Contents

## NOTE 9 – NONCONSOLIDATED AFFILIATES AND RELATED COMPANY TRANSACTIONS

The Company's investments in companies accounted for using the equity method ("nonconsolidated affiliates") were \$3,810 million at December 31, 2015, of which \$3,958 million is classified as "Investment in nonconsolidated affiliates" and \$148 million is classified as "Other noncurrent obligations" in the consolidated balance sheets, and \$4,201 million at December 31, 2014, classified as "Investment in nonconsolidated affiliates." At December 31, 2015, the carrying amount of the Company's investments in nonconsolidated affiliates was \$97 million more than its share of the investees' net assets, exclusive of additional differences for Dow Corning Corporation ("Dow Corning") and EQUATE Petrochemical Company K.S.C. ("EQUATE"), which are discussed separately below. At December 31, 2014, the carrying amount of the Company's investments in nonconsolidated affiliates was \$56 million more than its share of the investees' net assets, exclusive of additional differences for Dow Corning and MEGlobal. Dividends received from the Company's nonconsolidated affiliates were \$816 million in 2015, \$961 million in 2014 (including accrued dividends of \$5 million) and \$905 million in 2013.

At December 31, 2015, the Company's investment in Dow Corning was \$149 million less than the Company's proportionate share of Dow Corning's underlying net assets (\$149 million less at December 31, 2014). This amount is considered a permanent difference related to the other-than-temporary decline in the Company's investment in Dow Corning, triggered by Dow Corning's May 15, 1995, bankruptcy filing, and Dow Corning's purchase of additional ownership interests in its Hemlock Semiconductor Group entities in 2013. Dow Corning emerged from bankruptcy in 2004.

On December 23, 2015, the Company sold its interest in MEGlobal to EQUATE. The Company eliminated 42.5 percent of the gain on the sale (equivalent to Dow's ownership interest in EQUATE), or \$555 million, against the Company's investment in EQUATE, resulting in a negative investment of \$148 million at December 31, 2015, which is classified as "Other noncurrent obligations" in the consolidated balance sheets. The Company's investment in EQUATE was \$555 million less than the Company's proportionate share of EQUATE's underlying net assets, which represents the difference between the preliminary fair values of certain MEGlobal assets acquired and the Company's related valuation on a U.S. GAAP basis, of which approximately \$250 million is being amortized over the remaining useful lives of the assets and approximately \$305 million is considered a permanent difference. Final determination of the fair value of MEGlobal assets acquired by EQUATE may result in adjustments to the preliminary values assigned at the date of acquisition, and could impact the difference between the Company's investment in EQUATE and its proportionate share of EQUATE's assets and the amount of the difference assigned to goodwill and assets to be amortized.

At December 31, 2014, the Company's investment in MEGlobal was \$177 million less than the Company's proportionate share of MEGlobal's underlying net assets. This amount represented the difference between the value of certain assets of the joint venture and the Company's related valuation on a U.S. GAAP basis, of which \$41 million was being amortized over the remaining useful lives of the assets and \$136 million was considered to be a permanent difference. In the fourth quarter of 2014, MEGlobal purchased the noncontrolling interest of a subsidiary, which resulted in a \$3 million reduction in the permanent difference.

On July 31, 2015, the Company sold its AgroFresh business to AFSI. Proceeds received on the divestiture of AgroFresh included 17.5 million common shares of AFSI, which were valued at \$210 million and represent an approximate 35 percent ownership interest in AFSI. The Company has accounted for its ownership interest in AFSI using the equity method of accounting with the Company's investment in AFSI classified as "Investment in nonconsolidated affiliates" in the consolidated balance sheets and the Company's share of AFSI's results of operations included in "Equity in earnings of nonconsolidated affiliates" in the consolidated statements of income, aligned with the Agricultural Sciences segment. If the Company valued its investment in AFSI based on the December 31, 2015, closing stock price of AFSI, the value of this investment would have been lower than the carrying value by \$80 million. See Note 5 for further information on this transaction.

The Company and Saudi Arabian Oil Company formed Sadara Chemical Company ("Sadara") to build and operate a world-scale, fully integrated chemicals complex in Jubail Industrial City, Kingdom of Saudi Arabia. Sadara achieved its first polyethylene production in December 2015 and will follow a phased approach to start up the remaining

manufacturing facilities. At December 31, 2014, the Company had a \$193 million note receivable with Sadara, included in "Noncurrent receivables" in the consolidated balance sheets, that was converted to equity in the first quarter of 2015 and reclassified to "Investment in nonconsolidated affiliates" in the consolidated balance sheets. During 2015, the Company loaned an additional \$753 million to Sadara, of which \$280 million has been converted to equity. Approximately \$460 million of the outstanding note receivable is expected to be converted to equity in the first quarter of 2016.

The nonconsolidated affiliates in which the Company has investments, excluding AFSI, are privately held companies; therefore, quoted market prices are not available.

Table of Contents

Sales to and purchases from nonconsolidated affiliates were not material to the consolidated financial statements. Balances due to or due from nonconsolidated affiliates at December 31, 2015 and 2014 are as follows:

## Balances Due To or Due From Nonconsolidated Affiliates at December 31

In millions	2015	2014
Accounts and notes receivable - other	\$389	\$511
Noncurrent receivables (1)	473	212
Total assets	\$862	\$723
Notes payable	\$171	\$189
Accounts payable - other	230	274
Total current liabilities	\$401	\$463

Included in "Noncurrent receivables" is a \$473 million note receivable with Sadara at December 31, 2015, of (1) which \$460 million is expected to be converted to equity in the first quarter of 2016 (\$193 million at December 31, 2014, which was converted to equity in the first quarter of 2015).

## Principal Nonconsolidated Affiliates

Dow had an ownership interest in 55 nonconsolidated affiliates at December 31, 2015 (59 at December 31, 2014). The Company's principal nonconsolidated affiliates and its ownership interest (direct and indirect) for each at December 31, 2015, 2014 and 2013 are as follows:

## Principal Nonconsolidated Affiliates at December 31

	Ownership Interest			
	2015	2014	2013	
Dow Corning Corporation (1)	50	% 50	% 50	%
EQUATE Petrochemical Company K.S.C.	42.5	% 42.5	% 42.5	%
The Kuwait Olefins Company K.S.C.	42.5	% 42.5	% 42.5	%
The Kuwait Styrene Company K.S.C. (2)	42.5	% 42.5	% N/A	
Map Ta Phut Olefins Company Limited (3)	32.77	% 32.77	% 32.77	%
MEGlobal (4)	N/A	50	% 50	%
Sadara Chemical Company	35	% 35	% 35	%
The SCG-Dow Group:				
Siam Polyethylene Company Limited	50	% 50	% 50	%
Siam Polystyrene Company Limited	50	% 50	% 50	%
Siam Styrene Monomer Co., Ltd.	50	% 50	% 50	%
Siam Synthetic Latex Company Limited	50	% 50	% 50	%
Univation Technologies, LLC (5)	N/A	50	% 50	%

On December 10, 2015, the Company entered into a definitive agreement to restructure the ownership of Dow Corning. Under the terms of the agreements, Dow will become the 100 percent owner of Dow Corning, currently a (1) 50:50 joint venture between Dow and Corning Incorporated ("Corning"). Dow and Corning will maintain their current equity stake in the Hemlock Semiconductor Group. The transaction is expected to close in the first half of 2016.

(2) The Kuwait Styrene Company K.S.C. was added as a principal nonconsolidated affiliate in the fourth quarter of 2014.

The Company's effective ownership of Map Ta Phut Olefins Company Limited is 32.77 percent, of which the (3) Company directly owns 20.27 percent and indirectly owns 12.5 percent through its equity interest in Siam Polyethylene Company Limited and Siam Synthetic Latex Company Limited.

On December 23, 2015, the Company sold its 50 percent ownership interest in MEGlobal to EQUATE. MEGlobal (4) is treated as a separate principal nonconsolidated affiliate through the date of divestiture. See Note 5 for additional information.

(5)

On May 5, 2015, Univation, previously a 50:50 joint venture between Dow and ExxonMobil, became a wholly owned subsidiary of Dow. See Note 4 for additional information on this transaction.

The Company's investment in its principal nonconsolidated affiliates was \$2,972 million at December 31, 2015 and \$3,487 million at December 31, 2014. Equity earnings from these companies were \$704 million in 2015, \$845 million in 2014 and \$951 million in 2013. Equity earnings from principal nonconsolidated affiliates equity earnings decreased in 2015 as higher earnings at The SCG-Dow Group and Map Ta Phut Olefins Company Limited were more than offset by increased equity losses from Sadara, lower earnings from Univation resulting from the May 5, 2015, step acquisition, and lower earnings from EQUATE, TKOC and MEGlobal.

Table of Contents

The summarized financial information that follows represents the combined accounts (at 100 percent) of the principal nonconsolidated affiliates.

## Summarized Balance Sheet Information at December 31

In millions	2015 (1)	2014
Current assets	\$8,794	\$9,611
Noncurrent assets	31,723	27,025
Total assets	\$40,517	\$36,636
Current liabilities	\$9,850	\$6,321
Noncurrent liabilities	21,461	21,047
Total liabilities	\$31,311	\$27,368
Noncontrolling interests	\$663	\$666

(1) The summarized balance sheet information for 2015 does not include Univation; MEGlobal is included as part of EQUATE.

## Summarized Income Statement Information

In millions	2015 (1)	2014	2013 (2)
Sales	\$15,468	\$19,333	\$18,257
Gross profit	\$3,206	\$3,526	\$3,403
Net income	\$1,343	\$1,673	\$1,906

(1) The summarized income statement information for 2015 includes the results of Univation through April 30, 2015 and MEGlobal through November 30, 2015.

(2) The summarized income statement information for 2013 does not include the results of The Kuwait Styrene Company K.S.C. as this entity became a principal nonconsolidated affiliate in 2014.

The Company has service agreements with some of these entities, including contracts to manage the operations of manufacturing sites and the construction of new facilities; licensing and technology agreements; and marketing, sales, purchase, lease and sublease agreements.

The Company sells excess ethylene glycol produced at Dow's manufacturing facilities in the United States and Europe to MEGlobal, an EQUATE subsidiary as of December 23, 2015. The Company also sells ethylene to MEGlobal as a raw material for its ethylene glycol plants in Canada. Sales of these products to MEGlobal represented 1 percent of total net sales in 2015 (1 percent of total net sales in 2014 and 1 percent of total net sales in 2013). Sales of ethylene glycol to MEGlobal are reflected in the Performance Materials & Chemicals segment and represented 2 percent of the segment's sales in 2015 (2 percent in 2014 and 2 percent in 2013). Sales of ethylene to MEGlobal are reflected in the Performance Plastics segment and represented 1 percent of the segment's sales in 2015 (1 percent in 2014 and 2 percent in 2013).

Table of Contents

## NOTE 10 – GOODWILL AND OTHER INTANGIBLE ASSETS

The following tables show changes in the carrying amount of goodwill for the years ended December 31, 2015 and 2014, by operating segment:

2015 Goodwill	Agricultural Sciences	Consumer Solutions	Infrastructure Solutions	Performance Materials & Chemicals	Performance Plastics	Total
In millions						
Gross goodwill at Jan 1, 2015	\$1,558	\$4,598	\$4,451	\$1,029	\$1,425	\$13,061
Accumulated impairments at Jan 1, 2015	—	(209)	—	(220)	—	(429)
Net goodwill at Jan 1, 2015	\$1,558	\$4,389	\$4,451	\$809	\$1,425	\$12,632
Divestiture of ANGUS Chemical Company	—	—	—	(292)	—	(292)
Divestiture of the Sodium Borohydride business	—	—	—	(45)	—	(45)
Sale of Agricultural Sciences product lines	(16)	—	—	—	—	(16)
Divestiture of AgroFresh	(101)	—	—	—	—	(101)
Split-off of the chlorine value chain	—	—	—	(71)	—	(71)
Goodwill related to the Coodetec acquisition	31	—	—	—	—	31
Goodwill related to the Univation step acquisition	—	—	—	—	141	141
Foreign currency impact	—	(15)	(69)	(10)	(31)	(125)
Net goodwill at Dec 31, 2015	\$1,472	\$4,374	\$4,382	\$391	\$1,535	\$12,154
Accumulated impairments at Dec 31, 2015	—	209	—	220	—	429
Gross goodwill at Dec 31, 2015	\$1,472	\$4,583	\$4,382	\$611	\$1,535	\$12,583
2014 Goodwill						
In millions						
Gross goodwill at Jan 1, 2014	\$1,563	\$4,618	\$4,540	\$1,041	\$1,465	\$13,227
Accumulated impairments at Jan 1, 2014	—	(209)	—	(220)	—	(429)
Net goodwill at Jan 1, 2014	\$1,563	\$4,409	\$4,540	\$821	\$1,465	\$12,798
Purchase price adjustment of a seed company	(5)	—	—	—	—	(5)
Foreign currency impact	—	(20)	(89)	(12)	(40)	(161)
Net goodwill at Dec 31, 2014	\$1,558	\$4,389	\$4,451	\$809	\$1,425	\$12,632
	—	209	—	220	—	429



Accumulated impairments  
at Dec 31, 2014

Gross goodwill at Dec 31, 2014	\$1,558	\$4,598	\$4,451	\$1,029	\$1,425	\$13,061
-----------------------------------	---------	---------	---------	---------	---------	----------

#### Goodwill Impairments

The Company performs an impairment test for goodwill annually during the fourth quarter. Qualitative factors may be assessed by the Company to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. The qualitative factors assessed at the Company level include, but are not limited to, GDP growth rates, long-term hydrocarbon and energy prices, equity and credit market activity, discount rates, foreign exchange rates and overall financial performance. Qualitative factors assessed at the reporting unit level include, but are not limited to, changes in industry and market structure, competitive environments, planned capacity and new product launches, cost factors such as raw material prices, and financial performance of the reporting unit.

Table of Contents

## 2015 Goodwill Impairment Testing

In 2015, the Company assessed qualitative factors for 9 of the 12 reporting units carrying goodwill. The qualitative assessment indicated that it was more likely than not that the fair value exceeded carrying value for those reporting units included in the qualitative test. The Company performed the first step of the quantitative testing for the remaining three reporting units. The Company utilized a discounted cash flow methodology to calculate the fair value of the reporting units. Based on the fair value analysis, management concluded that fair value exceeded carrying value for all reporting units. As a result, no additional quantitative testing was required for the reporting units.

## 2014 Goodwill Impairment Testing

In 2014, the Company assessed qualitative factors for 9 of the 14 reporting units carrying goodwill. The qualitative assessment indicated that it was more likely than not that the fair value exceeded carrying value for those reporting units included in the qualitative test. The Company performed the first step of the quantitative testing for the remaining five reporting units. The Company utilized a discounted cash flow methodology to calculate the fair value of the reporting units. Based on the fair value analysis, management concluded that fair value exceeded carrying value for all reporting units. As a result, no additional quantitative testing was required for the reporting units.

## 2013 Goodwill Impairment Testing

In 2013, the Company assessed qualitative factors for 14 of the 19 units carrying goodwill. The qualitative assessment indicated that it was more likely than not that the fair value exceeded carrying value for those reporting units included in the qualitative test. The Company performed the first step of the quantitative testing for the remaining five reporting units. The Company utilized a discounted cash flow methodology to calculate the fair value of the reporting units. Based on the fair value analysis, management concluded that fair value exceeded carrying value for all reporting units. As a result, no additional quantitative testing was required for the reporting units.

## Other Intangible Assets

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

Other Intangible Assets at December 31	2015			2014		
	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
In millions						
Intangible assets with finite lives:						
Licenses and intellectual property	\$1,943	\$(1,087)	) \$856	\$1,777	\$(1,060)	) \$717
Patents	119	(108)	) 11	122	(108)	) 14
Software	1,253	(628)	) 625	1,287	(648)	) 639
Trademarks	666	(441)	) 225	685	(409)	) 276
Customer-related	3,164	(1,366)	) 1,798	3,443	(1,366)	) 2,077
Other	165	(140)	) 25	158	(146)	) 12
Total other intangible assets, finite lives	\$7,310	\$(3,770)	) \$3,540	\$7,472	\$(3,737)	) \$3,735
IPR&D (1), indefinite lives	77	—	) 77	33	—	) 33
Total other intangible assets	\$7,387	\$(3,770)	) \$3,617	\$7,505	\$(3,737)	) \$3,768

(1) In-process research and development ("IPR&D") purchased in a business combination.

On January 30, 2015, DAS acquired Coodetec's seed business resulting in an increase to intangible assets of \$81 million, which included \$14 million of trademarks, \$1 million of customer-related intangibles, \$20 million of germplasm (included in "Other" in the table above) and \$46 million of IPR&D. See Note 4 for additional information on this acquisition.



Table of Contents

Intangible assets acquired as part of the Univation step acquisition are presented in the table below. See Note 4 for additional information on this acquisition.

Univation Intangible Assets In millions	Gross Carrying Amount	Weighted-average Amortization Period
Intangible assets with finite lives:		
Licenses and intellectual property	\$340	10 years
Software	5	5 years
Trademarks	12	18 years
Customer-related	76	10 years
Total	\$433	10 years

The following table provides information regarding amortization expense related to intangible assets:

Amortization Expense In millions	2015	2014	2013
Other intangible assets, excluding software (1)	\$419	\$436	\$461
Software, included in "Cost of sales"	\$72	\$70	\$67

(1) Includes a \$3 million asset impairment charge related to intangible assets in 2013.

During 2014, the Company recognized a \$50 million asset impairment charge related to customer-related, trademarks and intellectual property intangible assets in the Dow Electronic Materials business, which is recorded in "Goodwill and other intangible asset impairment losses" in the consolidated statements of income and reflected in Consumer Solutions. During 2013, the Company recognized a \$3 million asset impairment charge related to software, which is recorded in "Cost of sales" in the consolidated statements of income and reflected in Corporate.

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

Estimated Amortization Expense for Next Five Years In millions	
2016	\$486
2017	\$467
2018	\$453
2019	\$387
2020	\$357

Table of Contents

## NOTE 11 – FINANCIAL INSTRUMENTS

The following table summarizes the fair value of financial instruments at December 31, 2015 and 2014:

## Fair Value of Financial Instruments at December 31

In millions	2015				2014			
	Cost	Gain	Loss	Fair Value	Cost	Gain	Loss	Fair Value
Marketable securities: (1)								
Debt securities:								
Government debt (2)	\$597	\$22	\$(7)	\$612	\$559	\$26	\$(1)	\$584
Corporate bonds	633	26	(8)	651	654	45	(2)	697
Total debt securities	\$1,230	\$48	\$(15)	\$1,263	\$1,213	\$71	\$(3)	\$1,281
Equity securities	555	108	(60)	603	566	177	(15)	728
Total marketable securities	\$1,785	\$156	\$(75)	\$1,866	\$1,779	\$248	\$(18)	\$2,009
Long-term debt including								
debt due within one year (3)	\$(16,756)	\$424	\$(1,668)	\$(18,000)	\$(19,123)	\$69	\$(2,396)	\$(21,450)
(4)								
Derivatives relating to:								
Interest rates	\$—	\$—	\$(4)	\$(4)	\$—	\$—	\$(12)	\$(12)
Commodities (5)	\$—	\$6	\$(248)	\$(242)	\$—	\$3	\$(81)	\$(78)
Foreign currency	\$—	\$109	\$(32)	\$77	\$—	\$26	\$(71)	\$(45)

(1) Included in “Other investments” in the consolidated balance sheets.

(2) U.S. Treasury obligations, U.S. agency obligations, agency mortgage-backed securities and other municipalities’ obligations.

(3) Cost includes fair value adjustments of \$18 million at December 31, 2015 and \$21 million at December 31, 2014.

(4) Presented in accordance with newly implemented ASU 2015-03. See Note 2 for further information.

(5) Presented net of cash collateral, as disclosed in Note 12.

Cost approximates fair value for all other financial instruments.

## Investments

The Company’s investments in marketable securities are primarily classified as available-for-sale securities. The following table provides the investing results from available-for-sale securities for the years ended December 31, 2015, 2014 and 2013.

## Investing Results

In millions	2015	2014	2013
Proceeds from sales of available-for-sale securities	\$565	\$675	\$486
Gross realized gains	\$96	\$99	\$66
Gross realized losses	\$(14)	\$(6)	\$(4)

The following table summarizes the contractual maturities of the Company’s investments in debt securities:

Contractual Maturities of Debt Securities  
at December 31, 2015

In millions	Amortized Cost	Fair Value
Within one year	\$18	\$18
One to five years	442	453

Six to ten years	567	578
After ten years	203	214
Total	\$1,230	\$1,263

At December 31, 2015, the Company had \$3,354 million (\$1,050 million at December 31, 2014) of held-to-maturity securities (primarily Treasury Bills) classified as cash equivalents as these securities had maturities of three months or less at the time of purchase. The Company's investments in held-to-maturity securities are held at amortized cost, which approximates fair value. At December 31, 2015, the Company had investments in money market funds of \$1,689 million classified as cash equivalents (\$1,655 million at December 31, 2014).

Table of Contents

The net unrealized gain/loss from mark-to-market adjustments recognized in earnings on trading securities held at the end of the year was a \$2 million loss in 2015, a \$3 million gain in 2014 and a \$13 million loss in 2013.

The following table provides the fair value and gross unrealized losses of the Company's investments that were deemed to be temporarily impaired at December 31, 2015 and 2014, aggregated by investment category:

## Temporarily Impaired Securities at December 31, 2015

In millions	Less than 12 months		12 months or more		Total	Unrealized Losses
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	
Government debt (1)	\$251	\$(7 )	\$1	\$—	\$252	\$(7 )
Corporate bonds	175	(8 )	1	—	176	(8 )
Equity securities	197	(54 )	10	(6 )	207	(60 )
Total temporarily impaired securities	\$623	\$(69 )	\$12	\$(6 )	\$635	\$(75 )

(1) U.S. Treasury obligations, U.S. agency obligations, agency mortgage-backed securities and other municipalities' obligations.

## Temporarily Impaired Securities at December 31, 2014

In millions	Less than 12 months		12 months or more		Total	Unrealized Losses
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	
Government debt (1)	\$74	\$(1 )	\$31	\$(1 )	\$105	\$(2 )
Corporate bonds	102	(1 )	4	—	106	(1 )
Equity securities	175	(15 )	—	—	175	(15 )
Total temporarily impaired securities	\$351	\$(17 )	\$35	\$(1 )	\$386	\$(18 )

(1) U.S. Treasury obligations, U.S. agency obligations, agency mortgage-backed securities and other municipalities' obligations.

Portfolio managers regularly review the Company'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.

For debt securities, the credit rating of the issuer, current credit rating trends, the trends of the issuer's overall sector, the ability of the issuer to pay expected cash flows and the length of time the security has been in a loss position are considered in determining whether unrealized losses represent an other-than-temporary impairment. The Company did not have any credit-related losses during 2015, 2014 or 2013.

For equity securities, the Company's investments are primarily in Standard & Poor's ("S&P") 500 companies; however, the Company's policies allow investments in companies outside of the S&P 500. The largest holdings are Exchange Traded Funds that represent the S&P 500 index or an S&P 500 sector or subset; the Company also has holdings in Exchange Traded Funds that represent emerging markets. The Company considers the evidence to support the recovery of the cost basis of a security including volatility of the stock, the length of time the security has been in a loss position, value and growth expectations, and overall market and sector fundamentals, as well as technical analysis, in determining whether unrealized losses represent an other-than-temporary impairment. In 2015, other-than-temporary impairment write-downs on investments still held by the Company were \$2 million (\$6 million in 2014).

The aggregate cost of the Company's cost method investments totaled \$157 million at December 31, 2015 (\$181 million at December 31, 2014). Due to the nature of these investments, either the cost basis approximates fair market value or fair value is not readily determinable. These investments are reviewed quarterly for impairment indicators. During the second quarter of 2015, a write-down of \$55 million was recorded as part of the 2015 restructuring charge due to a change in the Company's strategy to monetize and exit certain Venture Capital portfolio investments. See Note 3 for more information on the Company's restructuring activities. The Company's impairment analysis resulted in additional reductions in the cost basis of these investments of less than \$1 million for the year ended December 31, 2015; the analysis in 2014 resulted in an \$18 million reduction for the year ended December 31, 2014.



## Table of Contents

### Risk Management

Dow's business operations give rise to market risk exposure due to changes in interest rates, foreign currency exchange rates, commodity prices and other market factors such as equity prices. To manage such risks effectively, the Company enters into hedging transactions, pursuant to established guidelines and policies, which enable it to mitigate the adverse effects of financial market risk. Derivatives used for this purpose are designated as cash flow, fair value or net foreign investment hedges where appropriate. Accounting guidance requires companies to recognize all derivative instruments as either assets or liabilities at fair value. A secondary objective is to add value by creating additional nonspecific exposures within established limits and policies; derivatives used for this purpose are not designated as hedges. The potential impact of creating such additional exposures is not material to the Company's results.

The Company's risk management program for interest rate, foreign currency and commodity risks is based on fundamental, mathematical and technical models that take into account the implicit cost of hedging. Risks created by derivative instruments and the mark-to-market valuations of positions are strictly monitored at all times, using value at risk and stress tests. Counterparty credit risk arising from these contracts is not significant because the Company minimizes counterparty concentration, deals primarily with major financial institutions of solid credit quality, and the majority of its hedging transactions mature in less than three months. In addition, the Company minimizes concentrations of credit risk through its global orientation by transacting with large, internationally diversified financial counterparties. It is the Company's policy to not have credit-risk-related contingent features in its derivative instruments. No significant concentration of counterparty credit risk existed at December 31, 2015. The Company does not anticipate losses from credit risk, and the net cash requirements arising from counterparty risk associated with risk management activities are not expected to be material in 2016.

The Company revises its strategies as market conditions dictate and management reviews its overall financial strategies and the impacts from using derivatives in its risk management program with the Company's Board of Directors.

### Interest Rate Risk Management

The Company enters into various interest rate contracts with the objective of lowering funding costs or altering interest rate exposures related to fixed and variable rate obligations. In these contracts, the Company agrees with other parties to exchange, at specified intervals, the difference between fixed and floating interest amounts calculated on an agreed-upon notional principal amount. At December 31, 2015, the Company had open interest rate swaps with maturity dates that extend to 2021.

### Foreign Currency Risk Management

The Company's global operations require active participation in foreign exchange markets. The Company enters into foreign exchange forward contracts and options, and cross-currency swaps to hedge various currency exposures or create desired exposures. Exposures primarily relate to assets, liabilities and bonds denominated in foreign currencies, as well as economic exposure, which is derived from the risk that currency fluctuations could affect the dollar value of future cash flows related to operating activities. The primary business objective of the activity is to optimize the U.S. dollar value of the Company's assets, liabilities and future cash flows with respect to exchange rate fluctuations. Assets and liabilities denominated in the same foreign currency are netted, and only the net exposure is hedged. At December 31, 2015, the Company had forward contracts, options and cross-currency swaps to buy, sell or exchange foreign currencies. These contracts had various expiration dates, primarily in the first quarter of 2016.

### Commodity Risk Management

The Company has exposure to the prices of commodities in its procurement of certain raw materials. The primary purpose of commodity hedging activities is to manage the price volatility associated with these forecasted inventory purchases. At December 31, 2015, the Company had futures contracts, options and swaps to buy, sell or exchange commodities. These agreements had various expiration dates through the fourth quarter of 2020.

## Accounting for Derivative Instruments and Hedging Activities

### Cash Flow Hedges

For derivatives that are designated and qualify as cash flow hedging instruments, the effective portion of the gain or loss on the derivative is recorded in “Accumulated other comprehensive loss” (“AOCL”); it is reclassified to “Cost of sales” in the same period or periods that the hedged transaction affects income. The unrealized amounts in AOCL fluctuate based on changes in the fair value of open contracts at the end of each reporting period. The Company anticipates volatility in AOCL and net income from its cash flow hedges. The amount of volatility varies with the level of derivative activities and market conditions during any period. Gains and losses on the derivatives representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized in current period income.

Table of Contents

The Company had open interest rate derivatives designated as cash flow hedges at December 31, 2015 with a net loss of \$3 million after tax and a notional U.S. dollar equivalent of \$338 million (net loss of \$8 million after tax and a notional U.S. dollar equivalent of \$434 million at December 31, 2014).

Current open foreign currency forward contracts hedge the currency risk of forecasted feedstock purchase transactions until July 2016. The effective portion of the mark-to-market effects of the foreign currency forward contracts is recorded in AOCL; it is reclassified to income in the same period or periods that the underlying feedstock purchase affects income. The net gain from the foreign currency hedges included in AOCL at December 31, 2015 was \$4 million after tax (net gain of \$31 million after tax at December 31, 2014). During 2015, 2014 and 2013, there was no material impact on the consolidated financial statements due to foreign currency hedge ineffectiveness. At December 31, 2015, the Company had open forward contracts with various expiration dates to buy, sell or exchange foreign currencies with a notional U.S. dollar equivalent of \$398 million (\$374 million at December 31, 2014).

Commodity swaps, futures and option contracts with maturities of not more than 48 months are utilized and designated as cash flow hedges of forecasted commodity purchases. Current open contracts hedge forecasted transactions until December 2020. The effective portion of the mark-to-market effect of the cash flow hedge instrument is recorded in AOCL; it is reclassified to income in the same period or periods that the underlying commodity purchase affects income. The net loss from commodity hedges included in AOCL at December 31, 2015 was \$180 million after tax (\$96 million after tax loss at December 31, 2014). During 2015, 2014 and 2013, there was no material impact on the consolidated financial statements due to commodity hedge ineffectiveness. At December 31, 2015 and 2014, the Company had the following gross aggregate notionals of outstanding commodity forward, options and futures contracts to hedge forecasted purchases:

Commodity	Dec 31, 2015	Dec 31, 2014	Notional Volume Unit
Corn	1.0	1.3	million bushels
Crude Oil	0.4	0.5	million barrels
Ethane	—	0.9	million barrels
Natural Gas	257.4	192.5	million million British thermal units
Soybeans	1.4	1.2	million bushels

The net after-tax amounts to be reclassified from AOCL to income within the next 12 months are a \$27 million loss for commodity contracts, a \$4 million gain for foreign currency contracts and a \$2 million loss for interest rate contracts.

**Fair Value Hedges**

For derivative instruments that are designated and qualify as fair value hedges, the gain or loss on the derivative as well as the offsetting loss or gain on the hedged item attributable to the hedged risk are recognized in current period income and reflected as “Interest expense and amortization of debt discount” in the consolidated statements of income. The short-cut method is used when the criteria are met. During 2015, the Company entered into and subsequently terminated an interest rate swap designated as a fair value hedge of an underlying fixed rate debt obligation with a maturity date of May 2019. The fair value adjustments resulting from this swap were a gain on the derivative of less than \$1 million. At December 31, 2015 and 2014, the Company had no open interest rate swaps designated as fair value hedges of underlying fixed rate debt obligations.

**Net Foreign Investment Hedges**

For derivative instruments that are designated and qualify as net foreign investment hedges, the effective portion of the gain or loss on the derivative is included in “Cumulative Translation Adjustments” in AOCL. At December 31, 2015 and 2014, the Company had no open forward contracts or outstanding options to buy, sell or exchange foreign

currencies designated as net foreign investment hedges. At December 31, 2015, the Company had outstanding foreign-currency denominated debt designated as a hedge of net foreign investment of \$166 million (\$167 million at December 31, 2014). The results of hedges of the Company's net investment in foreign operations included in "Cumulative Translation Adjustments" in AOCL was a net gain of \$1 million after tax for the period ended December 31, 2015 (net gain of \$15 million after tax for the period ended December 31, 2014). During 2015, 2014 and 2013 there was no material impact on the consolidated financial statements due to hedge ineffectiveness. See Note 24 for further detail on changes in AOCL.

Table of Contents

## Other Derivative Instruments

The Company utilizes futures, options and swap instruments that are effective as economic hedges of commodity price exposures, but do not meet hedge accounting criteria for derivatives and hedging. At December 31, 2015 and 2014, the Company had the following gross aggregate notionals of outstanding commodity contracts:

Commodity	Dec 31, 2015	Dec 31, 2014	Notional Volume Unit
Ethane	—	0.2	million barrels
Gasoline	—	15.0	kilotons
Naphtha Price Spread	15.0	91.0	kilotons
Natural Gas	—	0.5	million million British thermal units
Propane	0.5	—	million barrels

The Company also uses foreign exchange forward contracts, options and cross-currency swaps that are not designated as hedging instruments primarily to manage foreign currency exposure. The Company had open foreign exchange contracts and cross-currency swaps with various expiration dates to buy, sell or exchange foreign currencies with a gross notional U.S. dollar equivalent of \$14,515 million at December 31, 2015 (\$20,156 million at December 31, 2014) and had no open interest rate swaps at December 31, 2015 and December 31, 2014.

The following table provides the fair value and gross balance sheet classification of derivative instruments at December 31, 2015 and 2014:

Fair Value of Derivative Instruments In millions	Balance Sheet Classification	2015	2014
Asset Derivatives			
Derivatives designated as hedges:			
Commodities	Other current assets	\$3	\$4
Foreign currency	Accounts and notes receivable – Other	5	25
Total derivatives designated as hedges		\$8	\$29
Derivatives not designated as hedges:			
Commodities	Other current assets	\$4	\$2
Foreign currency	Accounts and notes receivable – Other	156	91
Total derivatives not designated as hedges		\$160	\$93
Total asset derivatives		\$168	\$122
Liability Derivatives			
Derivatives designated as hedges:			
Interest rates	Accounts payable – Other	\$4	\$12
Commodities	Accounts payable – Other	28	58
Commodities	Other noncurrent obligations	234	48
Foreign currency	Accounts payable – Other	1	—
Total derivatives designated as hedges		\$267	\$118
Derivatives not designated as hedges:			
Commodities	Accounts payable – Other	\$—	\$2
Foreign currency	Accounts payable – Other	83	161
Total derivatives not designated as hedges		\$83	\$163
Total liability derivatives		\$350	\$281

Foreign currency derivatives not designated as hedges are offset by foreign exchange gains or losses resulting from the underlying exposures of foreign currency denominated assets and liabilities. The amount charged on a pretax basis related to foreign currency derivatives not designated as a hedge, which is included in "Sundry income (expense) - net" in the consolidated statements of income, was a loss of \$318 million for 2015, loss of \$333 million for 2014 and gain of \$89 million for 2013. See Note 13 for the net impact of foreign exchange transactions.

Table of Contents

## NOTE 12 – FAIR VALUE MEASUREMENTS

## Fair Value Measurements on a Recurring Basis

The following tables summarize the bases used to measure certain assets and liabilities at fair value on a recurring basis:

Basis of Fair Value Measurements on a Recurring Basis at December 31, 2015	Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Counterparty and Cash Collateral Netting (1)	Total
In millions					
Assets at fair value:					
Cash equivalents (2)	\$—	\$5,043	\$—	\$—	\$5,043
Interests in trade accounts receivable conduits (3)	—	—	943	—	943
Equity securities (4)	564	39	—	—	603
Debt securities: (4)					
Government debt (5)	—	612	—	—	612
Corporate bonds	—	651	—	—	651
Derivatives relating to: (6)					
Commodities	5	2	—	(1	) 6
Foreign currency	—	161	—	(52	) 109
Total assets at fair value	\$569	\$6,508	\$943	\$(53	) \$7,967
Liabilities at fair value:					
Long-term debt (7)	\$—	\$18,000	\$—	\$—	\$18,000
Derivatives relating to: (6)					
Interest rates	—	4	—	—	4
Commodities	6	256	—	(14	) 248
Foreign currency	—	84	—	(52	) 32
Total liabilities at fair value	\$6	\$18,344	\$—	\$(66	) \$18,284

(1) Cash collateral amounts represent the estimated net settlement amount when applying netting and set-off rights included in master netting arrangements between the Company and its counterparties and the payable or receivable for cash collateral held or placed with the same counterparty.

(2) Treasury Bills and money market funds included in "Cash and cash equivalents" in the consolidated balance sheets and held at amortized cost, which approximates fair value.

(3) Included in "Accounts and notes receivable – Other" in the consolidated balance sheets. See Note 16 for additional information on transfers of financial assets.

(4) The Company's investments in equity and debt securities are primarily classified as available-for-sale and are included in "Other investments" in the consolidated balance sheets.

(5) U.S. Treasury obligations, U.S. agency obligations, agency mortgage-backed securities and other municipalities' obligations.

(6) See Note 11 for the classification of derivatives in the consolidated balance sheets.

(7) See Note 11 for information on fair value measurements of long-term debt.

Table of Contents

Basis of Fair Value Measurements on a Recurring Basis at December 31, 2014	Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Counterparty and Cash Collateral Netting (1)	Total
In millions					
Assets at fair value:					
Cash equivalents (2)	\$—	\$2,705	\$—	\$—	\$2,705
Interests in trade accounts receivable conduits (3)	—	—	1,328	—	1,328
Equity securities (4)	692	36	—	—	728
Debt securities: (4)					
Government debt (5)	—	584	—	—	584
Corporate bonds	—	697	—	—	697
Derivatives relating to: (6)					
Commodities	—	6	—	(3	) 3
Foreign currency	—	116	—	(90	) 26
Total assets at fair value	\$692	\$4,144	\$1,328	\$(93	) \$6,071
Liabilities at fair value:					
Long-term debt (7)	\$—	\$21,450	\$—	\$—	\$21,450
Derivatives relating to: (6)					
Interest Rates	—	12	—	—	12
Commodities	9	99	—	(27	) 81
Foreign currency	—	161	—	(90	) 71
Total liabilities at fair value	\$9	\$21,722	\$—	\$(117	) \$21,614

(1) Cash collateral amounts represent the estimated net settlement amount when applying netting and set-off rights included in master netting arrangements between the Company and its counterparties and the payable or receivable for cash collateral held or placed with the same counterparty.

(2) Treasury Bills and money market funds included in "Cash and cash equivalents" in the consolidated balance sheets and held at amortized cost, which approximates fair value.

(3) Included in "Accounts and notes receivable – Other" in the consolidated balance sheets. See Note 16 for additional information on transfers of financial assets.

(4) The Company's investments in equity and debt securities are primarily classified as available-for-sale and are included in "Other investments" in the consolidated balance sheets.

(5) U.S. Treasury obligations, U.S. agency obligations, agency mortgage-backed securities and other municipalities' obligations.

(6) See Note 11 for the classification of derivatives in the consolidated balance sheets.

(7) See Note 11 for information on fair value measurements of long-term debt.

Assets and liabilities related to forward contracts, interest rate swaps, currency swaps, options and other conditional or exchange contracts executed with the same counterparty under a master netting arrangement are netted. Collateral accounts are netted with corresponding liabilities. The Company posted cash collateral of \$26 million at December 31, 2015 (\$29 million of cash collateral at December 31, 2014).

For assets and liabilities classified as Level 1 measurements (measured using quoted prices in active markets), 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 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 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. Market inputs are obtained from well-established and recognized vendors of market data and subjected to tolerance/quality checks.

For all other assets and liabilities 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. See Note 11 for further information on the types of instruments used by the Company for risk management.

Table of Contents

There were no transfers between Levels 1 and 2 during the years ended December 31, 2015 and December 31, 2014. For assets classified as Level 3 measurements, the fair value is based on significant unobservable inputs including assumptions where there is little, if any, market activity. The fair value of the Company's interests held in trade receivable conduits is determined by calculating the expected amount of cash to be received using the key input of anticipated credit losses in the portfolio of receivables sold that have not yet been collected. Given the short-term nature of the underlying receivables, discount rate and prepayments are not factors in determining the fair value of the interests. See Note 16 for further information on assets classified as Level 3 measurements.

The following table summarizes the changes in fair value measurements using Level 3 inputs for the years ended December 31, 2015 and 2014:

## Fair Value Measurements Using Level 3 Inputs for Interests Held in Trade

Receivable Conduits (1)	2015	2014
In millions		
Balance at January 1	\$1,328	\$1,227
Gain included in earnings (2)	2	9
Purchases	647	1,171
Settlements	(1,034	) (1,079
Balance at December 31	\$943	\$1,328

(1)Included in "Accounts and notes receivable – Other" in the consolidated balance sheets.

(2)Included in "Selling, general and administrative expenses" in the consolidated statements of income.

## Fair Value Measurements on a Nonrecurring Basis

The following table summarizes the basis used to measure certain assets and liabilities at fair value on a nonrecurring basis in the consolidated balance sheets in 2015, 2014 and 2013:

Basis of Fair Value Measurements on a Nonrecurring Basis	Significant Other Unobservable Inputs (Level 3)	Total Losses
In millions		
2015		
Assets at fair value:		
Long-lived assets, equity method investments, investments and other assets	\$24	\$(313
2014		
Assets at fair value:		
Long-lived assets and other assets	\$4	\$(73
2013		
Assets at fair value:		
Long-lived assets, other assets and equity method investments	\$127	\$(178

## 2015 Fair Value Measurements on a Nonrecurring Basis

As part of the 2015 restructuring plan that was approved on April 29, 2015, the Company will shut down a number of manufacturing facilities. The manufacturing assets and facilities associated with this plan, classified as Level 3 measurements, were written down to \$7 million using unobservable inputs, including assumptions a market participant would use to measure the fair value of the group of assets. In addition, a change in the Company's strategy to monetize and exit certain Venture Capital portfolio investments resulted in the write-down of certain investments. These investments, also classified as Level 3 measurements, were valued at \$17 million using unobservable inputs, including assumptions a market participant would use to measure the fair value of the investment. These impairment charges, totaling \$169 million, are included in "Restructuring charges (credits)" in the consolidated statements of

income. See Note 3 for additional information on the Company's 2015 restructuring program.

As a result of the Company's continued actions to optimize its footprint, the Company recognized an impairment charge of \$144 million in the fourth quarter of 2015, related to manufacturing assets and facilities and an equity method investment. These assets, classified as Level 3 measurements, were written down to zero. The impairment charges were included in "Cost of

102

---

Table of Contents

sales" (\$91 million) and "Sundry income (expense) - net" (\$53 million) in the consolidated statements of income and reflected in Infrastructure Solutions (\$87 million) and Performance Plastics (\$57 million).

## 2014 Fair Value Measurements on a Nonrecurring Basis

As a result of weakening demand for certain optical and ceramic technologies, the Company recognized a \$73 million asset impairment charge in the fourth quarter of 2014 in the Dow Electronic Materials business. The charge was included in "Cost of sales" (\$23 million) and "Goodwill and other intangible asset impairment losses" (\$50 million) in the consolidated statements of income and reflected in Consumer Solutions. The assets, classified as Level 3 measurements, were written down to \$4 million based on a valuation using unobservable inputs, including assumptions a market participant would use to measure the fair value of the group of assets, which included projected cash flows.

## 2013 Fair Value Measurements on a Nonrecurring Basis

As a result of Dow's announcement of its new market-driven growth strategy, the Company recognized a \$178 million asset impairment charge in the fourth quarter of 2013, including charges for manufacturing plant shutdowns. The charge was included in "Cost of sales" (\$175 million) and "Amortization of intangibles" (\$3 million) in the consolidated statements of income and impacted the following businesses/operating segments: Energy & Water Solutions and Performance Monomers businesses, part of the Infrastructure Solutions segment (\$93 million); Chlor-Alkali and Vinyl, Epoxy and Polyurethanes businesses, part of the Performance Materials & Chemicals segment (\$70 million); and Corporate (\$15 million). The assets, classified as Level 3 measurements, were valued at \$127 million using unobservable inputs, including assumptions a market participant would use to measure the fair value of the group of assets, which included projected cash flows. The carrying value by segment was as follows: Infrastructure Solutions assets were valued at \$100 million; Performance Materials & Chemicals assets were valued at \$9 million; and Corporate assets were valued at \$18 million.

## NOTE 13 – SUPPLEMENTARY INFORMATION

## Sundry Income (Expense) – Net

In millions	2015	2014	2013
Gain on sales of other assets and investments (1)	\$237	\$40	\$98
Foreign exchange loss	(191)	(61)	(31)
Gain on split-off of chlorine value chain (2)	2,233	—	—
Gain on sale of MEGlobal (3)	723	—	—
Gain on divestiture of ANGUS Chemical Company (3)	682	—	—
Gain on divestiture of AgroFresh business (3) (9)	618	—	—
Gain on Univation step acquisition (4)	361	—	—
Costs associated with portfolio and productivity actions (5)	(119)	(49)	—
Gain on sale of Agricultural Sciences subsidiary (6)	44	—	—
Gain on divestiture of Sodium Borohydride business (3)	20	—	—
Loss on early extinguishment of debt (7)	(8)	—	(329)
Gain on termination of ethylene off-take agreement	—	53	—
K-Dow settlement (8)	—	—	2,161
Gain on sale of Polypropylene Licensing and Catalysts business (3)	—	5	451
Gain on sale of a 7.5 percent ownership interest in Freeport LNG Development, L.P.	—	—	87
Gain on sale of ownership interest in Dow Kokam LLC (3)	—	—	26
Reclassification of cumulative translation adjustments	(4)	(12)	21
Other - net	(4)	(3)	70

Total sundry income (expense) – net \$4,592 \$(27 ) \$2,554

The 2013 gain on sales of other assets and investments also included a \$21 million gain reported as

(1) "Reclassification of cumulative translation adjustments."

(2) See Note 6 for additional information.

(3) See Note 5 for additional information.

(4) See Note 4 for additional information.

Nonrecurring transaction costs associated with the separation of the chlorine value chain, the planned all-stock merger of equals with DuPont, the planned ownership restructure of Dow Corning, implementation of the restructuring program and productivity actions.

(5) See Note 20 for additional information.

(6) Excludes a \$68 million loss on the early redemption on debt related to the split-off of the chlorine value chain. See Notes 6 and 17 for additional information.

(7) See Note 15 for additional information.

(8) Includes an \$8 million loss on mark-to-market adjustments related to warrants.

Table of Contents

## Other Income Statement Information

In millions	2015 (1)	2014	2013
Provision for doubtful receivables (2)	\$1	\$52	\$59

(1) Dow's provision for doubtful accounts was lower in 2015 due to the adjustment of certain reserve rates based on historical write-off experience, the impact of lower selling prices and the impact of divestitures.

(2) Included in "Selling, general and administrative expenses" in the consolidated statements of income.

## Supplemental Disclosure of Cash Flow Information

In millions	2015	2014	2013
Cash payments for interest	\$1,137	\$1,038	\$1,191
Cash payments for income taxes	\$1,405	\$1,109	\$1,708

## Accrued and Other Current Liabilities

"Accrued and other current liabilities" were \$3,212 million at December 31, 2015 and \$2,839 million at December 31, 2014. Accrued payroll, which is a component of "Accrued and other current liabilities," was \$1,120 million at December 31, 2015 and \$855 million at December 31, 2014. No other component of accrued liabilities was more than 5 percent of total current liabilities.

## Other Investments

The Company has investments in company-owned life insurance ("COLI") policies, which are recorded at their cash surrender value as of each balance sheet date, as provided below:

## Investments in Company-owned Life Insurance at December 31

In millions	2015	2014
Gross cash value	\$850	\$869
Less: Outstanding borrowings	58	767
Investment in Company-owned life insurance (1)	\$792	\$102

(1) Classified as "Other investments" in the consolidated balance sheets.

During the fourth quarter of 2015, the Company repaid \$697 million of principal outstanding loan amounts plus accrued interest, which is reflected in "Purchases of investments" in the consolidated statements of cash flows.

Table of Contents

## NOTE 14 – EARNINGS PER SHARE CALCULATIONS

The following tables provide the earnings per share calculations for the years ended December 31, 2015, 2014 and 2013:

Net Income for Earnings Per Share Calculations - Basic	2015	2014	2013
In millions			
Net income attributable to The Dow Chemical Company	\$7,685	\$3,772	\$4,787
Preferred stock dividends	(340)	(340)	(340)
Net income attributable to participating securities (1)	(51)	(27)	(38)
Net income attributable to common stockholders	\$7,294	\$3,405	\$4,409
Earnings Per Share Calculations - Basic	2015	2014	2013
Dollars per share			
Net income attributable to The Dow Chemical Company	\$6.80	\$3.22	\$4.04
Preferred stock dividends	(0.30)	(0.29)	(0.29)
Net income attributable to participating securities (1)	(0.05)	(0.02)	(0.03)
Net income attributable to common stockholders	\$6.45	\$2.91	\$3.72
Net Income for Earnings Per Share Calculations - Diluted	2015	2014	2013
In millions			
Net income attributable to The Dow Chemical Company	\$7,685	\$3,772	\$4,787
Preferred stock dividends (2)	—	(340)	—
Net income attributable to participating securities (1)	(51)	(27)	(38)
Net income attributable to common stockholders	\$7,634	\$3,405	\$4,749
Earnings Per Share Calculations - Diluted	2015	2014	2013
Dollars per share			
Net income attributable to The Dow Chemical Company	\$6.19	\$3.18	\$3.71
Preferred stock dividends (2)	—	(0.29)	—
Net income attributable to participating securities (1)	(0.04)	(0.02)	(0.03)
Net income attributable to common stockholders	\$6.15	\$2.87	\$3.68
Share Count Information	2015	2014	2013
Shares in millions			
Weighted-average common shares - basic	1,130.1	1,170.9	1,186.2
Plus dilutive effect of stock options and awards	14.5	16.1	7.4
Plus dilutive effect of assumed conversion of preferred stock (3)	96.8	—	96.8
Weighted-average common shares - diluted	1,241.4	1,187.0	1,290.4
Stock options and deferred stock awards excluded from EPS calculations (4)	4.6	5.8	47.4

(1) Deferred stock awards are considered participating securities due to Dow's practice of paying dividend equivalents on unvested shares.

(2) Preferred stock dividends were not added back in the calculation of diluted earnings per share for the period ended December 31, 2014, because the effect of adding them back would have been antidilutive.

(3) Conversion of the Company's Cumulative Convertible Perpetual Preferred Stock, Series A into shares of the Company's common stock was excluded from the calculation of diluted earnings per share for the period ended December 31, 2014, because the effect of including them would have been antidilutive.

(4) These outstanding options to purchase shares of common stock and deferred stock awards were excluded from the calculation of diluted earnings per share because the effect of including them would have been antidilutive.





Table of Contents

## NOTE 15 – COMMITMENTS AND CONTINGENT LIABILITIES

## Environmental Matters

## Introduction

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, 2015, the Company had accrued obligations of \$670 million for probable environmental remediation and restoration costs, including \$74 million for the remediation of Superfund sites. These obligations are 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 Company has accrued liabilities, although it is reasonably possible that the ultimate cost with respect to these particular matters could range up to approximately two and a half 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 Company's results of operations, financial condition and cash flows. It is the opinion of the Company's management, however, that the possibility is remote that costs in excess of the range disclosed will have a material impact on the Company's results of operations, financial condition or cash flows. Inherent uncertainties exist in these estimates primarily due to unknown conditions, changing governmental regulations and legal standards regarding liability, and emerging remediation technologies for handling site remediation and restoration. At December 31, 2014, the Company had accrued obligations of \$706 million for probable environmental remediation and restoration costs, including \$78 million for the remediation of Superfund sites.

The following table summarizes the activity in the Company's accrued obligations for environmental matters for the years ended December 31, 2015 and 2014:

## Accrued Obligations for Environmental Matters

In millions	2015	2014
Balance at January 1	\$706	\$722
Additional accruals	230	228
Charges against reserve	(233	) (219
Foreign currency impact	(33	) (25
Balance at December 31	\$670	\$706

The amounts charged to income on a pretax basis related to environmental remediation totaled \$218 million in 2015, \$227 million in 2014 and \$203 million in 2013. Capital expenditures for environmental protection were \$49 million in 2015, \$78 million in 2014 and \$102 million in 2013.

## Midland Off-Site Environmental Matters

On June 12, 2003, the Michigan Department of Environmental Quality ("MDEQ") issued a Hazardous Waste Operating License (the "License") to the Company's Midland, Michigan manufacturing site (the "Midland site"), which was renewed and replaced by the MDEQ on September 25, 2015, and included provisions requiring the Company to conduct an investigation to determine the nature and extent of off-site contamination in the City of Midland soils, the Tittabawassee River and Saginaw River sediment and floodplain soils, and the Saginaw Bay, and, if necessary, undertake remedial action.

## City of Midland

On March 6, 2012, the Company submitted an Interim Response Activity Plan Designed to Meet Criteria ("Work Plan") to the MDEQ that involved the sampling of soil at residential properties near the Midland site for the presence of dioxins to determine where clean-up may be required and then conducting remediation for properties that sample above the remediation criteria. The MDEQ approved the Work Plan on June 1, 2012 and implementation of the Work

Plan began on June 4, 2012. The Company also submitted and had approved by the MDEQ, amendments to the Work Plan. As of December 31, 2014, remediation was completed on all 132 properties that tested above the remediation criteria, and this completion is noted in the License.

Tittabawassee and Saginaw Rivers, Saginaw Bay

The Company, the U.S. Environmental Protection Agency ("EPA") and the State of Michigan ("State") entered into an administrative order on consent ("AOC"), effective January 21, 2010, that requires the Company to conduct a remedial investigation, a feasibility study and a remedial design for the Tittabawassee River, the Saginaw River and the Saginaw Bay, and pay the oversight costs of the EPA and the State under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act. These actions, to be conducted under the lead oversight of the EPA, will build

## Table of Contents

upon the investigative work completed under the State Resource Conservation Recovery Act program from 2005 through 2009.

The Tittabawassee River, beginning at the Midland Site and extending down to the first six miles of the Saginaw River, are designated as the first Operable Unit for purposes of conducting the remedial investigation, feasibility study and remedial design work. This work will be performed in a largely upriver to downriver sequence for eight geographic segments of the Tittabawassee and upper Saginaw Rivers. In the first quarter of 2012, the EPA requested the Company address the Tittabawassee River floodplain ("Floodplain") as an additional segment. In August 2014, the EPA proposed for public comment the techniques that can be used to remedy the Floodplain, including proposed site specific clean-up criteria. In January 2015, the Company and the EPA entered into an order to address remediation of the Floodplain. The remedial work is expected to take place over the next six years. The remainder of the Saginaw River and the Saginaw Bay are designated as a second Operable Unit and the work associated with that unit may also be geographically segmented. The AOC does not obligate the Company to perform removal or remedial action; that action can only be required by a separate order. The Company and the EPA will be negotiating orders separate from the AOC that will obligate the Company to perform remedial actions under the scope of work of the AOC. The Company and the EPA have entered into three separate orders to perform limited remedial actions to implement early actions - two separate orders to address remedial actions in two of the nine geographic segments in the first Operable Unit and the order to address the Floodplain.

### Alternative Dispute Resolution Process

The Company, the EPA, the U.S. Department of Justice, and the natural resource damage trustees (which include the Michigan Office of the Attorney General, the MDEQ, the U.S. Fish and Wildlife Service, the U.S. Bureau of Indian Affairs and the Saginaw-Chippewa tribe) have been engaged in negotiations to seek to resolve potential governmental claims against the Company related to historical off-site contamination associated with the City of Midland, the Tittabawassee and Saginaw Rivers and the Saginaw Bay. The Company and the governmental parties started meeting in the fall of 2005 and entered into a Confidentiality Agreement in December 2005. The Company continues to conduct negotiations under the Federal Alternative Dispute Resolution Act with all of the governmental parties, except the EPA which withdrew from the alternative dispute resolution process on September 12, 2007.

On September 28, 2007, the Company and the natural resource damage trustees entered into a Funding and Participation Agreement that addressed the Company's payment of past costs incurred by the natural resource damage trustees, payment of the costs of a trustee coordinator and a process to review additional cooperative studies that the Company might agree to fund or conduct with the natural resource damage trustees. On March 18, 2008, the Company and the natural resource damage trustees entered into a Memorandum of Understanding ("MOU") to provide a mechanism for the Company to fund cooperative studies related to the assessment of natural resource damages. This MOU was amended and funding of cooperative studies was extended until March 2014. All cooperative studies have been completed. On April 7, 2008, the natural resource damage trustees released their "Natural Resource Damage Assessment Plan for the Tittabawassee River System Assessment Area."

At December 31, 2015, the accrual for these off-site matters was \$62 million (included in the total accrued obligation of \$670 million). At December 31, 2014, the Company had an accrual for these off-site matters of \$62 million (included in the total accrued obligation of \$706 million).

### Environmental Matters Summary

It is the opinion of the Company's management that the possibility is remote that costs in excess of those disclosed will have a material impact on the Company's results of operations, financial condition or cash flows.

### Litigation

Asbestos-Related Matters of Union Carbide Corporation

#### Introduction

Union Carbide Corporation (“Union Carbide”), a wholly owned subsidiary of the Company, 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 Union Carbide sold in the past, alleged exposure to asbestos-containing products located on Union Carbide’s premises, and Union Carbide’s responsibility for asbestos suits filed against a former Union Carbide 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 Union Carbide’s products.

## Table of Contents

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

### Estimating the Liability

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

In October 2013, Union Carbide requested ARPC to review its historical asbestos claim and resolution activity and determine the appropriateness of updating its December 2012 study. In response to that request, ARPC reviewed and analyzed data through September 30, 2013. In December 2013, ARPC stated that an update of its study would not provide a more likely estimate of future events than the estimate reflected in its December 2012 study and, therefore, the estimate in that study remained applicable. Based on Union Carbide’s own review of the asbestos claim and resolution activity and ARPC’s response, Union Carbide determined that no change to the accrual was required.

In October 2014, Union Carbide requested ARPC to review its historical asbestos claim and resolution activity and determine the appropriateness of updating its December 2012 study. In response to that request, ARPC reviewed and analyzed data through September 30, 2014. The resulting study, completed by ARPC in December 2014, estimates that the undiscounted cost of disposing of pending and future claims against Union Carbide and Amchem, excluding future defense and processing costs, to be between \$540 million and \$640 million through 2029 based on the data as of September 30, 2014. As in earlier studies, ARPC provided longer periods of time in its December 2014 study, but also reaffirmed that forecasts for shorter periods of time are more accurate than those for longer periods of time.

In December 2014, based on ARPC's December 2014 study and Union Carbide's own review of the asbestos claim and resolution activity, Union Carbide determined that an adjustment to the accrual was required due to the increase in mesothelioma claim activity compared with what had been forecasted in the December 2012 study. Accordingly, Union Carbide increased its asbestos-related liability for pending and future claims by \$78 million, included in "Asbestos-related charge" in the consolidated statements of income. At December 31, 2014, the asbestos-related liability for pending and future claims was \$513 million, with approximately 22 percent of the recorded liability related to pending claims and approximately 78 percent related to future claims.

In October 2015, Union Carbide requested ARPC to review its historical asbestos claim and resolution activity and determine the appropriateness of updating its December 2014 study. In response to that request, ARPC reviewed and analyzed data through September 30, 2015. In December 2015, ARPC stated that an update of its study would not provide a more likely estimate of future events than the estimate reflected in the December 2014 study and, therefore, the estimate in that study remained applicable. Based on Union Carbide's own review of the asbestos claim and resolution activity and ARPC's response, Union Carbide determined that no change to the accrual would be required. At December 31, 2015, the asbestos-related liability for pending and future claims was \$437 million. At December 31, 2015, approximately 21 percent of the recorded liability related to pending claims and approximately 79 percent related to future claims.

### Insurance Receivables

At December 31, 2002, Union Carbide increased the receivable for insurance recoveries related to its asbestos liability to \$1.35 billion, substantially exhausting its asbestos product liability coverage. The insurance receivable related to the asbestos liability was determined by Union Carbide after a thorough review of applicable insurance policies and

the 1985 Wellington Agreement, to which Union Carbide and many of its liability insurers are signatory parties, as well as other insurance settlements, with due consideration given to applicable deductibles, retentions and policy limits, and taking into account the solvency and historical payment experience of various insurance carriers. The Wellington Agreement and other agreements with insurers are designed to facilitate an orderly resolution and collection of Union Carbide's insurance policies and to resolve issues that the insurance carriers may raise.

In September 2003, Union Carbide filed a comprehensive insurance coverage case, now proceeding in the Supreme Court of the State of New York, County of New York, seeking to confirm its rights to insurance for various asbestos claims and to facilitate an orderly and timely collection of insurance proceeds (the "Insurance Litigation"). The Insurance Litigation was filed against insurers that are not signatories to the Wellington Agreement and/or do not otherwise have agreements in place with Union Carbide regarding their asbestos-related insurance coverage, in order to facilitate an orderly resolution and collection of such insurance policies and to resolve issues that the insurance carriers may raise. Since the filing of the case, Union Carbide

Table of Contents

has reached settlements with most of the carriers involved in the Insurance Litigation and continues to pursue a settlement with the remaining carrier. Union Carbide's receivable for insurance recoveries related to its asbestos liability was \$10 million at December 31, 2015 and \$10 million at December 31, 2014.

In addition to the receivable for insurance recoveries related to its asbestos liability, Union Carbide had receivables for defense and resolution costs submitted to insurance carriers that have settlement agreements in place regarding their asbestos-related insurance coverage. The following table summarizes Union Carbide's receivables related to its asbestos-related liability:

Receivables for Asbestos-Related Costs at December 31 In millions	2015	2014
Receivables for defense and resolution costs – carriers with settlement agreements	\$51	\$69
Receivables for insurance recoveries – carriers without settlement agreements	10	10
Total	\$61	\$79

After a review of its insurance policies, with due consideration given to applicable deductibles, retentions and policy limits, after taking into account the solvency and historical payment experience of various insurance carriers; existing insurance settlements; and the advice of outside counsel with respect to the applicable insurance coverage law relating to the terms and conditions of its insurance policies, Union Carbide continues to believe that its recorded receivable for insurance recoveries from all insurance carriers is probable of collection.

Union Carbide expenses defense costs as incurred. The pretax impact for defense and resolution costs, net of insurance, was \$83 million in 2015, \$108 million in 2014 and \$107 million in 2013, and was reflected in "Cost of sales" in the consolidated statements of income.

Summary

The amounts recorded by Union Carbide for the asbestos-related liability and related insurance receivable described above were based upon current, known facts. However, future events, such as the number of new claims to be filed and/or received each year, the average cost of disposing of each such claim, coverage issues among insurers, and the continuing solvency of various insurance companies, as well as the numerous uncertainties surrounding asbestos litigation in the United States, could cause the actual costs and insurance recoveries for Union Carbide to be higher or lower than those projected or those recorded.

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

It is the opinion of Dow's management that it is reasonably possible that the cost of Union Carbide disposing of its asbestos-related claims, including future defense costs, could have a material impact on the Company's results of operations and cash flows for a particular period and on the consolidated financial position of the Company.

Urethane Matters

On February 16, 2006, the Company, among others, received a subpoena from the U.S. Department of Justice ("DOJ") as part of a previously announced antitrust investigation of manufacturers of polyurethane chemicals, including methylene diphenyl diisocyanate, toluene diisocyanate, polyether polyols and system house products. The Company cooperated with the DOJ and, following an extensive investigation, on December 10, 2007, the Company received notice from the DOJ that it had closed its investigation of potential antitrust violations involving these products

without indictments or pleas.

In 2005, the Company, among others, was named as a defendant in multiple civil class action lawsuits alleging a conspiracy to fix the price of various urethane chemical products, namely the products that were the subject of the above described DOJ antitrust investigation. These lawsuits were consolidated in the U.S. District Court for the District of Kansas (the "District Court") or have been tolled. On July 29, 2008, the District Court certified a class of purchasers of the products for the six-year period from 1999 through 2004. In January 2013, the class action lawsuit went to trial in the District Court with the Company as the sole remaining defendant, the other defendants having previously settled. On February 20, 2013, the jury returned a damages verdict of approximately \$400 million against the Company, which ultimately was trebled by the District Court under applicable antitrust laws, less offsets from other settling defendants, resulting in a judgment entered in July 2013 in the amount of \$1.06 billion. The Company appealed this judgment to the U.S. Tenth Circuit Court of Appeals ("Tenth Circuit" or "Court of Appeals"), and on September 29, 2014, the Court of Appeals issued an opinion affirming the District Court judgment. On

109

---



Table of Contents

October 14, 2014, the Company filed a petition for Rehearing or Rehearing En Banc (collectively the "Rehearing Petition") with the Court of Appeals, which was denied on November 7, 2014.

On March 9, 2015, the Company filed a petition for writ of certiorari ("Writ Petition") with the U.S. Supreme Court, seeking judicial review by the Supreme Court and requesting that it correct fundamental errors in the Circuit Court opinion. While it is unknowable whether or not the Supreme Court will accept the Writ Petition for review, there are several compelling reasons why the Supreme Court should grant the Writ Petition and, if it is accepted, the Company believes it is likely that the District Court judgment will be vacated. Specifically, it is the Company's position that the Tenth Circuit decision violates the law as expressed by the Supreme Court as set out in *Wal-Mart Stores, Inc. v. Dukes*, 131 S. Ct. 2541 (2011) and *Comcast Corp. v. Behrend*, 133 S. Ct. 1426 (2013). The Tenth Circuit also did not follow accepted law from other federal circuits on dispositive case issues, including legal precedent from the U.S. First, Second, Third, Fifth, Ninth and D.C. Circuit Courts. Finally, the Company argues that the erroneous law applied by the Tenth Circuit is not supported by any other federal circuit court. In April 2015, six amici filed amicus briefs in support of the Company's Writ Petition. The parties briefing is now complete. Dow filed its reply brief on May 22, 2015. On June 8, 2015, the Supreme Court granted a petition for a writ of certiorari in another case, *Tyson Foods, Inc. v. Bouaphakeo, PEG, et al.*, ("Tyson Foods") (Supreme Court No. 14-1146), which presented an issue core to the questions presented in the Company's Writ Petition: whether class-wide damages can be determined by simply applying the average injury observed in a sample. The Company's case was considered by the Supreme Court in conference on June 11, 2015. On June 15, 2015, the Supreme Court issued its decisions from its conference and did not rule on the Company's Writ Petition. Subsequently, the Writ Petition has not been listed for further consideration by the Supreme Court at its weekly conferences. The Company has been advised that this means that the Supreme Court is withholding further consideration of the Company's Writ Petition while it considers the Tyson Foods case on the merits. As a result, the Company does not expect any further action on its Writ Petition until sometime in 2016. The Company believes that the Supreme Court has accepted Tyson Foods for the compelling reasons also advanced by the Company in its Writ Petition and that the Supreme Court will issue an opinion in Tyson Foods that is favorable to the Company's case. Accordingly, on August 14, 2015, the Company filed an amicus brief in Tyson Foods supporting Tyson Foods' position. The Tyson Foods oral argument occurred before the Supreme Court on November 10, 2015. The Company expects a decision from the Supreme Court on Tyson Foods in the first half of 2016, after which, depending on the result, the Supreme Court likely will consider the Company's Writ Petition.

The Company has consistently denied plaintiffs' allegations of price fixing and, as outlined above, the Company will continue to vigorously defend this litigation. As with any litigation and based on various factors, the Company has had and may from time to time pursue confidential settlement negotiations to resolve the matter. As part of the Company's review of the jury verdict, the resulting judgment and the Court of Appeals' opinion, the Company assessed the legal and factual circumstances of the case, the trial record, the appellate record, the briefing before the Supreme Court in Tyson Foods and the applicable law including clear precedent from the Supreme Court. Based on this review and the reasons stated above, the Company believes that the District Court judgment and decision from the Court of Appeals are not appropriate. As a result, the Company has concluded it is not probable that a loss has been incurred and, therefore, a liability has not been recorded with respect to this matter. While the Company believes it is not probable a loss will occur, the existence of the jury verdict, the Court of Appeals' opinion, and subsequent denial of the Company's Rehearing Petition indicate that it is reasonably possible that a loss could occur. The estimate of the possible range of loss to the Company is zero to the \$1.06 billion judgment (excluding post-judgment interest and possible award of class attorney fees).

Shortly after the July 2008 class certification ruling, a series of "opt-out" cases were filed by a number of large volume purchasers who elected not to be class members. These opt-out cases are substantively identical to the class action lawsuit, but expanded the period of time to include 1994 through 1998. On September 30, 2014, the opt-out cases, which had been consolidated with the class action lawsuit for purposes of pre-trial proceedings were remanded from the District Court to the U.S. District Court for the District of New Jersey. A consolidated trial of the opt-out

cases is set to begin on March 7, 2016. As with the class case, the Company denies plaintiffs' allegations of price fixing and maintains that the opt-out plaintiffs cannot prove a compensable injury. As a result, the Company has concluded it is not probable a loss has been incurred and, therefore, a liability is not recorded with respect to these cases.

In addition to the matters described above, there are two separate but inter-related matters in Ontario and Quebec, Canada. In March 2014, the Superior Court of Justice in London, Ontario, ruled in favor of the plaintiffs' motion for class certification. The Company filed its Notice of Motion for Leave to Appeal in March 2014, which was subsequently denied. This matter is currently in the pretrial stage, but no trial date has been set. The Quebec case has been stayed pending the outcome of the Ontario case. For the same reasons stated above, a liability has not been recorded with respect to either Canadian matter.

#### Bayer CropScience v. Dow AgroSciences ICC Arbitration

On August 13, 2012, Bayer CropScience AG and Bayer CropScience NV (together, "Bayer") filed a request for arbitration with the International Chamber of Commerce ("ICC") International Court of Arbitration against Dow AgroSciences LLC, a wholly

## Table of Contents

owned subsidiary of the Company, and other subsidiaries of the Company (collectively, “DAS”) under a 1992 license agreement executed by predecessors of the parties (the “License Agreement”). In its request for arbitration, Bayer alleged that (i) DAS breached the License Agreement, (ii) the License Agreement was properly terminated with no ongoing rights to DAS, (iii) DAS has infringed and continues to infringe its patent rights related to the use of the pat gene in certain soybean and cotton seed products, and (iv) Bayer is entitled to monetary damages and injunctive relief. DAS denied that it breached the License Agreement and asserted that the License Agreement remained in effect because it was not properly terminated. DAS also asserted that all of Bayer’s patents at issue are invalid and/or not infringed, and, therefore, for these reasons (and others), a license was not required. During the pendency of the arbitration proceeding, DAS filed six re-examination petitions with the United States Patent & Trademark Office (“USPTO”) against the Bayer patents, asserting that each patent is invalid based on the doctrine against double-patenting and/or prior art. The USPTO granted all six petitions, and, on February 26, 2015, the USPTO issued an office action rejecting the patentability of the sole Bayer patent claim in the only asserted Bayer patent that has not expired and that forms the basis for the vast majority of the damages in the arbitral award discussed below.

A three-member arbitration tribunal presided over the arbitration proceeding (the “tribunal”). In a decision dated October 9, 2015, the tribunal determined that (i) DAS breached the License Agreement, (ii) Bayer properly terminated the License Agreement, (iii) all of the patents remaining in the proceeding are valid and infringed, and (iv) that Bayer is entitled to monetary damages in the amount of \$455 million inclusive of pre-judgment interest and costs (the “arbitral award”). One of the arbitrators, however, issued a partial dissent finding that all of the patents are invalid based on the double-patenting doctrine. The tribunal also denied Bayer’s request for injunctive relief. The arbitration award is not self-executing, and must be confirmed by a court for it to be enforceable and to have the legal effect of a judgment. On October 16, 2015, Bayer filed a motion in U.S. District Court for the Eastern District of Virginia (“federal district court”) seeking to confirm the arbitral award (the “federal court proceeding”). DAS opposed the motion and filed separate motions to vacate the award, or in the alternative, to stay enforcement of the award until the USPTO issues final office actions with respect to the re-examination proceedings. On January 15, 2016, the federal district court denied DAS’ motions and confirmed the award. The USPTO has now issued office actions rejecting the patentability of all four patents that Bayer asserted in the case. The USPTO re-examination proceedings remain ongoing. DAS has appealed the federal district court’s decision, and DAS has posted a bond to stay enforcement of the award during the appeal.

The Company believes the arbitral award is fundamentally flawed in numerous respects and is confident that it will be vacated on appeal once the applicable law is properly applied. The Company continues to believe that Bayer’s patents are invalid for multiple reasons and that the damages awarded cannot be supported under prevailing patent law, including U.S. Supreme Court precedent. In addition, the Company anticipates that the USPTO will conclude with a final office action declaring each of the patents invalid in the pending re-examination proceedings which will provide a strong basis to vacate the arbitral award. As part of the Company’s review of the arbitral award, the Company assessed the legal and factual circumstances of the case, the record of the arbitration and USPTO re-examination status, and the applicable law to vacate the arbitral award. Based on this review and the reasons stated above, the Company has concluded it is not probable that a loss has been incurred and, therefore, a liability has not been recorded with respect to this matter. While the Company believes it is not probable that a loss has been incurred, the existence of the arbitral award and the federal district court confirmation of the award indicates that it is reasonably possible that a loss could occur. The estimate of the possible range of loss to the Company is zero to the \$455 million amount set forth in the arbitral award (excluding post-judgment interest).

The arbitral award will not impact DAS’s commercialization of its soybean and cotton seed products, including those containing the ENLIST™ technologies.

## Other Litigation Matters

In addition to the specific matters described above, the Company is party to a number of other claims and lawsuits arising out of the normal course of business with respect to product liability, patent infringement, governmental regulation, contract and commercial litigation, and other actions. Certain of these actions purport to be class actions and seek damages in very large amounts. All such claims are being contested. Dow has an active risk management program consisting of numerous insurance policies secured from many carriers at various times. These policies may provide coverage that could be utilized to minimize the financial impact, if any, of certain contingencies described above. It is the opinion of the Company's management 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, financial condition and cash flows of the Company.

Table of Contents

## Purchase Commitments

The Company has various commitments for take-or-pay and throughput agreements. These commitments are at prices not in excess of current market prices. The remaining terms for all but one of these agreements extend from 1 to 29 years. One agreement has a remaining term of 62 years. The 10-year future commitments for this agreement as well as the fixed and determinable portion of all other obligations under the Company's purchase commitments have been updated as of December 31, 2015 and are included in the following table:

## Fixed and Determinable Portion of Take-or-Pay and Throughput Obligations at December 31, 2015

In millions

2016	\$2,935
2017	2,415
2018	2,262
2019	1,927
2020	1,799
2021 and beyond	7,827
Total	\$19,165

In addition to the take-or-pay obligations at December 31, 2015, the Company had outstanding commitments which ranged from 1 to 15 years for materials, services and other items used in the normal course of business of approximately \$354 million. Such commitments were at prices not in excess of current market prices.

## Guarantees

The following tables provide a summary of the final expiration, maximum future payments and recorded liability reflected in the consolidated balance sheets for each type of guarantee:

Guarantees at December 31, 2015	Final	Maximum Future	Recorded
In millions	Expiration	Payments	Liability
Guarantees	2021	\$4,910	\$102
Residual value guarantees	2025	912	117
Total guarantees		\$5,822	\$219

Guarantees at December 31, 2014	Final	Maximum Future	Recorded
In millions	Expiration	Payments	Liability
Guarantees	2021	\$5,042	\$160
Residual value guarantees	2024	951	123
Total guarantees		\$5,993	\$283

## Guarantees

Guarantees arise during the ordinary course of business from relationships with customers and nonconsolidated affiliates when the Company undertakes an obligation to guarantee the performance of others (via delivery of cash or other assets) if specified triggering events occur. With guarantees, such as commercial or financial contracts, non-performance by the guaranteed party triggers the obligation of the Company to make payments to the beneficiary of the guarantee. The majority of the Company's guarantees relates to debt of nonconsolidated affiliates, which have expiration dates ranging from less than one year to six years, and trade financing transactions in Latin America, which typically expire within one year of inception. The Company's current expectation is that future payment or performance related to the non-performance of others is considered unlikely.

The Company has entered into guarantee agreements (“Guarantees”) related to project financing for Sadara, a nonconsolidated affiliate. The total of an Islamic bond and Additional Project Financing (collectively “Total Project Financing”) obtained by Sadara is approximately \$12.5 billion. Sadara had \$11.9 billion of Total Project Financing outstanding at December 31, 2015 (\$10.5 billion at December 31, 2014). The Company's guarantee of the Total Project Financing is in proportion to the Company's 35 percent ownership interest in Sadara, or up to approximately \$4.4 billion when the project financing is fully drawn. The Guarantees will be released upon completion of construction of the Sadara complex and satisfactory fulfillment of certain other conditions, including passage of an extensive operational testing program, which is currently anticipated by the end of 2017.

Table of Contents

## Residual Value Guarantees

The Company provides guarantees related to leased assets specifying the residual value that will be available to the lessor at lease termination through sale of the assets to the lessee or third parties.

In 2014, the Company entered into a residual value guarantee as part of a sale-leaseback transaction for a significant portion of its North American railcar fleet. The sale transaction resulted in a deferred gain of \$102 million, which was recorded as a liability due to the guarantee and will be deferred until expiration of the ten-year lease unless otherwise terminated. The maximum value of the guarantee was \$236 million at December 31, 2015 (\$229 million at December 31, 2014).

## Warranties

The Company provides warranty policies on certain products and accrues liabilities under warranty policies using historical warranty claim experience. Adjustments are made to accruals as claim data and historical experience change. The following table summarizes changes in the Company's warranty liability for the years ended December 31, 2015 and 2014:

## Warranty Accrual

In millions	2015	2014
Balance at January 1	\$ 107	\$ 24
Accruals related to existing warranties (1)	5	104
Settlements made during the year	(19	) (21
Balance at December 31	\$ 93	\$ 107

In the fourth quarter of 2014, the Company recorded a pretax charge of \$100 million for a warranty accrual (1) adjustment related to an exited business. The charge was included in "Cost of sales" in the consolidated statements of income and reflected in Infrastructure Solutions.

## Asset Retirement Obligations

Dow has 179 manufacturing sites in 35 countries. Most of these sites contain numerous individual manufacturing operations, particularly at the Company's larger sites. Asset retirement obligations are recorded as incurred and reasonably estimable, including obligations for which the timing and/or method of settlement are conditional on a future event that may or may not be within the control of the Company. The retirement of assets may involve such efforts as remediation and treatment of asbestos, contractually required demolition, and other related activities, depending on the nature and location of the assets; and retirement obligations are typically realized only upon demolition of those facilities. In identifying asset retirement obligations, the Company considers identification of legally enforceable obligations, changes in existing law, estimates of potential settlement dates and the calculation of an appropriate discount rate to be used in calculating the fair value of the obligations. Dow has a well-established global process to identify, approve and track the demolition of retired or to-be-retired facilities; and no assets are retired from service until this process has been followed. Dow typically forecasts demolition projects based on the usefulness of the assets; environmental, health and safety concerns; and other similar considerations. Under this process, as demolition projects are identified and approved, reasonable estimates are determined for the time frames during which any related asset retirement obligations are expected to be settled. For those assets where a range of potential settlement dates may be reasonably estimated, obligations are recorded. Dow routinely reviews all changes to items under consideration for demolition to determine if an adjustment to the value of the asset retirement obligation is required.

The Company has recognized asset retirement obligations for the following activities: demolition and remediation activities at manufacturing sites primarily in the United States, Canada, Brazil, Argentina and Europe; and capping activities at landfill sites in the United States, Canada, Brazil and Italy. The Company has also recognized conditional asset retirement obligations related to asbestos encapsulation as a result of planned demolition and remediation

activities at manufacturing and administrative sites primarily in the United States, Canada, Argentina and Europe. The aggregate carrying amount of conditional asset retirement obligations recognized by the Company (included in the asset retirement obligations balance shown below) was \$33 million at December 31, 2015 (\$28 million at December 31, 2014).



Table of Contents

The following table shows changes in the aggregate carrying amount of the Company's asset retirement obligations for the years ended December 31, 2015 and 2014:

Asset Retirement Obligations In millions	2015	2014
Balance at January 1	\$84	\$89
Additional accruals	8	3
Liabilities settled	(8	) (8
Accretion expense	1	1
Revisions in estimated cash flows	17	3
Other	(6	) (4
Balance at December 31	\$96	\$84

The discount rate used to calculate the Company's asset retirement obligations at December 31, 2015 was 1.48 percent (1.48 percent at December 31, 2014). These obligations are included in the consolidated balance sheets as "Accrued and other current liabilities" and "Other noncurrent obligations."

The Company has not recognized conditional asset retirement obligations for which a fair value cannot be reasonably estimated in its consolidated financial statements. Assets that have not been submitted/reviewed for potential demolition activities are considered to have continued usefulness and are generally still operating normally. Therefore, without a plan to demolish the assets or the expectation of a plan, such as shortening the useful life of assets for depreciation purposes in accordance with the accounting guidance related to property, plant and equipment, the Company is unable to reasonably forecast a time frame to use for present value calculations. As such, the Company has not recognized obligations for individual plants/buildings at its manufacturing sites where estimates of potential settlement dates cannot be reasonably made. In addition, the Company has not recognized conditional asset retirement obligations for the capping of its approximately 42 underground storage wells and 141 underground brine mining and other wells at Dow-owned sites when there are no plans or expectations of plans to exit the sites. It is the opinion of the Company's management that the possibility is remote that such conditional asset retirement obligations, when estimable, will have a material impact on the Company's consolidated financial statements based on current costs.

**K-Dow Arbitration**

In February 2009, the Company initiated arbitration proceedings against Petrochemical Industries Company (K.S.C.) ("PIC") alleging that PIC breached the Joint Venture Formation Agreement related to the establishment of K-Dow, a proposed 50:50 global petrochemicals joint venture with PIC, by failing to close the transaction. On May 6, 2013, the Company and PIC entered into a Deed providing for payment and resolution of the Company's claims against PIC under the K-Dow arbitration. On May 7, 2013, the Company received a \$2.195 billion cash payment from PIC, which included damages awarded of \$2.161 billion as well as recovery of Dow's costs incurred in the arbitration, including legal fees. In the second quarter of 2013, the Company recorded a pretax gain of \$2.195 billion, of which \$2.161 billion is included in "Sundry income (expense) - net" and \$34 million is included in "Cost of sales" in the consolidated statements of income and reflected in Corporate. The K-Dow arbitration is considered final and settled in full.

Table of Contents

## NOTE 16 – TRANSFERS OF FINANCIAL ASSETS

The Company sells trade accounts receivable of select North America entities and qualifying trade accounts receivable of select European entities on a revolving basis to certain multi-seller commercial paper conduit entities ("conduits"). The proceeds received are comprised of cash and interests in specified assets of the conduits (the receivables sold by the Company) that entitle the Company to the residual cash flows of such specified assets in the conduits after the commercial paper has been repaid. Neither the conduits nor the investors in those entities have recourse to other assets of the Company in the event of nonpayment by the debtors.

During the year ended December 31, 2015, the Company recognized a loss of \$15 million on the sale of these receivables (\$16 million loss for the year ended December 31, 2014 and \$17 million loss for the year ended December 31, 2013), which is included in "Interest expense and amortization of debt discount" in the consolidated statements of income.

The Company's interests in the conduits are carried at fair value and included in "Accounts and notes receivable – Other" in the consolidated balance sheets. Fair value of the interests is determined by calculating the expected amount of cash to be received and is based on unobservable inputs (a Level 3 measurement). The key input in the valuation is the percentage of anticipated credit losses in the portfolio of receivables sold that have not yet been collected. Given the short-term nature of the underlying receivables, discount rates and prepayments are not factors in determining the fair value of the interests.

The following table summarizes the carrying value of interests held, which represents the Company's maximum exposure to loss related to the receivables sold, and the percentage of anticipated credit losses related to the trade accounts receivable sold. Also provided is the sensitivity of the fair value of the interests held to hypothetical adverse changes in the anticipated credit losses; amounts shown below are the corresponding hypothetical decreases in the carrying value of interests.

## Interests Held at December 31

In millions	2015	2014		
Carrying value of interests held	\$943	\$1,328		
Percentage of anticipated credit losses	0.34	% 0.35		%
Impact to carrying value - 10% adverse change	\$1	\$1		
Impact to carrying value - 20% adverse change	\$1	\$2		

Credit losses, net of any recoveries, were \$1 million for the year ended December 31, 2015 (\$7 million for the year ended December 31, 2014, and \$1 million for the year ended December 31, 2013).

Following is an analysis of certain cash flows between the Company and the conduits:

## Cash Proceeds

In millions	2015	2014	2013
Sale of receivables	\$18	\$98	\$34
Collections reinvested in revolving receivables	\$22,951	\$26,479	\$25,864
Interests in conduits (1)	\$1,034	\$1,079	\$1,028

(1) Presented in "Operating Activities" in the consolidated statements of cash flows.

Following is additional information related to the sale of receivables under these facilities:

## Trade Accounts Receivable Sold at December 31

Edgar Filing: DOW CHEMICAL CO /DE/ - Form 10-K

In millions	2015	2014
Delinquencies on sold receivables still outstanding	\$97	\$133
Trade accounts receivable outstanding and derecognized	\$2,152	\$2,607

In 2015, the Company repurchased \$11 million of previously sold receivables related to a divestiture.

Table of Contents

## NOTE 17 – NOTES PAYABLE, LONG-TERM DEBT AND AVAILABLE CREDIT FACILITIES

Notes Payable at December 31	2015		2014	
In millions				
Notes payable to banks and other lenders		\$277		\$353
Notes payable to related companies		171		189
Notes payable trade		6		9
Total notes payable		\$454		\$551
Year-end average interest rates		4.00	%	4.08
				%
Long-Term Debt at December 31	2015		2014	
In millions	Average	2015	Average	2014
	Rate		Rate	
Promissory notes and debentures:				
Final maturity 2015	—	% \$—	2.74	% \$60
Final maturity 2016	2.64	% 356	2.52	% 805
Final maturity 2017	6.06	% 442	5.66	% 489
Final maturity 2018	5.78	% 339	5.44	% 567
Final maturity 2019	8.55	% 2,123	8.41	% 2,168
Final maturity 2020	4.46	% 1,547	4.37	% 1,877
Final maturity 2021 and thereafter	5.42	% 9,872	5.31	% 10,186
Other facilities:				
U.S. dollar loans, various rates and maturities	2.32	% 125	1.38	% 461
Foreign currency loans, various rates and maturities	2.74	% 856	3.01	% 1,013
Medium-term notes, varying maturities through 2025	3.79	% 1,082	3.55	% 1,528
Tax-exempt bonds, varying maturities through 2038	5.66	% 343	5.66	% 343
Capital lease obligations	—	76	—	85
Unamortized debt discount and issuance costs (1)	—	(405	) —	(459
Long-term debt due within one year (1) (2)	—	(541	) —	(382
Long-term debt (1)	—	\$16,215	—	\$18,741

(1) Presented in accordance with newly implemented ASU 2015-03. See Note 2 for further information.

(2) Presented net of current portion of unamortized debt issuance costs of \$9 million at December 31, 2015 and \$12 million at December 31, 2014.

Annual Installments on Long-Term Debt  
for Next Five Years

In millions

2016	\$550
2017	\$644
2018	\$730
2019	\$2,389
2020	\$1,769

## 2015 Activity

During the fourth quarter of 2015, the Company redeemed \$724 million aggregate principal amount of InterNotes of various interest rates and maturities between 2016 and 2024. As a result of this redemption, the Company realized an \$8 million pretax loss related to the early extinguishment of debt, included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Corporate.

On October 5, 2015, (i) the Company completed the transfer of its U.S. Gulf Coast Chlor-Alkali and Vinyl, Global Chlorinated Organics and Global Epoxy businesses into a new company ("Splitco"), (ii) participating Dow shareholders tendered, and the Company accepted, Dow shares for Splitco shares in a public exchange offer, and (iii) Splitco merged with a wholly owned subsidiary of Olin in a tax-efficient Reverse Morris Trust transaction (collectively, the "Transaction"). Under the terms of a debt exchange offer, the Company received \$1,220 million principal amount of new debt instruments from Splitco, which were subsequently transferred to certain investment banks in a non-cash fair value exchange for \$1,154 million principal amount of the Company's outstanding debt instruments owned by such investment banks. As a result of this debt exchange offer and related transactions, the Company retired \$1,161 million of certain notes, including \$401 million of 2.50 percent notes due

Table of Contents

2016, \$182 million of 5.70 percent notes due 2018, \$278 million of 4.25 percent notes due 2020 and a \$300 million Term Loan Facility with a maturity date of 2016. The Company recognized a loss on the early extinguishment of debt of \$68 million, included in "Sundry income (expense) - net" in the consolidated statements of income as a component of the pretax gain on the Transaction and reflected in Corporate. In connection with the Transaction, a membrane chlor-alkali joint venture was included as part of the assets and liabilities divested. This resulted in an additional reduction of \$569 million principal amount of debt. See Notes 6 and 20 for further information.

During 2015, the Company issued \$346 million aggregate principal amount of InterNotes and approximately \$163 million of long-term debt (net of \$8 million of additional borrowings) was repaid by consolidated variable interest entities.

2014 Activity

On September 16, 2014, the Company issued \$2 billion of senior unsecured notes in a public offering. The offering included \$900 million aggregate principal amount of 3.5 percent notes due 2024; \$600 million aggregate principal amount of 4.25 percent notes due 2034; and \$500 million aggregate principal amount of 4.625 percent notes due 2044.

During 2014, the Company issued \$390 million aggregate principal amount of InterNotes with varying maturities in 2019, 2021 and 2024, at various interest rates averaging 2.94 percent. The Company also repaid \$346 million of long-term debt related to the purchase of an ethylene production facility (see Note 20 for additional information), redeemed \$124 million of tax-exempt bonds at maturity and repurchased \$51 million of tax-exempt bonds. In addition, approximately \$97 million of long-term debt (net of \$69 million of additional borrowings) was repaid by consolidated variable interest entities.

2013 Activity

On November 18, 2013, the Company concluded cash tender offers for \$700 million aggregate principal amount of certain notes issued by the Company. As a result of the tender offers, the Company redeemed \$414 million of 6.0 percent notes due 2017 and \$286 million of 5.7 percent notes due 2018 and recognized a \$156 million loss on the early extinguishment of debt, included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Corporate.

During the third quarter of 2013, the Company redeemed \$209 million aggregate principal amount of InterNotes of various interest rates and maturities in 2017, 2018, 2020, 2021 and 2022. As a result of this redemption, the Company realized a \$3 million pretax loss on the early extinguishment of debt, included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Corporate.

On June 24, 2013, the Company redeemed \$1.25 billion aggregate principal amount of 5.9 percent notes due February 15, 2015, at a price of 108.4 percent of the principal amount of the notes, plus accrued and unpaid interest. As a result of this redemption, the Company realized a \$108 million pretax loss on the early extinguishment of debt, included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Corporate.

On June 15, 2013, the Company redeemed \$142 million aggregate principal amount of InterNotes of various interest rates and varying maturities in 2017, 2018, 2020, 2021 and 2022. As a result of this redemption, the Company realized a \$2 million pretax loss on the early extinguishment of debt, included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Corporate.

On March 25, 2013, the Company redeemed \$750 million aggregate principal amount of 7.6 percent notes due May 15, 2014, at a price of 107.8 percent of the principal amount of the notes, plus accrued and unpaid interest. As a result of this redemption, the Company realized a \$60 million pretax loss on the early extinguishment of debt, included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Corporate.

During 2013, the Company issued \$447 million aggregate principal amount of InterNotes with varying maturities in 2018, 2020 and 2023, at various interest rates averaging 3.24 percent; and approximately \$80 million of long-term debt (net of \$119 million of repayments) was entered into by consolidated variable interest entities. The Company also drew \$300 million on a Committed Term Loan Facility on April 5, 2013.

During 2013, the Company redeemed \$250 million of 5.6 percent notes that matured on March 15, 2013, redeemed \$138 million of 6.85 percent notes that matured on August 15, 2013, and redeemed \$82 million principal amount of InterNotes at maturity. In the second quarter of 2013, the Company repurchased \$200 million of tax-exempt bonds. The Company also acquired third party lenders' interest in Dow Kokam LLC's \$75 million note, which was previously classified as "Long-Term Debt" in the consolidated balance sheets. See Note 5 for additional information on this transaction.

Table of Contents

## Available Credit Facilities

The following table summarizes the Company's credit facilities:

## Committed and Available Credit Facilities at December 31, 2015

In millions	Effective Date	Committed Credit	Credit Available	Maturity Date	Interest
Five Year Competitive Advance and Revolving Credit Facility (1)	March 2015	\$ 5,000	\$5,000	March 2020	Floating rate
Bilateral Revolving Credit Facility (2)	March 2015	100	100	March 2016	Floating rate
Bilateral Revolving Credit Facility (2)	August 2015	100	100	March 2020	Floating rate
Bilateral Revolving Credit Facility (2)	August 2015	280	280	March 2020	Floating rate
Bilateral Revolving Credit Facility (2)	August 2015	100	100	March 2020	Floating rate
Bilateral Revolving Credit Facility (2)	August 2015	100	100	March 2020	Floating rate
Bilateral Revolving Credit Facility	August 2015	200	200	March 2020	Floating rate
Bilateral Revolving Credit Facility	August 2015	100	100	August 2016	Floating rate
Total Committed and Available Credit Facilities		\$ 5,980	\$5,980		

(1) The prior credit facility was terminated and replaced with a new credit facility, with substantially similar terms and conditions, on March 24, 2015.

(2) The prior credit facility was amended or replaced in 2015 to extend its maturity date and incorporate substantially similar terms and conditions to the new Five Year Competitive Advance and Revolving Credit Facility.

## Debt Covenants and Default Provisions

The Company's outstanding long-term debt has been issued under indentures which contain, among other provisions, certain customary restrictive covenants with which the Company must comply while the underlying notes are outstanding. Such covenants include obligations to not allow liens on principal U.S. manufacturing facilities, enter into sale and lease-back transactions with respect to principal U.S. manufacturing facilities, merge or consolidate with any other corporation, or sell or convey all or substantially all of the Company's assets. The outstanding debt also contains customary default provisions. Failure of the Company to comply with any of these covenants could 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 underlying notes. The Company expects to remain in compliance with these covenants after completion of the all-stock, merger of equals strategic combination with DuPont.

The Company's primary, private credit agreements also contain certain customary restrictive covenant and default provisions in addition to the covenants set forth above with respect to the Company's debt. Significant other restrictive covenants and default provisions related to these agreements include:

(a) the obligation to maintain the ratio of the Company's consolidated indebtedness to consolidated capitalization at no greater than 0.65 to 1.00 at any time the aggregate outstanding amount of loans under the Five Year Competitive Advance and Revolving Credit Facility Agreement dated March 24, 2015 equals or exceeds \$500 million,

(b) a default if the Company or an applicable subsidiary fails to make any payment, including principal, premium or interest, under the applicable agreement on other indebtedness of, or guaranteed by, the Company or such applicable subsidiary in an aggregate amount of \$100 million or more when due, or any other default or other event under the applicable agreement with respect to such indebtedness occurs which permits or results in the acceleration of \$400 million or more in the aggregate of principal, and

(c) a default if the Company or any applicable subsidiary fails to discharge or stay within 60 days after the entry of a final judgment against the Company or such applicable subsidiary of more than \$400 million.



Failure of the Company to comply with any of the covenants or default provisions could result in a default under the applicable credit agreement which would allow the lenders to not fund future loan requests and to accelerate the due date of the outstanding principal and accrued interest on any outstanding indebtedness.

Table of Contents

## NOTE 18 – PENSION PLANS AND OTHER POSTRETIREMENT BENEFITS

## Pension Plans

The Company has defined benefit pension plans that cover employees in the United States and a number of other countries. The U.S. qualified plan covering the parent company is the largest plan. Benefits for employees hired before January 1, 2008 are based on length of service and the employee's three highest consecutive years of compensation. Employees hired after January 1, 2008 earn benefits that are based on a set percentage of annual pay, plus interest.

The Company's funding policy is to contribute to the plans when pension laws and/or economics either require or encourage funding. In 2015, Dow contributed \$844 million to its pension plans, including contributions to fund benefit payments for its non-qualified supplemental plans. Dow expects to contribute approximately \$620 million to its pension plans in 2016.

The weighted-average assumptions used to determine pension plan obligations and net periodic benefit costs for the plans are provided in the two tables below:

Weighted-Average Assumptions for All Pension Plans	Benefit Obligations at December 31			Net Periodic Costs for the Year			
	2015	2014	2013	2015	2014	2013	
Discount rate	3.88	% 3.60	% 4.54	% 3.60	% 4.54	% 3.88	%
Rate of increase in future compensation levels	4.13	% 4.13	% 4.15	% 4.13	% 4.15	% 3.96	%
Expected long-term rate of return on plan assets	—	—	—	7.35	% 7.40	% 7.47	%

Weighted-Average Assumptions for U.S. Pension Plans	Benefit Obligations at December 31			Net Periodic Costs for the Year			
	2015	2014	2013	2015	2014	2013	
Discount rate	4.40	% 4.04	% 4.92	% 4.04	% 4.92	% 4.02	%
Rate of increase in future compensation levels	4.50	% 4.50	% 4.50	% 4.50	% 4.50	% 4.50	%
Expected long-term rate of return on plan assets	—	—	—	7.85	% 7.82	% 7.85	%

The Company 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 Company's historical experience with the pension fund asset performance is also considered.

Effective January 1, 2016, the Company elected to adopt a 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 for the U.S. and other selected countries. Under the spot rate approach, the Company will calculate service costs and interest costs by applying individual spot rates from the Willis Towers Watson RATE:Link yield curve (based on high-quality corporate bond yields) for each selected country to the separate expected cash flows components of service cost and interest cost; service cost and interest cost for all other plans will continue to be determined on the

basis of the single equivalent discount rates derived in determining those plan obligations. The Company changed to the new method to provide a more precise measure of interest and service costs for certain countries by improving the correlation between projected benefit cash flows and the discrete spot yield curves. The Company has accounted for this change as a change in accounting estimate and it will be applied prospectively starting in 2016. The adoption of the spot rate approach is expected to decrease the service cost and interest cost components of net periodic benefit costs by approximately \$210 million in 2016.

The discount rates utilized to measure the pension and other postretirement obligations of the U.S. qualified plans are based on the yield on high-quality corporate fixed income investments at the measurement date. Future expected actuarially determined cash flows for Dow's U.S. 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.

On October 27, 2014, the Society of Actuaries ("SOA") published updated mortality tables and mortality improvement scales (generational mortality tables), which reflect increased life expectancy. Based on an evaluation of the mortality experience of

Table of Contents

the Company's U.S. pension plans and the SOA's tables, effective for 2014 and forward, the Company adopted updated generational mortality tables for purposes of measuring U.S. pension and other postretirement obligations. The mortality assumption change increased pension and other postretirement benefit obligations by \$479 million at December 31, 2014.

The accumulated benefit obligation for all defined benefit pension plans was \$24.5 billion at December 31, 2015 and \$26.5 billion at December 31, 2014.

Pension Plans with Accumulated Benefit Obligations in Excess  
of Plan Assets at December 31

In millions	2015	2014
Projected benefit obligations	\$23,421	\$25,539
Accumulated benefit obligations	\$22,409	\$24,281
Fair value of plan assets	\$16,066	\$16,932

In addition to the U.S. 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 Company. Defined contribution plans also cover employees in some subsidiaries in other countries, including Australia, Brazil, Canada, Italy, Spain and the United Kingdom. Expense recognized for all defined contribution plans was \$235 million in 2015, \$243 million in 2014 and \$231 million in 2013.

Other Postretirement Benefits

The Company provides certain health care and life insurance benefits to retired employees. The Company's plans outside of the United States are not significant; therefore, this discussion relates to the U.S. plans only. The plans provide health care benefits, including hospital, physicians' services, drug and major medical expense coverage, and life insurance benefits. In general, for employees hired before January 1, 1993, the plans provide benefits supplemental to Medicare when retirees are eligible for these benefits. The Company and the retiree share the cost of these benefits, with the Company portion increasing as the retiree has increased years of credited service, although there is a cap on the Company portion. The Company has the ability to change these benefits at any time. Employees hired after January 1, 2008 are not covered under the plans.

On January 1, 2014, the Company implemented an Employer Group Waiver Plan ("EGWP") for its Medicare-eligible, retiree medical plan participants. The Medicare Part D Retiree Drug Subsidy program ("RDS") was eliminated on January 1, 2014. The EGWP does not significantly alter the benefits provided to retiree medical plan participants. Federal subsidies to be earned under the EGWP are expected to exceed those earned under the RDS and will be partially offset by increased costs related to the administration of the EGWP. The net periodic benefit cost decreased by \$25 million in 2014 due to the EGWP.

The Company funds most of the cost of these health care and life insurance benefits as incurred. In 2015, Dow did not make any contributions to its other postretirement benefit plan trusts. The trusts did not hold assets at December 31, 2015. Dow does not expect to contribute assets to its other postretirement benefits plan trusts in 2016.

The weighted-average assumptions used to determine other postretirement benefit obligations and net periodic benefit costs for the U.S. plans are provided below:

U.S. Plan Assumptions for Other Postretirement Benefits	Benefit Obligations at December 31			Net Periodic Costs for the Year			
	2015	2014	2013	2015	2014	2013	
Discount rate	3.97	% 3.68	% 4.37	% 3.68	% 4.37	% 3.67	%

Edgar Filing: DOW CHEMICAL CO /DE/ - Form 10-K

Initial health care cost trend rate	7.25	%	7.06	%	7.45	%	7.06	%	7.45	%	7.84	%
Ultimate health care cost trend rate	5.00	%	5.00	%	5.00	%	5.00	%	5.00	%	5.00	%
Year ultimate trend rate to be reached	2025		2020		2020		2025		2020		2020	

Table of Contents

Increasing the assumed medical cost trend rate by one percentage point in each year would decrease the accumulated postretirement benefit obligation at December 31, 2015 by \$16 million and decrease the net periodic postretirement benefit cost for the year by \$1 million. Decreasing the assumed medical cost trend rate by one percentage point in each year would increase the accumulated postretirement benefit obligation at December 31, 2015 by \$22 million and the net periodic postretirement benefit cost for the year by \$1 million.

## Net Periodic Benefit Cost for All Significant Plans

In millions	Defined Benefit Pension Plans			Other Postretirement Benefits		
	2015	2014	2013	2015	2014	2013
Service cost	\$484	\$411	\$471	\$14	\$14	\$19
Interest cost	975	1,096	1,012	59	72	78
Expected return on plan assets	(1,382 )	(1,322 )	(1,248 )	—	—	—
Amortization of prior service cost (credit)	(28 )	22	25	(2 )	(2 )	(4 )
Amortization of unrecognized (gain) loss	706	500	788	(11 )	(14 )	4
Curtailment/settlement/other (1) (2)	—	(2 )	5	—	—	—
Net periodic benefit cost	\$755	\$705	\$1,053	\$60	\$70	\$97

(1) The 2013 impact primarily relates to settlements associated with the wind-up of a Canadian pension plan.

(2) The 2014 impact relates to settlements associated with the wind-up of a pension plan in The Netherlands and a pension plan in Canada.

## Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive (Income) Loss for All Significant Plans

In millions	Defined Benefit Pension Plans			Other Postretirement Benefits		
	2015	2014	2013	2015	2014	2013
Net (gain) loss	\$(127 )	\$3,528	\$(2,343 )	\$11	\$63	\$(404 )
Prior service cost (credit) arising during period	63	(500 )	—	—	—	—
Amortization of prior service (cost) credit	28	(22 )	(25 )	2	2	4
Amortization of unrecognized gain (loss)	(706 )	(498 )	(793 )	11	14	(4 )
Total recognized in other comprehensive (income) loss	\$(742 )	\$2,508	\$(3,161 )	\$24	\$79	\$(404 )
Total recognized in net periodic benefit cost and other comprehensive (income) loss	\$13	\$3,213	\$(2,108 )	\$84	\$149	\$(307 )

Table of Contents

## Change in Projected Benefit Obligations, Plan Assets and Funded Status of All Significant Plans

In millions	Defined Benefit Pension Plans		Other Postretirement Benefits	
	2015	2014	2015	2014
Change in projected benefit obligations:				
Benefit obligations at beginning of year	\$27,979	\$25,027	\$1,707	\$1,742
Service cost	484	411	14	14
Interest cost	975	1,096	59	72
Plan participants' contributions	19	21	—	—
Plan amendments (1)	30	(500)	—	—
Actuarial changes in assumptions and experience	(929)	4,096	11	63
Acquisition/divestiture/other activity (2)	(894)	(1)	—	—
Benefits paid	(1,289)	(1,316)	(172)	(169)
Currency impact	(723)	(779)	(22)	(15)
Termination benefits/curtailment cost/settlements (3)	—	(76)	—	—
Benefit obligations at end of year	\$25,652	\$27,979	\$1,597	\$1,707
Change in plan assets:				
Fair value of plan assets at beginning of year	\$19,629	\$18,827	\$—	\$—
Actual return on plan assets	314	1,961	—	—
Currency impact	(488)	(593)	—	—
Employer contributions	844	815	—	—
Plan participants' contributions	19	21	—	—
Acquisition/divestiture/other activity (4)	(255)	(86)	—	—
Benefits paid	(1,289)	(1,316)	—	—
Fair value of plan assets at end of year	\$18,774	\$19,629	\$—	\$—
Less: Fair value of assets due to Olin	\$(179)	\$—	\$—	\$—
Net fair value of plan assets at end of year	\$18,595	\$19,629	\$—	\$—
Funded status at end of year	\$(7,057)	\$(8,350)	\$(1,597)	\$(1,707)
Net amounts recognized in the consolidated balance sheets at December 31:				
Noncurrent assets	\$317	\$263	\$—	\$—
Current liabilities	(64)	(68)	(146)	(147)
Noncurrent liabilities	(7,310)	(8,545)	(1,451)	(1,560)
Net amounts recognized in the consolidated balance sheets	\$(7,057)	\$(8,350)	\$(1,597)	\$(1,707)
Pretax amounts recognized in AOCL at December 31:				
Net loss (gain) (5)	\$10,012	\$10,845	\$(154)	\$(176)
Prior service credit (5)	(328)	(419)	(3)	(5)
Pretax balance in AOCL at end of year	\$9,684	\$10,426	\$(157)	\$(181)

(1) The 2014 plan amendments include a change in post-termination interest rates in the U.S. and new legislation in The Netherlands.

The 2015 impact includes the transfer of benefit obligations associated with the Reverse Morris Trust transaction with Olin of \$618 million and the transfer of benefit obligations associated with the divestiture of ANGUS to (2)Golden Gate Capital of \$34 million. See Notes 5 and 6 as well as the following paragraph for further information.

The 2015 impact also includes the transfer of benefit obligations of \$248 million in the U.S. through the purchase of annuity contracts from an insurance company.

- (3) The 2014 impact relates to settlements associated with the wind-up of a pension plan in The Netherlands and a pension plan in Canada.  
The 2015 impact includes the transfer of plan assets associated with the divestiture of ANGUS to Golden Gate Capital of \$9 million. The 2015 impact also includes the purchase of annuity contracts of \$247 million associated with the transfer of benefit obligations to an insurance company.
- (4) Capital of \$9 million. The 2015 impact also includes the purchase of annuity contracts of \$247 million associated with the transfer of benefit obligations to an insurance company.
- (5) The 2014 amounts were adjusted for the Defined Benefit Pension Plans to reclassify \$500 million between the "Net loss (gain)" and "Prior service credit" lines.

On October 5, 2015 ("Closing Date"), (i) the Company completed the transfer of its U.S. Gulf Coast Chlor-Alkali and Vinyl, Global Chlorinated Organics and Global Epoxy businesses into a new company ("Splitco"), (ii) participating Dow shareholders tendered, and the Company accepted, Dow shares for Splitco shares in a public exchange offer, and (iii) Splitco merged with a



Table of Contents

wholly owned subsidiary of Olin in a tax-efficient Reverse Morris Trust transaction (collectively, the “Transaction”). In connection with the Transaction, the Company transferred certain defined benefit obligations of \$618 million. No other postretirement benefit obligations were transferred in connection with the Transaction. The Company expects to transfer approximately \$179 million of pension plan assets to Olin in 2016. The expected pension plan assets transferred to Olin will be adjusted for the actual return on plan assets and benefits paid to participants from the Closing Date to the date of transfer.

In 2016, an estimated net loss of \$585 million and prior service credit of \$24 million for the defined benefit pension plans will be amortized from AOCL to net periodic benefit cost. In 2016, an estimated net gain of \$7 million and prior service credit of \$3 million for other postretirement benefit plans will be amortized from AOCL to net periodic benefit cost.

**Estimated Future Benefit Payments**

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

**Estimated Future Benefit Payments at December 31, 2015**

In millions	Defined Benefit Pension Plans	Other Postretirement Benefits
2016	\$1,277	\$149
2017	1,281	144
2018	1,311	139
2019	1,351	135
2020	1,385	130
2021 through 2025	7,361	560
Total	\$13,966	\$1,257

**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 absolute return strategies. At December 31, 2015, plan assets totaled \$18.8 billion and included no Company common stock. At December 31, 2014, plan assets totaled \$19.6 billion and included no Company common stock.

**Investment Strategy and Risk Management for Plan Assets**

The Company’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 plans.

The plans are permitted to use derivative instruments for investment purposes, as well as for hedging the underlying asset and liability exposure and rebalancing the asset allocation. The plans use value at risk, stress testing, scenario analysis and Monte Carlo simulations to monitor and manage both the risk within the portfolios and the surplus risk of the plans.

Equity securities primarily include investments in large- and small-cap companies located in both developed and emerging markets around the world. Fixed income securities include investment and non-investment grade corporate bonds of companies diversified across industries, U.S. treasuries, non-U.S. developed market securities, U.S. agency mortgage-backed securities, emerging market securities and fixed income related funds. 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, commodity and foreign exchange derivative investments and hedges.

Strategic Weighted-Average Target Allocation of Plan

Assets for All Significant Plans

Asset Category	Target Allocation	
Equity securities	35	%
Fixed income securities	34	%
Alternative investments	30	%
Other investments	1	%
Total	100	%

123

---

Table of Contents

## Concentration of Risk

The Company mitigates the credit risk of investments by establishing guidelines with 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 Company and external managers. Credit risk related to derivative 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 U.S. plans, which from time to time can represent a significant investment. For one U.S. plan, approximately half of the liability is covered by a participating group annuity issued by Prudential Insurance Company.

The following tables summarize the bases used to measure the Company's pension plan assets at fair value for the years ended December 31, 2015 and 2014:

Basis of Fair Value Measurements of Pension Plan Assets at December 31, 2015	Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
In millions				
Cash and cash equivalents	\$84	\$733	\$—	\$817
Equity securities:				
U.S. equity (1)	\$2,525	\$558	\$1	\$3,084
Non-U.S. equity – developed countries	1,877	1,167	—	3,044
Emerging markets	462	542	27	1,031
Convertible bonds	26	177	—	203
Equity derivatives	—	8	—	8
Total equity securities	\$4,890	\$2,452	\$28	\$7,370
Fixed income securities:				
U.S. government and municipalities	\$—	\$1,320	\$—	\$1,320
U.S. agency and agency mortgage-backed securities	—	279	—	279
Corporate bonds – investment grade	—	1,527	—	1,527
Non-U.S. governments – developed countries	—	1,161	—	1,161
Non-U.S. corporate bonds – developed countries	—	917	—	917
Emerging market debt	—	109	—	109
Other asset-backed securities	—	88	1	89
High yield bonds	47	166	16	229
Other fixed income funds	—	295	276	571
Fixed income derivatives	—	33	—	33
Total fixed income securities	\$47	\$5,895	\$293	\$6,235
Alternative investments:				
Real estate	\$22	\$38	\$1,772	\$1,832
Private equity	—	—	1,054	1,054
Absolute return	—	483	695	1,178
Total alternative investments	\$22	\$521	\$3,521	\$4,064
Other investments	\$—	\$250	\$38	\$288
Total pension plan assets at fair value	\$5,043	\$9,851	\$3,880	\$18,774
	(179	) —	—	(179

Less: Fair value of pension plan assets due to  
Olin (2)

Net pension plan assets at fair value	\$4,864	\$9,851	\$3,880	\$18,595
---------------------------------------	---------	---------	---------	----------

(1) Includes no Company common stock.

(2) Pension plan assets due to Olin and expected to be transferred in 2016. See Note 6 for additional information.

Table of Contents

Basis of Fair Value Measurements of Pension Plan Assets at December 31, 2014	Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
In millions				
Cash and cash equivalents	\$61	\$953	\$—	\$1,014
Equity securities:				
U.S. equity (1)	\$3,011	\$428	\$9	\$3,448
Non-U.S. equity – developed countries	1,814	1,410	—	3,224
Emerging markets	472	538	23	1,033
Convertible bonds	15	195	—	210
Equity derivatives	—	7	—	7
Total equity securities	\$5,312	\$2,578	\$32	\$7,922
Fixed income securities:				
U.S. government and municipalities	\$—	\$1,406	\$—	\$1,406
U.S. agency and agency mortgage-backed securities	—	310	—	310
Corporate bonds – investment grade	—	1,605	—	1,605
Non-U.S. governments – developed countries	—	1,212	—	1,212
Non-U.S. corporate bonds – developed countries	—	961	—	961
Emerging market debt	—	93	—	93
Other asset-backed securities	—	105	1	106
High yield bonds	—	168	16	184
Other fixed income funds	—	299	294	593
Fixed income derivatives	—	31	—	31
Total fixed income securities	\$—	\$6,190	\$311	\$6,501
Alternative investments:				
Real estate	\$31	\$36	\$1,627	\$1,694
Private equity	—	—	1,059	1,059
Absolute return	—	586	656	1,242
Total alternative investments	\$31	\$622	\$3,342	\$3,995
Other investments	\$—	\$157	\$40	\$197
Total pension plan assets at fair value	\$5,404	\$10,500	\$3,725	\$19,629

(1) Includes no Company common stock.

For pension plan assets classified as Level 1 measurements (measured using quoted prices in active markets), 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 pension or other postretirement benefit plan 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.

Some pension plan assets are held in funds where a net asset value is calculated based on the fair value of the underlying assets and the number of shares owned. The classification of the fund (Level 2 or 3 measurements) is determined based on the lowest level classification of significant holdings within the fund. For all other pension plan 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.

Table of Contents

For pension plan 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.

The following table summarizes the changes in fair value of Level 3 pension plan assets for the years ended December 31, 2014 and 2015:

Fair Value Measurement of Level 3 Pension Plan Assets In millions	Equity Securities	Fixed Income Securities	Alternative Investments	Other Investments	Total	
Balance at January 1, 2014	\$12	\$237	\$2,761	\$40	\$3,050	
Actual return on plan assets:						
Relating to assets sold during 2014	—	22	139	—	161	
Relating to assets held at Dec 31, 2014	(12	) (7	) 191	1	173	
Purchases, sales and settlements	32	63	300	(1	) 394	
Transfers out of Level 3, net	—	(3	) —	—	(3	)
Foreign currency impact	—	(1	) (49	) —	(50	)
Balance at December 31, 2014	\$32	\$311	\$3,342	\$40	\$3,725	
Actual return on plan assets:						
Relating to assets sold during 2015	—	18	233	—	251	
Relating to assets held at Dec 31, 2015	—	(9	) 58	(2	) 47	
Purchases, sales and settlements	2	(27	) (90	) —	(115	)
Transfers out of Level 3, net	(6	) (1	) 5	—	(2	)
Foreign currency impact	—	1	(27	) —	(26	)
Balance at December 31, 2015	\$28	\$293	\$3,521	\$38	\$3,880	

## NOTE 19 – LEASED PROPERTY

## Leased Property

The Company routinely leases premises for use as sales and administrative offices, warehouses and tanks for product storage, motor vehicles, railcars, computers, office machines and equipment under leases. In addition, the Company leases aircraft in the United States. At the termination of the leases, the Company has the option to purchase certain leased equipment and buildings based on a fair market value determination.

Rental expenses under leases, net of sublease rental income, were \$600 million in 2015, \$539 million in 2014 and \$490 million in 2013. Future minimum rental payments under leases with remaining noncancelable terms in excess of one year are as follows:

## Minimum Lease Commitments at December 31, 2015

In millions

2016	\$302
2017	277
2018	249
2019	230
2020	215

2021 and thereafter	1,500
Total	\$2,773

126

---



Table of Contents

NOTE 20 – VARIABLE INTEREST ENTITIES

Consolidated Variable Interest Entities

The Company holds a variable interest in six joint ventures for which the Company is the primary beneficiary.

Three joint ventures own and operate manufacturing and logistics facilities, which produce chemicals and provide services in Asia Pacific. The Company's variable interest in these joint ventures relates to arrangements between the joint ventures and the Company, involving the majority of the output on take-or-pay terms with pricing ensuring a guaranteed return to the joint ventures.

The fourth joint venture manufactures products in Japan for the semiconductor industry. Each joint venture partner holds several equivalent variable interests, with the exception of a royalty agreement held exclusively between the joint venture and the Company. In addition, the entire output of the joint venture is sold to the Company for resale to third-party customers.

The fifth joint venture provides ethylene storage in Alberta, Canada. The Company's variable interests relate to arrangements involving a majority of the joint venture's storage capacity on take-or-pay terms with pricing ensuring a guaranteed return to the joint venture; and favorably priced leases provided to the joint venture. The Company provides the joint venture with operation and maintenance services and utilities.

The sixth joint venture is located in Brazil and produces ethanol from sugarcane. The Company's variable interests in this joint venture relate to an equity option between the partners, a parental loan and guarantee related to debt financing, and contractual arrangements limiting the partner's initial participation in the economics of certain assets and liabilities. Since formation of the joint venture, the partners have amended the governing documents, including terms of the equity option. These amendments did not result in a change to the Company's accounting treatment of the joint venture. Terms of the equity option require the Company to purchase the partner's equity investment at a price based on a specified formula if the partner elects to exit the joint venture. In August 2015, the partner exercised its equity option which requires Dow to purchase their equity investment for approximately \$200 million before July 12, 2016. As a result, in the third quarter of 2015, the Company reclassified the partner's equity investment from "Redeemable Noncontrolling Interest" to "Accrued and other current liabilities" in the consolidated balance sheets. The joint venture's ethanol mill commenced production in the second quarter of 2015. Original plans for the joint venture's expansion into downstream derivative products have been postponed. This joint venture also holds variable interests in an entity that owns a cogeneration facility. The joint venture's variable interests are the result of a tolling arrangement where it provides fuel to the entity and purchases a majority of the cogeneration facility's output on terms that ensure a return to the entity's equity holders.

The Company previously held an equity interest in a joint venture that owns and operates a membrane chlor-alkali manufacturing facility. The Company's variable interests in this joint venture related to equity options between the partners and a cost-plus off-take arrangement between the joint venture and the Company, involving proportional purchase commitments on take-or-pay terms and ensuring a guaranteed return to the joint venture. During the second quarter of 2015, Mitsui & Co. Texas Chlor-Alkali Inc. ("Mitsui"), a 50 percent equity owner in this joint venture, provided notice of its intention to transfer its equity interest to Dow as part of the Reverse Morris Trust transaction ("Transaction") with Olin. On October 5, 2015, the Company purchased Mitsui's equity interest in the membrane chlor-alkali joint venture for \$133 million, which resulted in a loss of \$25 million included in "Sundry income (expense) - net" in the consolidated statements of income and included as a component of the pretax gain on the Transaction. The loss is reflected in the Performance Materials & Chemicals segment. See Note 6 for additional information on this Transaction.

The Company held a 49 percent equity interest in a joint venture that managed the growth, harvest and conditioning of soybean seed and grain, corn and wheat in the United States. The Company's variable interest in this joint venture

related to an equity option between the partners. Terms of the equity option required the Company to purchase the partner's equity investment at a price based on a specified formula, after a specified period of time, and satisfaction of certain conditions, if the partner elected to sell its equity investment. On August 10, 2015, the equity option was determined to be exercisable and the partner provided notice to the Company of its intent to exercise the equity option, which resulted in an after-tax loss of \$22 million, included in "Net income attributable to noncontrolling interests" in the consolidated statements of income. The Company purchased the partner's equity investment on September 18, 2015, which resulted in the joint venture becoming a wholly owned subsidiary of Dow. Subsequent to the purchase of the partner's equity investment, the Company sold its entire ownership interest in the subsidiary to a third party and recognized a pretax gain of \$44 million on the sale in the third quarter of 2015, included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in the Agricultural Sciences segment.

The Company previously held a variable interest in an owner trust, for which the Company was the primary beneficiary. The owner trust leased an ethylene production facility in The Netherlands to the Company, whereby substantially all of the rights

Table of Contents

and obligations of ownership were transferred to the Company. The Company's variable interest in the owner trust related to a fixed purchase price option. On January 2, 2014, the Company purchased the ethylene production facility for \$406 million. The Company classified \$346 million as "Payments on long-term debt" and \$60 million as "Purchases of noncontrolling interests" in the consolidated statements of cash flows.

The Company's consolidated financial statements include the assets, liabilities and results of operations of variable interest entities ("VIEs") for which the Company is the primary beneficiary. The other equity holders' interests are reflected in "Net income attributable to noncontrolling interests" in the consolidated statements of income and "Redeemable Noncontrolling Interest," "Non-redeemable noncontrolling interests" and "Accrued and other current liabilities" in the consolidated balance sheets. The following table summarizes the carrying amounts of these entities' assets and liabilities included in the Company's consolidated balance sheets at December 31, 2015 and 2014:

Assets and Liabilities of Consolidated VIEs at December 31 In millions	2015	2014
Cash and cash equivalents (1)	\$158	\$190
Other current assets (2)	112	174
Property	1,717	2,726
Other noncurrent assets (2)	65	72
Total assets (2) (3)	\$2,052	\$3,162
Current liabilities (nonrecourse 2015: \$256; 2014: \$389) (2)	\$258	\$392
Long-term debt (nonrecourse 2015: \$487; 2014: \$1,216) (2)	504	1,247
Other noncurrent obligations (nonrecourse 2015: \$51; 2014: \$62)	51	62
Total liabilities (2)	\$813	\$1,701

(1) Included \$20 million at December 31, 2014 specifically restricted for the debt servicing and operational expenses of a manufacturing facility.

(2) Presented in accordance with newly implemented ASU 2015-03. See Note 2 for additional information.

(3) All assets were restricted at December 31, 2015 and December 31, 2014.

In addition, the Company holds a variable interest in an entity created to monetize accounts receivable of select European entities. The Company is the primary beneficiary of this entity as a result of holding subordinated notes while maintaining servicing responsibilities for the accounts receivable. The carrying amounts of assets and liabilities included in the Company's consolidated balance sheets pertaining to this entity were current assets of \$103 million (zero restricted) at December 31, 2015 (\$99 million, zero restricted, at December 31, 2014) and current liabilities were less than \$1 million (zero nonrecourse) at December 31, 2015 (less than \$1 million, zero nonrecourse, at December 31, 2014).

Amounts presented in the consolidated balance sheets and the table above as restricted assets or nonrecourse obligations relating to consolidated VIEs at December 31, 2015 and 2014 are adjusted for intercompany eliminations and parental guarantees.

#### Nonconsolidated Variable Interest Entities

The Company holds a variable interest in a joint venture that manufactures crude acrylic acid in the United States and Germany on behalf of the Company and the other joint venture partner. The variable interest relates to a cost-plus arrangement between the joint venture and each joint venture partner. The Company is not the primary beneficiary, as a majority of the joint venture's output is committed to the other joint venture partner; therefore, the entity is accounted for under the equity method of accounting. At December 31, 2015, the Company's investment in the joint venture was \$160 million (\$162 million at December 31, 2014), classified as "Investment in nonconsolidated affiliates" in the consolidated balance sheets, representing the Company's maximum exposure to loss.

The Company holds variable interests in AFSI, a company that produces and sells proprietary technologies for the horticultural and agronomic markets. The variable interests in AFSI relate to a sublease agreement between Dow and AFSI; a tax receivable agreement that entitles Dow to additional consideration in the form of tax savings, which is contingent on the operations and earnings of AFSI; and contingent consideration, which is subject to certain performance conditions. The Company is not the primary beneficiary, as Dow is a minority shareholder in AFSI and AFSI is governed by a board of directors, the composition of which is mandated by AFSI's corporate governance requirements that a majority of the directors be independent. At December 31, 2015, the Company's investment in AFSI was \$191 million (zero at December 31, 2014), and is classified as "Investment in nonconsolidated affiliates" in the consolidated balance sheets. In addition, the Company has a receivable with AFSI for six million warrants, which is currently valued at \$6 million and classified as "Accounts and notes receivable - other" in the consolidated balance sheets. The Company's maximum exposure to loss was \$197 million at December 31, 2015.

Table of Contents

## NOTE 21 – STOCK-BASED COMPENSATION

The Company provides stock-based compensation in the form of the Employee Stock Purchase Plan (“ESPP”), which grants eligible employees the right to purchase shares of the Company's common stock at a discounted price. The Company also grants stock-based compensation to employees and non-employee directors in the form of stock incentive plans, which include stock options, deferred stock, performance deferred stock and restricted stock. Information regarding these plans is provided below.

Accounting for Stock-Based Compensation

The Company grants stock-based compensation awards that vest over a specified period or upon employees meeting certain performance and/or retirement eligibility criteria. The fair value of equity instruments issued to employees is measured on the grant date. The fair value of liability instruments issued to employees (specifically, performance deferred stock awards, which are granted to executive employees subject to stock ownership requirements, that provide the recipient the option to elect to receive a cash payment equal to the value of the stock award on the date of delivery) is measured at the end of each quarter. The fair value of equity and liability instruments is expensed over the vesting period or, in the case of retirement, from the grant date to the date on which retirement eligibility provisions have been met and additional service is no longer required.

The Company uses a lattice-based option valuation model to estimate the fair value of stock options, the Black-Scholes option valuation model for subscriptions to purchase shares under the ESPP and Monte Carlo simulation for the market portion of performance deferred stock awards. The weighted-average assumptions used to calculate total stock-based compensation are included in the following table:

Weighted-Average Assumptions	2015		2014		2013	
Dividend yield	3.54	%	3.08	%	3.89	%
Expected volatility	27.84	%	28.11	%	29.93	%
Risk-free interest rate	1.02	%	1.11	%	1.08	%
Expected life of stock options granted during period (years)	7.7		7.7		7.8	
Life of Employee Stock Purchase Plan (months)	6		6		5	

The dividend yield assumption for 2015 was equal to the dividend yield on the grant date, which reflected the most recent quarterly dividend payment of \$0.42 per share. The dividend yield assumption for 2014 was equal to the dividend yield on the grant date, which for stock options was the most recent quarterly dividend declared on the grant date of \$0.37 per share and for the ESPP was the first quarter dividend payment of \$0.32 per share. The dividend yield assumption for 2013 was equal to the dividend yield on the grant date, which reflected the most recent quarterly dividend payment of \$0.32 per share. The expected volatility assumptions for options and ESPP were based on an equal weighting of the historical daily volatility for the term of the awards and current implied volatility from exchange-traded options. The expected volatility assumption for the market portion of the performance deferred stock awards was based on historical daily volatility for the term of the award. The risk-free interest rate was based on the weighted-average of U.S. Treasury strip rates over the contractual term of the options. The expected life of stock options granted was based on an analysis of historical exercise patterns.

Employee Stock Purchase Plan

On February 9, 2012, the Board of Directors authorized The Dow Chemical Company 2012 Employee Stock Purchase Plan which was approved by stockholders at the Company's annual meeting on May 10, 2012. Under the 2015 annual offering, most employees were eligible to purchase shares of common stock of the Company valued at up to 10 percent of their annual base salary. The value is determined using the plan price multiplied by the number of shares subscribed to by the employee. The plan price of the stock is set at an amount equal to at least 85 percent of the fair market value (closing price) of the common stock on a date during the fourth quarter of the year prior to the offering,

or the average fair market value (closing price) of the common stock over a period during the fourth quarter of the year prior to the offering, in each case, specified by the plan administrator.

129

---

Table of Contents

Employee Stock Purchase Plan	2015	
Shares in thousands	Shares	Exercise Price (1)
Outstanding and exercisable at January 1, 2015	16	\$38.13
Granted	3,183	\$41.49
Exercised	(3,148	) \$41.48
Forfeited/Expired	(44	) \$40.69
Outstanding and exercisable at December 31, 2015	7	\$41.49
(1) Weighted average price per share		

Additional Information about Employee Stock Purchase Plan	2015	2014	2013
In millions, except per share amounts			
Weighted-average fair value per share of purchase rights granted	\$4.62	\$5.45	\$7.20
Total compensation expense for ESPP	\$15	\$20	\$60
Related tax benefit	\$5	\$7	\$22
Total amount of cash received from the exercise of purchase rights	\$131	\$138	\$198
Total intrinsic value of purchase rights exercised (1)	\$25	\$42	\$68
Related tax benefit	\$9	\$15	\$25
(1) Difference between the market price at exercise and the price paid by the employee to exercise the purchase rights.			

**Stock Incentive Plan**

The Company has historically granted equity awards under various plans (the "Prior Plans"). On February 9, 2012, the Board of Directors authorized The Dow Chemical Company 2012 Stock Incentive Plan (the "2012 Plan"), which was approved by stockholders at the Company's annual meeting on May 10, 2012 ("Original Effective Date") and became effective on that date. On February 13, 2014, the Board of Directors adopted The Dow Chemical Company Amended and Restated 2012 Stock Incentive Plan (the "2012 Restated Plan"). The 2012 Restated Plan was approved by stockholders at the Company's annual meeting on May 15, 2014 and became effective on that date. The Prior Plans were superseded by the 2012 Plan and the 2012 Restated Plan (collectively, the "2012 Plan"). Under the 2012 Plan, the Company may grant options, deferred stock, performance deferred stock, restricted stock, stock appreciation rights and stock units to employees and non-employee directors until the tenth anniversary of the Original Effective Date, subject to an aggregate limit and annual individual limits. The terms of the grants are fixed at the grant date. At December 31, 2015, there were 56,905,984 shares available for grant under the 2012 Plan.

**Stock Options**

The Company grants stock options to certain employees, subject to certain annual and individual limits, with terms of the grants fixed at the grant date. The exercise price of each stock option equals the market price of the Company's stock on the grant date. Options vest from one to three years, and have a maximum term of 10 years.

The following table summarizes stock option activity for 2015:

Stock Options	2015	
Shares in thousands	Shares	Exercise Price (1)
Outstanding at January 1, 2015	53,647	\$36.05
Granted	3,024	\$49.44
Exercised	(11,226	) \$36.06
Forfeited/Expired	(3,984	) \$51.94
Outstanding at December 31, 2015	41,461	\$35.50
Remaining contractual life in years		5.50

Aggregate intrinsic value in millions	\$662	
Exercisable at December 31, 2015	30,992	\$34.02
Remaining contractual life in years		4.75
Aggregate intrinsic value in millions (1) Weighted-average per share.	\$541	



Table of Contents

Additional Information about Stock Options	2015	2014	2013
In millions, except per share amounts			
Weighted-average fair value per share of options granted	\$11.61	\$11.49	\$6.99
Total compensation expense for stock option plans	\$55	\$65	\$101
Related tax benefit	\$20	\$24	\$37
Total amount of cash received from the exercise of options	\$377	\$810	\$188
Total intrinsic value of options exercised (1)	\$175	\$300	\$102
Related tax benefit	\$65	\$111	\$38

(1) Difference between the market price at exercise and the price paid by the employee to exercise the options.

Total unrecognized compensation cost related to unvested stock option awards of \$20 million at December 31, 2015 is expected to be recognized over a weighted-average period of 0.74 years.

## Deferred Stock

The Company grants deferred stock to certain employees. The grants vest after a designated period of time, generally one to three years. The following table shows changes in nonvested deferred stock:

Deferred Stock	2015	Grant Date
Shares in thousands	Shares	Fair Value (1)
Nonvested at January 1, 2015	9,352	\$36.45
Granted	2,168	\$49.42
Vested	(3,339)	) \$33.95
Canceled	(202)	) \$39.07
Nonvested at December 31, 2015	7,979	\$40.96

(1) Weighted-average per share.

Additional Information about Deferred Stock	2015	2014	2013
In millions, except per share amounts			
Weighted-average fair value per share of deferred stock granted	\$49.42	\$46.88	\$32.13
Total fair value of deferred stock vested and delivered (1)	\$162	\$156	\$137
Related tax benefit	\$60	\$58	\$51
Total compensation expense for deferred stock awards	\$110	\$99	\$104
Related tax benefit	\$41	\$37	\$39

(1) Includes the fair value of shares vested in prior years and delivered in the reporting year.

Total unrecognized compensation cost related to deferred stock awards of \$81 million at December 31, 2015 is expected to be recognized over a weighted-average period of 0.85 years. At December 31, 2015, approximately 30,794 deferred shares with a grant date weighted-average fair value per share of \$37.62 had previously vested, but were not issued. These shares are scheduled to be issued to employees within one to three years or upon retirement.

## Performance Deferred Stock

The Company grants performance deferred stock to certain employees. The grants vest when the Company attains specified performance targets, such as return on capital and relative total shareholder return, over a predetermined period, generally one to three years. Compensation expense related to performance deferred stock awards is recognized over the lesser of the service or performance period. Changes in the fair value of liability instruments are recognized as compensation expense each quarter.



Table of Contents

The following table shows the performance deferred stock awards granted:

Performance Deferred Stock Awards		Target	Grant Date
Shares in thousands		Shares	Fair Value (2) (3)
Year	Performance Period	Granted (1)	
2015	January 1, 2015 – December 31, 2017	2,258	\$59.08
2014	January 1, 2014 – December 31, 2016	2,425	\$54.42
2013	January 1, 2013 – December 31, 2015	1,321	\$34.41

At the end of the performance period, the actual number of shares issued can range from zero to 250 percent of the (1) target shares granted in the 2013 grant year and zero to 200 percent of target shares granted in the 2014 and 2015 grant years.

(2) Weighted-average per share.

(3) The 2013 and 2014 grant date fair values have been updated to incorporate the probability distribution of projected payout outcomes.

The following table shows changes in nonvested performance deferred stock:

Performance Deferred Stock	2015	
	Target	Grant Date
Shares in thousands	Shares	Fair Value (2)
	Granted (1)	
Nonvested at January 1, 2015	3,720	\$47.40
Granted	2,258	\$59.08
Vested (3)	(1,295)	) \$34.41
Canceled	(62)	) \$52.51
Nonvested at December 31, 2015	4,621	\$56.68

At the end of the performance period, the actual number of shares issued can range from zero to 250 percent of the (1) target shares granted in the 2013 grant year, and zero to 200 percent of target shares granted in the 2014 and 2015 grant years.

(2) Weighted-average per share.

(3) Vested shares for the 2013 - 2015 performance period that were earned (i.e., performance conditions were satisfied and the target shares granted for the performance period vested) during the applicable fiscal year. Shares earned will be delivered in February 2016 at the applicable pay-out percentage. Certain executive employees may opt to receive a cash payment equal to the value of the stock award on the date of delivery.

#### Additional Information about Performance Deferred Stock

In millions	2015	2014	2013
Total fair value of performance deferred stock vested and delivered (1)	\$37	\$12	\$14
Related tax benefit	\$14	\$5	\$5
Total compensation expense for performance deferred stock awards	\$172	\$67	\$62
Related tax benefit	\$63	\$25	\$23
Shares of performance deferred stock settled in cash (2)	0.3	0.1	0.2
Total cash paid to settle performance deferred stock awards (3)	\$16	\$6	\$6

(1) Includes the fair value of shares vested in prior years and delivered in the reporting year.

(2) Performance deferred stock awards vested in prior years and delivered in the reporting year.

(3) Cash paid to certain employees for performance deferred stock awards vested in prior periods and delivered in the reporting year, equal to the value of the stock award on the date of delivery.

Total unrecognized compensation cost related to performance deferred stock awards of \$83 million at December 31, 2015 is expected to be recognized over a weighted-average period of 0.81 years. At December 31, 2015, approximately 2.4 million performance deferred shares with a grant date weighted-average fair value of \$34.41 per share were vested, but not issued. These shares are scheduled to be issued in February 2016.

#### Restricted Stock

Under the 2012 Plan, the Company may grant shares (including options, stock appreciation rights, stock units and restricted stock) to non-employee directors over the 10-year duration of the program, subject to the plan's aggregate limit as well as annual individual limits. The restricted stock issued under this plan cannot be sold, assigned, pledged or otherwise transferred

Table of Contents

by the non-employee director, until the director is no longer a member of the Board. The following table shows the restricted stock issued under this plan:

Restricted Stock	Shares Issued	Weighted-Average Fair Value
Year		
2015	31,560	\$51.51
2014	24,840	\$48.98
2013	35,280	\$34.46

## NOTE 22 – STOCKHOLDERS’ EQUITY

## Cumulative Convertible Perpetual Preferred Stock, Series A

Equity securities in the form of Cumulative Convertible Perpetual Preferred Stock, Series A (“preferred series A”) were issued on April 1, 2009 to Berkshire Hathaway Inc. in the amount of \$3 billion (3 million shares) and the Kuwait Investment Authority in the amount of \$1 billion (1 million shares). The Company will pay cumulative dividends on preferred series A at a rate of 8.5 percent per annum in either cash, shares of common stock, or any combination thereof, at the option of the Company. Dividends may be deferred indefinitely, at the Company’s option. If deferred, common stock dividends must also be deferred. Any past due and unpaid dividends will accrue additional dividends at a rate of 10 percent per annum, compounded quarterly. If dividends are deferred for any six quarters, the preferred series A shareholders may elect two directors to the Company’s Board of Directors until all past due dividends are paid. Ongoing dividends related to preferred series A are \$85 million per quarter; no dividends had been deferred at December 31, 2015.

Shareholders of preferred series A may convert all or any portion of their shares, at their option, at any time, into shares of the Company’s common stock at an initial conversion rate of 24.2010 shares of common stock for each share of preferred series A. Under certain circumstances, the Company will be required to adjust the conversion rate. On or after the fifth anniversary of the issuance date, if the common stock price exceeds \$53.72 per share for any 20 trading days in a consecutive 30-day window, the Company may, at its option, at any time, in whole or in part, convert preferred series A into common stock at the then applicable conversion rate. Upon conversion, accrued and unpaid dividends will be payable, at the option of the Company, in either cash, shares of common stock, or any combination thereof.

## Common Stock

The Company may issue common stock shares out of treasury stock or as new common stock shares for purchases under the Employee Stock Purchase Plan, for options exercised and for the release of deferred, performance deferred and restricted stock. In 2015, no new common stock shares were issued to employees and 31,560 new common stock shares were issued to non-employee directors under the Company’s stock-based compensation program. The number of new common stock shares issued to employees and non-employee directors was 21.2 million in 2014 and 18.3 million in 2013.

## Retained Earnings

There are no significant restrictions limiting the Company’s ability to pay dividends.

Undistributed earnings of nonconsolidated affiliates included in retained earnings were \$2,708 million at December 31, 2015 and \$2,703 million at December 31, 2014.

## Employee Stock Ownership Plan

The Company has the Dow Employee Stock Ownership Plan (the “ESOP”), which is an integral part of The Dow Chemical Company Employees’ Savings Plan (the “Plan”). A significant majority of full-time employees in the United States are eligible to participate in the Plan. The Company uses the ESOP to provide the Company’s matching contribution in the form of the Company’s stock to Plan participants.

In connection with the acquisition of Rohm and Haas on April 1, 2009, the Rohm and Haas Employee Stock Ownership Plan (the "Rohm and Haas ESOP") was merged into the Plan, and the Company assumed the \$78 million balance of debt at 9.8 percent interest with final maturity in 2020 that was used to finance share purchases by the Rohm and Haas ESOP in 1990. The outstanding balance of the debt was \$30 million at December 31, 2015 and \$37 million at December 31, 2014.

## Table of Contents

Dividends on unallocated shares held by the ESOP are used by the ESOP to make debt service payments and to purchase additional shares if dividends exceed the debt service payments. Dividends on allocated shares are used by the ESOP to make debt service payments to the extent needed; otherwise, they are paid to the Plan participants. Shares are released for allocation to participants based on the ratio of the current year's debt service to the sum of the principal and interest payments over the life of the loan. The shares are allocated to Plan participants in accordance with the terms of the Plan.

Compensation expense for allocated shares is recorded at the fair value of the shares on the date of allocation. ESOP shares that have not been released or committed to be released are not considered outstanding for purposes of computing basic and diluted earnings per share.

Compensation expense for ESOP shares was \$174 million in 2015, \$163 million in 2014 and \$132 million in 2013. At December 31, 2015, 15.2 million shares out of a total 31.8 million shares held by the ESOP had been allocated to participants' accounts and 16.6 million shares, at a fair value of \$852 million, were considered unearned.

### Treasury Stock

On February 13, 2013, the Board of Directors approved a share buy-back program, authorizing up to \$1.5 billion to be spent on the repurchase of the Company's common stock over a period of time. On January 29, 2014, the Board of Directors announced an expansion of the Company's share buy-back authorization, authorizing an additional amount not to exceed \$3 billion to be spent on the repurchase of the Company's common stock over a period of time. On November 12, 2014, the Board of Directors announced a new \$5 billion tranche to its share buy-back program, with the repurchase of the Company's common stock timed to proceeds received from portfolio management actions and increases in operating cash flows. As a result of these actions, the total authorized amount of the share repurchase program is \$9.5 billion. At December 31, 2015, \$2.3 billion of the share buy-back authorization remained for repurchases. The total number of treasury shares purchased by the Company was 23.1 million in 2015, 84.1 million in 2014 and 8.2 million in 2013. In 2015, the Company also recorded 34.1 million treasury shares as part of the Reverse Morris Trust transaction with Olin, which were tendered as part of a non-cash, public exchange offer. See Note 6 for additional information.

On December 11, 2015, the Company and DuPont announced that their boards of directors unanimously approved a definitive agreement under which the companies will combine in an all-stock merger of equals strategic combination. The combined company will be named DowDuPont. This transaction is expected to close in the second half of 2016, subject to customary closing conditions, including regulatory approvals. As a result of this pending transaction, the Company will not repurchase shares under the share repurchase program until after the shareholder vote on the DowDuPont merger.

The Company may issue shares for purchases under the Employee Stock Purchase Plan, for options exercised as well as for the release of deferred, performance deferred and restricted stock out of treasury stock or as new common stock shares. The number of treasury shares issued to employees under the Company's stock-based compensation programs was 16.5 million in 2015, 7.1 million in 2014 and zero in 2013.

Table of Contents

## NOTE 23 – INCOME TAXES

## Domestic and Foreign Components of Income Before Income Taxes

In millions	2015 (1)	2014	2013 (2)
Domestic	\$5,313	\$1,652	\$3,979
Foreign	4,617	3,613	2,825
Total	\$9,930	\$5,265	\$6,804

In 2015, the domestic and foreign components of "Income Before Income Taxes" included approximately \$3.5 (1) billion and \$1.1 billion of income from portfolio actions, respectively. This includes gains from transactions noted below in the Reconciliation to U.S. Statutory Rate table.

In 2013, the domestic component of "Income Before Income Taxes" included a gain of \$2.195 billion related to the (2) K-Dow arbitration and a \$451 million gain related to the sale of Dow's Polypropylene Licensing and Catalysts business.

## Provision for Income Taxes

	2015			2014			2013		
In millions	Current	Deferred	Total	Current	Deferred	Total	Current	Deferred	Total
Federal (1)	\$583	\$358	\$941	\$(161)	\$442	\$281	\$805	\$278	\$1,083
State and local	38	(8)	30	(4)	43	39	42	(73)	(31)
Foreign	1,221	(45)	1,176	1,125	(19)	1,106	1,028	(92)	936
Total	\$1,842	\$305	\$2,147	\$960	\$466	\$1,426	\$1,875	\$113	\$1,988

(1) Reflects the 2014 impact of accelerated deductions.

## Reconciliation to U.S. Statutory Rate

In millions	2015	2014	2013
Taxes at U.S. statutory rate	\$3,476	\$1,843	\$2,381
Equity earnings effect	(197)	(307)	(276)
Foreign income taxed at rates other than 35% (1)	(398)	(195)	(76)
U.S. tax effect of foreign earnings and dividends	130	54	102
Goodwill impact from divestitures	57	—	—
Discrete equity earnings (2)	21	26	—
Change in valuation allowances	(32)	33	(197)
Unrecognized tax benefits	81	(30)	243
Federal tax accrual adjustments	13	(3)	29
Gain from K-Dow arbitration (3)	—	—	(212)
Gain on split-off of chlorine value chain (4)	(763)	—	—
Gain on Univation step acquisition (5)	(124)	—	—
Gain on sale of MEGlobal (6)	(120)	—	—
Other – net	3	5	(6)
Total tax provision	\$2,147	\$1,426	\$1,988
Effective tax rate	21.6	% 27.1	% 29.2

(1) Includes the tax provision for statutory taxable income in foreign jurisdictions for which there is no corresponding amount in "Income Before Income Taxes."

(2) Includes nonrecurring charges related to equity in earnings of nonconsolidated affiliates.

(3) In 2013, the K-Dow arbitration award generated a tax rate benefit of \$212 million due to the tax treatment of certain components of the award. See Note 15 for further information.

(4) See Note 6 for further information.

(5) See Note 4 for further information.

(6) See Note 5 for further information.



The tax rate for 2015 was positively impacted by portfolio actions, specifically the tax-efficient split-off of the chlorine value chain, the non-taxable gain from the Univation step acquisition and the sale of MEGlobal. The geographic mix of earnings favorably impacted the tax rate with the gain from the ANGUS Chemical Company divestiture and continued profitability improvement in Europe and Asia Pacific providing most of the benefit. The tax rate was unfavorably impacted by foreign subsidiaries repatriating cash to the United States which was primarily derived from divestiture proceeds. Reduced equity earnings and continued increases in statutory income in Latin America and Canada due to local currency devaluations also unfavorably impacted the tax rate. These factors resulted in an effective tax rate of 21.6 percent for 2015.

135

---

Table of Contents

The tax rate for 2014 was favorably impacted by the geographic mix of earnings, with the most notable components being improved profitability in Europe and Asia Pacific as well as equity earnings providing additional favorable impact on the tax rate. The tax rate was also favorably impacted by a reduction in the tax on remittances by foreign subsidiaries to the United States. The tax rate was unfavorably impacted by a continued increase in statutory income in Latin America due to local currency devaluations, and increases in valuation allowances, primarily in Asia Pacific. These factors resulted in an effective tax rate of 27.1 percent for 2014.

The tax rate for 2013 was favorably impacted by increased equity earnings; the K-Dow arbitration award, due to favorable tax treatment of certain components of the award; and changes in valuation allowances in the United States on state income tax attributes and capital loss carryforwards. The tax rate was unfavorably impacted by adjustments to uncertain tax positions related to court rulings on two separate tax matters as well as the establishment of valuation allowances outside the United States. Additionally, the tax rate was unfavorably impacted by an increase in statutory taxable income in Latin America, primarily due to local currency devaluation. These factors resulted in an effective tax rate of 29.2 percent for 2013.

Deferred Tax Balances at December 31 In millions	2015		2014	
	Deferred Tax Assets (1)	Deferred Tax Liabilities	Deferred Tax Assets (1)	Deferred Tax Liabilities
Property	\$48	\$2,015	\$63	\$2,005
Tax loss and credit carryforwards	1,647	—	1,843	—
Postretirement benefit obligations	4,199	1,344	4,526	1,220
Other accruals and reserves	1,191	684	1,213	411
Intangibles	208	692	217	691
Inventory	306	218	412	177
Long-term debt	—	440	—	673
Investments (2)	204	242	130	346
Other – net (2)	1,114	436	972	527
Subtotal	\$8,917	\$6,071	\$9,376	\$6,050
Valuation allowances	(1,000	) —	(1,106	) —
Total	\$7,917	\$6,071	\$8,270	\$6,050

(1) Included in current deferred tax assets are prepaid tax assets totaling \$293 million in 2015 and \$358 million in 2014.

(2) Prior year was adjusted to conform to current year presentation.

Gross operating loss carryforwards amounted to \$10,364 million at December 31, 2015 and \$11,080 million at December 31, 2014. At December 31, 2015, \$1,655 million of the operating loss carryforwards were subject to expiration in 2016 through 2020. The remaining operating loss carryforwards expire in years beyond 2020 or have an indefinite carryforward period. Tax credit carryforwards at December 31, 2015 amounted to \$128 million (\$130 million at December 31, 2014), net of uncertain tax positions, of which \$29 million is subject to expiration in 2016 through 2020. The remaining tax credit carryforwards expire in years beyond 2020 or have an indefinite carryforward period.

The Company had valuation allowances that primarily related to the realization of recorded tax benefits on tax loss carryforwards from operations in the United States, Brazil and Asia Pacific of \$1,000 million at December 31, 2015 and \$1,106 million at December 31, 2014.

Undistributed earnings of foreign subsidiaries and related companies that are deemed to be permanently invested amounted to \$18,773 million at December 31, 2015, \$18,037 million at December 31, 2014 and \$16,139 million at December 31, 2013. It is not practicable to calculate the unrecognized deferred tax liability on undistributed earnings.

## Total Gross Unrecognized Tax Benefits

In millions	2015	2014	2013	
Balance at January 1	\$240	\$266	\$409	
Increases related to positions taken on items from prior years	92	42	385	
Decreases related to positions taken on items from prior years	(6	) (57	) (137	)
Increases related to positions taken in the current year	10	10	10	
Settlement of uncertain tax positions with tax authorities	(56	) (13	) (393	)
Decreases due to expiration of statutes of limitations	—	(8	) (8	)
Balance at December 31	\$280	\$240	\$266	

Table of Contents

At December 31, 2015, the total amount of unrecognized tax benefits was \$280 million (\$240 million at December 31, 2014), of which \$206 million would impact the effective tax rate, if recognized (\$233 million at December 31, 2014).

Interest and penalties are recognized as components of the "Provision for income taxes," and totaled a charge of \$80 million in 2015, a charge of \$15 million in 2014 and a benefit of \$71 million in 2013. The Company's accrual for interest and penalties associated with uncertain tax positions was \$159 million at December 31, 2015 and \$109 million at December 31, 2014.

During 2013, court rulings on two separate tax matters resulted in the adjustment of uncertain tax positions. In February 2013, the U.S. District Court for the Middle District of Louisiana issued a ruling that disallowed, for tax purposes, transactions and partnerships associated with Chemtech, a wholly owned subsidiary. In March 2013, the U.S. Supreme Court denied certiorari in Union Carbide's research tax credit case. Through denial of certiorari, the decision issued by the U.S. Court of Appeals denying Union Carbide's tax credit claim for supplies used in process-related research and development at its manufacturing facilities became final. As a result of these rulings, the Company adjusted uncertain tax positions related to these matters, resulting in a tax charge of \$276 million in 2013.

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

Tax Years Subject to Examination by Major Tax  
Jurisdiction at December 31

Jurisdiction	Earliest Open Year	
	2015	2014
Argentina	2008	2007
Brazil (1)	2006	2008
Canada	2010	2010
Germany	2006	2006
Italy	2011	2009
The Netherlands	2013	2013
Switzerland	2012	2011
United States:		
Federal income tax	2004	2004
State and local income tax	2004	2004

(1) Amended returns filed in 2015 for years 2006 and 2009.

The Company is currently under examination in a number of tax jurisdictions. It is reasonably possible that some of these examinations may be resolved within twelve months. As a result, it is reasonably possible that the total gross unrecognized tax benefits of the Company at December 31, 2015 may range from an increase of \$60 million to a decrease of \$140 million in the next twelve months as a result of these resolved examinations. The impact on the Company's results of operations is not expected to be material.

The reserve for non-income tax contingencies related to issues in the United States and foreign locations was \$64 million at December 31, 2015 and \$93 million at December 31, 2014. This is management's best estimate of the potential liability for non-income tax contingencies. 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 Company's management that the possibility is remote that costs in excess of those accrued will have a material impact on the Company's consolidated financial statements.



Table of Contents

## NOTE 24 – ACCUMULATED OTHER COMPREHENSIVE LOSS

The following table provides an analysis of the changes in accumulated other comprehensive loss for the years ended December 31, 2015, 2014 and 2013:

## Accumulated Other Comprehensive Loss

In millions	2015	2014	2013
Unrealized Gains on Investments at beginning of year	\$141	\$160	\$147
Net change in unrealized gains (losses) (net of tax of \$(22), \$22, \$25)	(40)	) 41	55
Reclassification to earnings - Net sales (net of tax of \$(27), \$(32), \$(20)) (1)	(49)	) (59)	) (42)
Reclassification to earnings - Sundry income (expense) - net (net of tax of \$(3), \$(1), \$-) (1)	(5)	) (1)	) —
Balance at end of period	\$47	\$141	\$160
Cumulative Translation Adjustments at beginning of year	\$(751)	) \$476	\$328
Translation adjustments (net of tax of \$(84), \$(28), \$6)	(990)	) (1,239)	) 169
Reclassification to earnings - Sundry income (expense) - net (2)	4	12	(21)
Balance at end of period	\$(1,737)	) \$(751)	) \$476
Pension and Other Postretirement Benefit Plans at beginning of year	\$(7,321)	) \$(5,460)	) \$(7,995)
Net gain (loss) arising during period (net of tax of \$70, \$(1,228), \$876) (3)	132	(2,516)	) 1,984
Prior service credit (cost) arising during period (net of tax of \$(36), \$185, \$1) (3)	(27)	) 315	5
Amortization of prior service cost (credit) included in net periodic pension costs (net of tax of \$(10), \$6, \$6) (3)	(20)	) 14	15
Amortization of net loss included in net periodic pension costs (net of tax of \$228, \$158, \$266) (3)	467	326	531
Balance at end of period	\$(6,769)	) \$(7,321)	) \$(5,460)
Accumulated Derivative Gain (Loss) at beginning of year	\$(86)	) \$(3)	) \$4
Net hedging results (net of tax of \$(79), \$(25), \$5)	(136)	) (91)	) 10
Reclassification to earnings - Cost of sales (net of tax of \$9, \$2, \$(8)) (1)	14	8	(17)
Balance at end of period	\$(208)	) \$(86)	) \$(3)
Total accumulated other comprehensive loss	\$(8,667)	) \$(8,017)	) \$(4,827)

(1) Tax amounts are included in "Provision for income taxes" in the consolidated statements of income.

(2) In 2015 and 2014, reclassification resulted from the liquidation and divestiture of subsidiaries. In 2013, reclassification resulted from the divestiture of a nonconsolidated affiliate.

(3) See Note 18 for additional information.

Table of Contents

## NOTE 25 – NONCONTROLLING INTERESTS

Ownership interests in the Company's subsidiaries held by parties other than the Company are presented separately from the Company's equity in the consolidated balance sheets as "Accrued and other current liabilities," "Redeemable Noncontrolling Interest" and "Non-redeemable noncontrolling interests." The amount of consolidated net income attributable to the Company and the noncontrolling interests are both presented on the face of the consolidated statements of income. See Note 20 for additional information related to the redeemable noncontrolling interest.

The following table summarizes the activity for equity attributable to non-redeemable noncontrolling interests for the years ended December 31, 2015, 2014 and 2013:

Non-redeemable Noncontrolling Interests In millions	2015	2014	2013	
Balance at January 1	\$931	\$1,026	\$990	
Net income attributable to noncontrolling interests	98	67	29	
Distributions to noncontrolling interests (1)	(76	) (64	) (55	)
Capital contributions (2)	38	36	58	
Purchases of noncontrolling interests (3)	(42	) (56	) —	)
Transfers of redeemable noncontrolling interest (4)	(108	) (46	) (9	)
Cumulative translation adjustments	(34	) (29	) (43	)
Deconsolidation of noncontrolling interests	—	—	52	
Other	2	(3	) 4	)
Balance at December 31	\$809	\$931	\$1,026	

Distributions to noncontrolling interests is net of \$36 million in 2015 (\$27 million in 2014) in dividends paid to a (1) joint venture which were reclassified to "Equity in earnings of nonconsolidated affiliates" in the consolidated statements of income.

(2) Includes non-cash capital contributions of \$21 million in 2015.

(3) The 2015 value excludes a \$133 million purchase of a Redeemable Noncontrolling Interest. See Notes 6 and 20 for additional information.

(4) See Notes 6 and 20 for additional information.

## NOTE 26 – OPERATING SEGMENTS AND GEOGRAPHIC AREAS

Dow is a diversified, worldwide manufacturer and supplier of products used primarily as raw materials in the manufacture of customer products and services. The Company serves the following industries: appliance; automotive; agricultural; building and construction; chemical processing; electronics; furniture; housewares; oil and gas; packaging; paints, coatings and adhesives; personal care; pharmaceutical; processed foods; pulp and paper; textile and carpet; utilities; and water treatment.

Dow conducts its worldwide operations through global businesses, which are reported in five operating segments. Corporate contains the reconciliation between the totals for the reportable segments and the Company's totals and includes research and other expenses related to new business development activities, and other corporate items not allocated to the reportable operating segments.

The Company uses EBITDA (which Dow defines as earnings (i.e., "Net Income") before interest, income taxes, depreciation and amortization) as its measure of profit/loss for segment reporting purposes. EBITDA by operating segment includes all operating items relating to the businesses; items that principally apply to the Company as a whole are assigned to Corporate. See table toward the end of this footnote for depreciation and amortization by segment, as well as a reconciliation of EBITDA to "Income Before Income Taxes."

### Corporate Profile

Dow combines the power of science and technology to passionately innovate what is essential to human progress. The Company is driving innovations that extract value from materials, polymers, chemicals and biological sciences to help address many of the world's most challenging problems such as the need for clean water, clean energy generation and conservation, and increasing agricultural productivity. Dow's integrated, market-driven, industry-leading portfolio of specialty chemical, advanced materials, agrosiences and plastics businesses delivers a broad range of technology-based products and solutions to customers in approximately 180 countries and in high-growth sectors such as packaging, electronics, water, coatings and agriculture. In 2015, Dow had annual sales of nearly \$49 billion and employed approximately 49,500 people worldwide. The Company's more than 6,000 product families are manufactured at 179 sites in 35 countries across the globe. The Company

139

---



## Table of Contents

conducts its worldwide operations through global businesses, which are reported in five operating segments: Agricultural Sciences, Consumer Solutions, Infrastructure Solutions, Performance Materials & Chemicals and Performance Plastics.

### Agricultural Sciences

The Agricultural Sciences segment is a global leader in providing crop protection and seed/plant biotechnology products and technologies, urban pest management solutions and healthy oils. The business invents, develops, manufactures and markets products for use in agricultural, industrial and commercial pest management, and food service. Agricultural Sciences consists of two businesses - Crop Protection and Seeds.

### Acquisition:

On January 30, 2015, Dow AgroSciences LLC ("DAS") acquired Coodetec's seed business. See Note 4 for additional information on this acquisition.

### Divestiture:

On July 31, 2015, the Company sold its AgroFresh business to AFSI. The AgroFresh business was reported in the Agricultural Sciences segment through the date of divestiture. The Company has retained a minority interest in AFSI which is reported in the Agricultural Sciences segment and accounted for as an equity method investment. See Note 5 for additional information on this divestiture.

### Consumer Solutions

The Consumer Solutions segment consists of three global businesses: Consumer Care, Dow Automotive Systems and Dow Electronic Materials. These global businesses develop and market customized materials using advanced technology and unique chemistries for specialty applications - including semiconductors and organic light-emitting diodes, adhesives and foams used by the transportation industry, and cellulose and other polymers for innovative pharmaceutical formulations and food solutions. These businesses serve the needs of market segments as diverse as: automotive; electronics and entertainment; food and pharmaceuticals; and, personal and home care products. The Consumer Solutions segment also includes a portion of the Company's share of the results of Dow Corning, a joint venture that manufactures silicone and silicone products, which is owned 50 percent by the Company.

### Infrastructure Solutions

The Infrastructure Solutions segment is comprised of an industry-leading portfolio of businesses utilizing advanced technology to deliver products such as architectural and industrial coatings, construction material ingredients, building insulation, adhesives, microbial protection for the oil and gas industry, and water technologies. Infrastructure Solutions consists of four global businesses: Dow Building & Construction, Dow Coating Materials, Energy & Water Solutions and Performance Monomers. The Infrastructure Solutions segment also includes a portion of the Company's share of the results of Dow Corning, a joint venture that manufactures silicone and silicone products, which is owned 50 percent by the Company.

### Performance Materials & Chemicals

The Performance Materials & Chemicals segment is comprised of three technology-driven, customer-centric global businesses that are advantaged through integration and driven by innovative technology and solutions: Chlor-Alkali and Vinyl, Industrial Solutions and Polyurethanes. Products produced by this segment are back-integrated into feedstocks, supporting a low-cost manufacturing base and consistent, reliable supply. The Performance Materials & Chemicals segment is positioned for growth through diverse markets and product offerings. The Performance Materials & Chemicals segment also includes the results of MEGlobal and a portion of the results of EQUATE, TKOC, Map Ta Phut Olefins Company Limited and Sadara, all joint ventures of the Company.

### Divestitures:

On January 30, 2015, the Company sold its global Sodium Borohydride business to Vertellus Specialty Materials LLC. On February 2, 2015, the Company sold ANGUS Chemical Company to Golden Gate Capital. On October 5, 2015, the Company completed the split-off of its U.S. Gulf Coast Chlor-Alkali and Vinyl, Global Chlorinated Organics and Global Epoxy businesses to Olin in a tax-efficient Reverse Morris Trust transaction. These businesses were reported in the Performance Materials & Chemicals segment through the date of divestiture.

On December 23, 2015, the Company sold its 50 percent ownership interest in MEGlobal to EQUATE. MEGlobal was aligned 100 percent with Performance Materials & Chemicals through the date of divestiture. Dow has retained a 42.5 percent ownership stake in MEGlobal through its ownership in EQUATE. See Notes 5, 6 and 9 for additional information on these divestitures.

Table of Contents

## Performance Plastics

The Performance Plastics segment is the world's leading plastics franchise, and is a market-oriented portfolio composed of five global businesses: Dow Elastomers, Dow Electrical and Telecommunications, Dow Packaging and Specialty Plastics, Energy and Hydrocarbons. The segment is advantaged through its low cost position into key feedstocks and benefits from Dow's R&D expertise to deliver leading-edge technology that provides a competitive benefit to customers in key strategic markets. The Performance Plastics segment also includes the results of TKSC and The SCG-Dow Group as well as a portion of the results of EQUATE, TKOC, Map Ta Phut Olefins Limited and Sadara, all joint ventures of the Company.

## Acquisition:

On May 5, 2015, Univation Technologies, LLC, previously a 50:50 joint venture between Dow and ExxonMobil, became a wholly owned subsidiary of Dow. See Note 4 for additional information on this step acquisition.

## Divestiture:

On December 2, 2013, the Company sold its Polypropylene Licensing and Catalysts business to W. R. Grace & Co. This business was reported in the Performance Plastics segment through the date of divestiture. See Note 5 for additional information on this divestiture.

## Corporate

Corporate includes certain enterprise and governance activities (including insurance operations, geographic management, risk management such as foreign currency hedging activities, audit fees, donations, Company branding initiatives, etc.); the results of Ventures (including business incubation platforms and non-business aligned joint ventures); environmental operations; gains and losses on the sales of financial assets; severance costs; non-business aligned litigation expenses (including asbestos-related defense costs and reserve adjustments); and, foreign exchange results.

The Company operates 179 manufacturing sites in 35 countries. The United States is home to 55 of these sites, representing 62 percent of the Company's long-lived assets. Sales are attributed to geographic areas based on customer location; long-lived assets are attributed to geographic areas based on asset location.

## Geographic Area Information

In millions	United States	Europe, Middle East, Africa and India	Rest of World	Total
2015				
Sales to external customers	\$16,821	\$15,291	\$16,666	\$48,778
Long-lived assets	\$11,062	\$2,172	\$4,620	\$17,854
2014				
Sales to external customers	\$19,449	\$19,671	\$19,047	\$58,167
Long-lived assets	\$10,605	\$2,628	\$4,818	\$18,051
2013				
Sales to external customers	\$18,712	\$19,208	\$19,160	\$57,080
Long-lived assets	\$9,320	\$3,256	\$4,878	\$17,454

Table of Contents

Operating Segment Information In millions	Perf						
	Agri-cultural Sciences	Consumer Solutions	Infra-structure Solutions	Materials & Chemicals	Perf Plastics	Corp	Total
2015							
Sales to external customers	\$ 6,381	\$ 4,379	\$ 7,394	\$ 11,973	\$ 18,357	\$ 294	\$ 48,778
Intersegment revenues (1)	—	—	—	24	—	(24 )	—
Equity in earnings (losses) of nonconsolidated affiliates	(15 )	91	203	225	220	(50 )	674
Restructuring charges (3)	16	67	26	—	12	294	415
EBITDA (5)	1,432	1,048	1,021	5,479	5,399	(1,053 )	13,326
Total assets (6)	6,333	9,234	12,186	7,694	14,310	18,269	68,026
Investment in nonconsolidated affiliates	275	732	986	155	304	1,506	3,958
Depreciation and amortization	195	354	495	637	746	94	2,521
Capital expenditures	308	134	355	223	2,683	—	3,703
2014							
Sales to external customers	\$ 7,290	\$ 4,639	\$ 8,429	\$ 15,114	\$ 22,386	\$ 309	\$ 58,167
Intersegment revenues (1)	—	—	—	100	—	(100 )	—
Equity in earnings (losses) of nonconsolidated affiliates	4	281	(6 )	322	257	(23 )	835
Goodwill and other intangible assets impairment loss (2)	—	50	—	—	—	—	50
Restructuring credits (3)	—	—	—	(3 )	—	—	(3 )
Asbestos-related charge (4)	—	—	—	—	—	78	78
EBITDA (5)	962	1,130	817	2,193	4,422	(580 )	8,944
Total assets (6)	7,292	9,629	12,245	12,166	13,459	13,896	68,687
Investment in nonconsolidated affiliates	83	691	922	698	705	1,102	4,201
Depreciation and amortization	208	396	510	780	759	94	2,747
Capital expenditures	383	114	269	315	2,490	1	3,572
2013							
Sales to external customers	\$ 7,137	\$ 4,562	\$ 8,339	\$ 14,824	\$ 21,910	\$ 308	\$ 57,080
Intersegment revenues (1)	—	—	—	137	—	(137 )	—
Equity in earnings (losses) of nonconsolidated affiliates	5	107	126	480	355	(39 )	1,034
Restructuring credits (3)	—	—	(1 )	(15 )	(6 )	—	(22 )
EBITDA (5)	894	933	941	1,913	4,503	1,361	10,545
Total assets (6)	7,059	10,171	12,844	12,071	13,788	13,469	69,402
Investment in nonconsolidated affiliates	88	541	1,178	827	772	1,095	4,501
Depreciation and amortization	189	414	528	743	707	100	2,681
Capital expenditures	319	105	198	409	1,271	—	2,302

(1) Includes revenues generated by transfers of product to Agricultural Sciences from other segments, generally at market-based prices. Other transfers of products between operating segments are generally valued at cost.

(2) See Note 12 for information regarding intangible asset impairment losses.

(3) See Note 3 for information regarding restructuring charges and credits.

(4) See Note 15 for information regarding the asbestos-related charge.

(5) A reconciliation of EBITDA to "Income Before Income Taxes" is provided below.

(6) Presented in accordance with newly implemented ASU 2015-03. See Note 2 for additional information.

Reconciliation of EBITDA to “Income Before Income Taxes” In millions	2015	2014	2013
EBITDA	\$ 13,326	\$ 8,944	\$ 10,545
- Depreciation and amortization	2,521	2,747	2,681
+ Interest income	71	51	41
- Interest expense and amortization of debt discount	946	983	1,101
Income Before Income Taxes	\$ 9,930	\$ 5,265	\$ 6,804

Table of Contents

NOTE 27 – PLANNED MERGER WITH DUPONT

On December 11, 2015, the Company and DuPont entered into an Agreement and Plan of Merger (the "Merger Agreement"), pursuant to which Dow and DuPont have agreed, subject to the terms and conditions of the Merger Agreement, to effect an all-stock, merger of equals strategic combination of their respective businesses by: (i) forming Diamond-Orion HoldCo, Inc., a Delaware corporation that is jointly owned by Dow and DuPont ("HoldCo"), (ii) Dow merging with a newly formed, wholly owned direct subsidiary of HoldCo, with Dow surviving such merger as a direct, wholly owned subsidiary of HoldCo (the "Dow Merger"), (iii) DuPont merging with a newly formed, wholly owned direct subsidiary of HoldCo, with DuPont surviving such merger as a direct, wholly owned subsidiary of HoldCo (the "DuPont Merger" and, together with the Dow Merger, the "Mergers"), and (iv) prior to or as of the effective time of the Mergers (the "Effective Time"), changing the name of HoldCo to be DowDuPont. Following the consummation of the Mergers, Dow and DuPont intend to pursue, subject to the receipt of regulatory approvals and approval by the board of directors of HoldCo, the separation of the combined company's agriculture business, specialty products business and material science business through one or more tax-efficient transactions.

Subject to the terms and conditions set forth in the Merger Agreement, at the Effective Time, each share of common stock, par value \$2.50 per share, of Dow (the "Dow Common Stock") issued and outstanding immediately prior to the Effective Time (excluding any shares of Dow Common Stock that are held in treasury) will be converted into the right to receive one share of common stock, par value \$0.01 per share, of HoldCo (the "HoldCo Common Stock"), and each share of Cumulative Convertible Perpetual Preferred Stock, Series A, par value \$1.00 per share, of Dow (the "Dow Preferred") issued and outstanding immediately prior to the Effective Time will be automatically canceled and each holder of shares of Dow Preferred will be deemed to hold the same number of shares of preferred, par value \$0.01 per share, stock of HoldCo on equivalent terms.

Subject to the terms and conditions set forth in the Merger Agreement, at the Effective Time, each share of common stock, par value \$0.30 per share, of DuPont (the "DuPont Common Stock") issued and outstanding immediately prior to the Effective Time (excluding any shares of DuPont Common Stock that are held in treasury) will be converted into the right to receive 1.2820 shares of HoldCo Common Stock, and each share of DuPont Preferred Stock—\$4.50 Series and DuPont Preferred Stock—\$3.50 Series, in each case issued and outstanding immediately prior to the Effective Time shall remain issued and outstanding and be unaffected by the Mergers. The aforementioned 1.2820 exchange ratio set forth in the Merger Agreement will result in Dow common stockholders and DuPont common stockholders each owning approximately 50 percent of the outstanding shares of HoldCo Common Stock immediately following the Effective Time, excluding the shares of Dow Preferred.

The Merger Agreement provides that, at the Effective Time, the Dow stock options and other equity awards and the DuPont stock options and other equity awards generally will automatically convert into stock options and equity awards with respect to HoldCo Common Stock, on the same terms and conditions under the applicable plans and award agreements immediately prior to the Effective Time and, in the case of DuPont stock options and equity awards, after giving effect to the exchange ratio and appropriate adjustments to reflect the consummation of the Mergers.

After the Effective Time, HoldCo Common Stock will be listed on the New York Stock Exchange ("NYSE").

The Company expects the Mergers to close in the second half of 2016, subject to customary closing conditions. The completion of the Mergers is subject to the satisfaction or waiver of certain conditions, including (i) the adoption of the Merger Agreement by the affirmative vote of the holders of a majority of all outstanding shares of Dow Common Stock entitled to vote thereon; (ii) the adoption of the Merger Agreement by the affirmative vote of the holders of a majority of all outstanding shares of DuPont Common Stock entitled to vote thereon; (iii) the receipt of certain domestic and foreign approvals under competition laws; (iv) Dow and DuPont reasonably determining that the Dow

Merger and the DuPont Merger do not constitute an acquisition of 50 percent or greater interest in Dow and DuPont, respectively, under the principles of Section 355(e) of the Internal Revenue Code; (v) the absence of governmental restraints or prohibitions preventing the consummation of either of the Mergers; (vi) the effectiveness of the Form S-4 and absence of any stop order or proceedings by the U.S. Securities and Exchange Commission; and (vii) the approval of the shares of HoldCo Common Stock to be issued in the Merger for listing on the NYSE. The obligation of each of Dow and DuPont to consummate the Mergers is also conditioned on, among other things, the receipt of a tax opinion from tax counsel as to the tax-free nature of each of the Mergers, and the truth and correctness of the representations and warranties made by the other party as of the closing date, subject to certain "material" and "material adverse effect" qualifiers.

Table of Contents

NOTE 28 – PLANNED RESTRUCTURE OF DOW CORNING

On December 10, 2015, the Company entered into a definitive agreement with Corning to restructure the ownership of Dow Corning, a 50:50 joint venture between Dow and Corning. Under the terms of the agreement, Corning will exchange with Dow Corning its 50 percent equity interest in Dow Corning for 100 percent of the stock of a newly formed entity owned 100 percent by Dow Corning ("SplitCo") (collectively, the "Transaction"). SplitCo will hold an approximately 40 percent equity interest in the Hemlock Semiconductor Group and approximately \$4.8 billion of cash. As a result of this Transaction, Dow will obtain a 100 percent ownership interest in Dow Corning. Dow and Corning will maintain their current equity interest in the Hemlock Semiconductor Group. It is anticipated that Dow Corning will incur approximately \$4.5 billion of indebtedness in order to fund the contribution of cash to SplitCo. The Transaction is subject to closing conditions, including, but not limited to, customary regulatory approvals, receipt by Corning of certain tax opinions and consummation by Dow Corning of financing required to fund the contribution of cash to SplitCo. The Transaction is expected to close in the first half of 2016.



Table of ContentsThe Dow Chemical Company and Subsidiaries  
Selected Quarterly Financial DataIn millions, except per share amounts  
(Unaudited)

2015	1st	2nd	3rd	4th	Year
Net sales	\$12,370	\$12,910	\$12,036	\$11,462	\$48,778
Cost of sales	9,535	10,146	9,349	8,806	37,836
Gross margin	2,835	2,764	2,687	2,656	10,942
Restructuring charges	—	375	—	40	415
Net income	1,519	1,197	1,436	3,631	7,783
Net income available for common stockholders	1,393	1,135	1,290	3,527	7,345
Earnings per common share - basic (1)	1.22	0.99	1.12	3.17	6.45
Earnings per common share - diluted (1) (2)	1.18	0.97	1.09	2.94	6.15
Dividends declared per share of common stock	0.42	0.42	0.42	0.46	1.72
Market price range of common stock: (3)					
High	50.22	53.77	53.20	57.10	57.10
Low	41.95	47.21	35.11	42.15	35.11

In millions, except per share amounts  
(Unaudited)

2014	1st	2nd	3rd	4th	Year	
Net sales	\$14,461	\$14,917	\$14,405	\$14,384	\$58,167	
Cost of sales	11,733	12,344	11,776	11,611	47,464	
Gross margin	2,728	2,573	2,629	2,773	10,703	
Goodwill and other intangible assets impairment losses	—	—	—	50	50	
Restructuring credits	—	—	—	(3	) (3	)
Asbestos-related charge	—	—	—	78	78	
Net income	1,066	970	964	839	3,839	
Net income available for common stockholders	964	882	852	734	3,432	
Earnings per common share - basic (1)	0.80	0.74	0.72	0.64	2.91	
Earnings per common share - diluted (1)	0.79	0.73	0.71	0.63	2.87	
Dividends declared per share of common stock	0.37	0.37	0.37	0.42	1.53	
Market price range of common stock: (3)						
High	50.96	53.35	54.97	53.80	54.97	
Low	41.82	46.56	50.34	41.45	41.45	

See Notes to the Consolidated Financial Statements.

(1)

Due to quarterly changes in the share count and the allocation of income to participating securities, the sum of the four quarters does not equal the earnings per share amount calculated for the year.

(2) For the quarters ended March 31, 2015, June 30, 2015, September 30, 2015, and December 31, 2015, and the year ended December 31, 2015, an assumed conversion of the Company's Cumulative Convertible Perpetual Preferred Stock, Series A into shares of the Company's common stock was included in the calculation of earnings per common share - diluted. See Note 14 for additional information.

(3) Composite price as reported by the New York Stock Exchange.

Table of Contents

The Dow Chemical Company and Subsidiaries

PART II, Item 9. Changes in and Disagreements With Accountants on Accounting and  
Financial Disclosure.

CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL  
DISCLOSURE

Not applicable.

146

---

Table of Contents

The Dow Chemical Company and Subsidiaries  
PART II, Item 9A. Controls and Procedures.

CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this Annual Report on Form 10-K, the Company carried out an evaluation, under the supervision and with the participation of the Company's Disclosure Committee and the Company's management, including the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures pursuant to paragraph (b) of Exchange Act Rules 13a-15 and 15d-15. Based upon that evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective.

Changes in Internal Control Over Financial Reporting

There were no changes in the Company's internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Exchange Act Rules 13a-15 and 15d-15 that was conducted during the last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control framework and processes are designed to provide reasonable assurance to management and the Board of Directors regarding the reliability of financial reporting and the preparation of the Company's consolidated financial statements in accordance with accounting principles generally accepted in the United States of America.

The Company's internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and Directors of the Company; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the consolidated financial statements.

Because of its inherent limitations, any system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements.

Management assessed the effectiveness of the Company's internal control over financial reporting and concluded that, as of December 31, 2015, such internal control is effective. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control—Integrated Framework (2013).

The Company's independent auditors, Deloitte & Touche LLP, with direct access to the Company's Board of Directors through its Audit Committee, have audited the consolidated financial statements prepared by the Company. Their report on the consolidated financial statements is included in Part II, Item 8. Financial Statements and Supplementary Data. Deloitte & Touche LLP's report on the Company's internal control over financial reporting is referenced therein and included herein.

February 12, 2016

/s/ ANDREW N. LIVERIS  
Andrew N. Liveris  
Chief Executive Officer and  
Chairman of the Board

/s/ HOWARD I. UNGERLEIDER  
Howard I. Ungerleider  
Vice Chairman and  
Chief Financial Officer

/s/ RONALD C. EDMONDS  
Ronald C. Edmonds  
Vice President and Controller

147

---

Table of Contents

The Dow Chemical Company and Subsidiaries

PART II

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of

The Dow Chemical Company:

We have audited the internal control over financial reporting of The Dow Chemical Company and subsidiaries (the "Company") as of December 31, 2015, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on the criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements of the Company and the financial statement schedule listed in the Index at Item 15(a)2 as of and for the year ended December 31, 2015 and our report dated February 12, 2016 expressed an unqualified opinion on those financial statements and financial statement schedule.

/S/ DELOITTE & TOUCHE LLP

Deloitte & Touche LLP

Midland, Michigan

February 12, 2016



Table of Contents

The Dow Chemical Company and Subsidiaries  
PART II, Item 9B. Other Information.

OTHER INFORMATION

None.

149

---



Table of Contents

The Dow Chemical Company and Subsidiaries

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information relating to Directors, certain executive officers and certain corporate governance matters (including identification of Audit Committee members and financial expert(s)) is contained in the definitive Proxy Statement for the Annual Meeting of Stockholders of The Dow Chemical Company to be held on May 12, 2016, and is incorporated herein by reference. See also the information regarding executive officers of the registrant set forth in Part I, Item 1. Business under the caption "Executive Officers of the Registrant" in reliance on General Instruction G to Form 10-K.

On July 10, 2003, the Board of Directors of the Company adopted a code of ethics that applies to its principal executive officer, principal financial officer and principal accounting officer, and is incorporated herein by reference to Exhibit 14 to the Company's Annual Report on Form 10-K for the year ended December 31, 2003.

ITEM 11. EXECUTIVE COMPENSATION

Information relating to executive compensation and the Company's equity compensation plans is contained in the definitive Proxy Statement for the Annual Meeting of Stockholders of The Dow Chemical Company to be held on May 12, 2016, and is incorporated herein by reference.

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

Information with respect to beneficial ownership of Dow common stock by each Director and all Directors and executive officers of the Company as a group is contained in the definitive Proxy Statement for the Annual Meeting of Stockholders of The Dow Chemical Company to be on held May 12, 2016, and is incorporated herein by reference.

Information relating to any person who beneficially owns in excess of 5 percent of the total outstanding shares of Dow common stock is contained in the definitive Proxy Statement for the Annual Meeting of Stockholders of The Dow Chemical Company to be on held May 12, 2016, and is incorporated herein by reference.

Information with respect to compensation plans under which equity securities are authorized for issuance is contained in the definitive Proxy Statement for the Annual Meeting of Stockholders of The Dow Chemical Company to be held on May 12, 2016, and is incorporated herein by reference.

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

Reportable relationships and related transactions, if any, as well as information relating to director independence are contained in the definitive Proxy Statement for the Annual Meeting of Stockholders of The Dow Chemical Company to be held on May 12, 2016, and are incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information with respect to fees and services related to the Company's independent auditors, Deloitte & Touche LLP, and the disclosure of the Audit Committee's pre-approval policies and procedures are contained in the definitive Proxy Statement for the Annual Meeting of Stockholders of The Dow Chemical Company to be held on May 12, 2016, and are incorporated herein by reference.



Table of Contents

The Dow Chemical Company and Subsidiaries

PART IV, Item 15. Exhibits, Financial Statement Schedules.

EXHIBITS, FINANCIAL STATEMENT SCHEDULES

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

- (1) The Company's 2015 Consolidated Financial Statements and the Report of Independent Registered Public Accounting Firm are included in Part II, Item 8. Financial Statements and Supplementary Data.

Financial Statement Schedules – The following Financial Statement Schedule should be read in conjunction with the (2) Consolidated Financial Statements and Report of Independent Registered Public Accounting Firm included in Part II, Item 8. Financial Statements and Supplementary Data:

Schedule II Valuation and Qualifying Accounts

Schedules other than the one listed above are omitted due to the absence of conditions under which they are required or because the information called for is included in the Consolidated Financial Statements or the Notes to the Consolidated Financial Statements.

- (3) Exhibits – See the Exhibit Index for the exhibits filed with this Annual Report on Form 10-K or incorporated by reference. The following exhibits are filed with this Annual Report on Form 10-K:

Exhibit No.	Description of Exhibit
12.1	Computation of Ratio of Earnings to Fixed Charges and Combined Fixed Charges and Preferred Stock Dividend Requirements.
21	Subsidiaries of The Dow Chemical Company.
23(a)	Consent of Independent Registered Public Accounting Firm.
23(b)	Analysis, Research & Planning Corporation's Consent.
31(a)	Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31(b)	Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32(a)	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32(b)	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
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.

A copy of any exhibit can be obtained via the Internet through the Investor Relations section of the Company's website ([www.dow.com/investors](http://www.dow.com/investors)), or the Company 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 Vice President and Controller of the Company at the address of the Company's principal executive offices. The Company's website and its content are not deemed incorporated by reference into this report.

Table of Contents

The Dow Chemical Company and Subsidiaries					Schedule II	
Valuation and Qualifying Accounts						
For the Years Ended December 31						
In millions						
COLUMN A	COLUMN B	COLUMN C - Additions		COLUMN D	COLUMN E	
Description	Balance	Charged to	Charged to	Deductions	Balance	
	at Beginning	Costs and	Other	from	at End	
	of Year	Expenses	Accounts	Reserves	of Year	
2015						
RESERVES DEDUCTED FROM ASSETS TO WHICH THEY APPLY:						
For doubtful receivables	\$110	\$24	\$2	(1) \$42	(2) \$94	
Other investments and noncurrent receivables	\$477	\$108	\$—	\$91	\$494	
Deferred tax assets	\$1,106	\$67	\$—	\$173	\$1,000	
2014						
RESERVES DEDUCTED FROM ASSETS TO WHICH THEY APPLY:						
For doubtful receivables	\$148	\$53	\$8	(1) \$99	(2) \$110	
Other investments and noncurrent receivables	\$454	\$62	\$—	\$39	\$477	
Deferred tax assets	\$1,112	\$126	\$—	\$132	\$1,106	
2013						
RESERVES DEDUCTED FROM ASSETS TO WHICH THEY APPLY:						
For doubtful receivables	\$121	\$65	\$—	\$38	(2) \$148	
Other investments and noncurrent receivables	\$467	\$39	\$—	\$52	\$454	
Deferred tax assets	\$1,399	\$214	\$—	\$501	\$1,112	

Additions to reserves for doubtful receivables charged to other accounts were classified as "Accounts and notes receivable - Other" in the consolidated balance sheets. These reserves relate to the Company's sale of trade (1) accounts receivable. Anticipated credit losses in the portfolio of receivables sold are used to fair value the Company's interests held in trade accounts receivable conduits. See Notes 12 and 16 to the Consolidated Financial Statements for further information.

(2) Deductions represent notes and accounts receivable written off, credits to profit and loss and other miscellaneous items.

Table of ContentsThe Dow Chemical Company and Subsidiaries  
Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

## THE DOW CHEMICAL COMPANY

By /s/ R. C. EDMONDS  
R. C. Edmonds, Vice President and Controller  
Date February 11, 2016

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By /s/ A. BANGA  
A. Banga, Director  
Date February 11, 2016

By /s/ R. J. MILCHOVICH  
R. J. Milchovich, Director  
Date February 11, 2016

By /s/ J. K. BARTON  
J. K. Barton, Director  
Date February 11, 2016

By /s/ R. S. MILLER  
R. S. Miller, Director  
Date February 11, 2016

By /s/ J. A. BELL  
J. A. Bell, Director  
Date February 11, 2016

By /s/ P. POLMAN  
P. Polman, Director  
Date February 11, 2016

By /s/ R. K. DAVIS  
R. K. Davis, Director  
Date February 11, 2016

By /s/ D. H. REILLEY  
D. H. Reilley, Director  
Date February 11, 2016

By /s/ R. C. EDMONDS  
R. C. Edmonds, Vice President and  
Controller  
Date February 11, 2016

By /s/ J. M. RINGLER  
J. M. Ringler, Director  
Date February 11, 2016

By /s/ J. M. FETTIG  
J. M. Fettig, Lead Director  
Date February 11, 2016

By /s/ R. G. SHAW  
R. G. Shaw, Director  
Date February 11, 2016

By /s/ A. N. LIVERIS  
A. N. Liveris, Director, Chief Executive  
Officer and Chairman of the Board  
Date February 11, 2016

By /s/ H. I. UNGERLEIDER  
H. I. Ungerleider, Vice Chairman and Chief  
Financial Officer  
Date February 11, 2016

By /s/ M. LOUGHRIDGE  
M. Loughridge, Director

Date February 11, 2016

153

---

Table of Contents

The Dow Chemical Company and Subsidiaries

Trademark Listing

The following trademarks or service marks of The Dow Chemical Company and certain affiliated companies of Dow appear in this report: ACOUSTICRYL, ACRY SOL, ADSORBSIA, AFFINITY, AMBERJET, AMBERLYST, AQUASET, AQUACAR, AVANSE, BETAMATE, BIOBAN, DOW, DOWEX, EDI, ELITE, ENDURANCE, EVOQUE, FILMTEC, FORMASHIELD, FROTH-PAK, GREAT STUFF, LIQUID ARMOR, MAINCOTE, NORDEL, OPTIPORE, PACXPART, PARALOID, POWERHOUSE, PRIMAL, RHOPLEX, SAFE CHEM, SAFE-TAINER, SILVADUR, SOLDERON, STYROFOAM, TAMOL, TEQUATIC, THERMAX, WALOCEL, WEATHERMATE, XENERGY

The following trademarks or service marks of Dow AgroSciences LLC and certain affiliated companies of Dow AgroSciences LLC appear in this report: ARYLEX, BROADWAY, BRODBECK, CLINCHER, DAIRYLAND SEED, DITHANE, DURANGO, ENLIST, ENLIST DUO, ENLIST E3, FENCER, GARLON, INATREQ, ISOCLAST, LONTREL, LORSBAN, MILESTONE, MYCOGEN, N-SERVE, NEXERA, PANZER, PFISTER, PHYTOGEN, PRAIRIE BRAND, PRIMUS, RADIANT, REFUGE ADVANCED, RINSKOR, SENTRICON, SPIDER, STARANE, SURESTART, TELONE, TORDON, TRACER

The following trademark of Agromen Sementes Agricolas Ltda appears in this report: AGROMEN

The following registered service mark of American Chemistry Council appears in this report: Responsible Care

The following registered trademark of Monsanto Technology LLC appears in this report: SmartStax, POWERCORE. SmartStax and POWERCORE multi-event technology developed by Dow AgroSciences LLC and Monsanto

® <sup>TM</sup>Trademark of The Dow Chemical Company (“Dow”) or an affiliated company of Dow

154

---



Table of Contents

The Dow Chemical Company and Subsidiaries  
Exhibit Index

EXHIBIT NO. DESCRIPTION

Agreement and Plan of Merger, dated as of July 10, 2008, among The Dow Chemical Company, Ramses  
2(b) Acquisition Corp. and Rohm and Haas Company, incorporated by reference to Exhibit 2.1 to The Dow Chemical  
Company Current Report on Form 8-K filed on July 10, 2008.

Joint Venture Formation Agreement, dated November 28, 2008, between The Dow Chemical Company and  
2(c) Petroleum Industries Company (K.S.C.), incorporated by reference to Exhibit 2.1 to The Dow Chemical Company  
Current Report on Form 8-K filed on February 19, 2009.

Deed Regarding Arbitration Award Payment, dated as of May 6, 2013, between The Dow Chemical Company  
2(c)(i) and Petroleum Industries Company (K.S.C.), incorporated by reference to Exhibit 2(c)(i) to The Dow Chemical  
Quarterly Report on Form 10-Q for the quarter ended June 30, 2013.

Shareholders' Agreement, dated as of October 8, 2011, between Dow Saudi Arabia Holding B.V. and  
2(e) Performance Chemicals Holding Company, incorporated by reference to Exhibit 99.1 to The Dow Chemical  
Company Current Report on Form 8-K/A filed on June 27, 2012.

First Amendment, effective June 1, 2012, to the Shareholders' Agreement, dated as of October 8, 2011, between  
2(e)(i) Performance Chemicals Holding Company, Dow Saudi Arabia Holding B.V., Saudi Arabian Oil Company,  
Dow Europe Holding B.V. and The Dow Chemical Company, incorporated by reference to Exhibit 99.1 to The  
Dow Chemical Company Current Report on Form 8-K filed on February 14, 2013.

Agreement and Plan of Merger, dated as of March 26, 2015, among The Dow Chemical Company, Blue Cube  
2(f) Spinco Inc., Olin Corporation and Blue Cube Acquisition Corp., incorporated by reference to Exhibit 2.1 to The  
Dow Chemical Company Current Report on Form 8-K filed on March 27, 2015.

Separation Agreement, dated as of March 26, 2015, between The Dow Chemical Company and Blue Cube  
2(f)(i) Spinco Inc., incorporated by reference to Exhibit 2.2 to The Dow Chemical Company Current Report on Form  
8-K filed on March 27, 2015.

Transaction Agreement, dated as of December 10, 2015, among The Dow Chemical Company, Corning  
2(g) Incorporated, Dow Corning Corporation and HS Upstate Inc., incorporated by reference to Exhibit 2.1 to  
The Dow Chemical Company Current Report on Form 8-K filed on December 11, 2015.

Tax Matters Agreement, dated as of December 10, 2015, among The Dow Chemical Company, Corning  
2(g)(i) Incorporated, Dow Corning Corporation and HS Upstate Inc., incorporated by reference to Exhibit 2.2 to The  
Dow Chemical Company Current Report on Form 8-K filed on December 11, 2015.

Agreement and Plan of Merger, dated as of December 11, 2015, among The Dow Chemical Company, E. I. du  
2(h) Pont de Nemours and Company, Diamond Merger Sub, Inc., Orion Merger Sub, Inc. and Diamond-Orion HoldCo  
Inc., incorporated by reference to Exhibit 2.1 to The Dow Chemical Company Current Report on Form 8-K filed  
on December 11, 2015.

3(i) The Restated Certificate of Incorporation of The Dow Chemical Company as filed with the Secretary of  
State, State of Delaware on May 17, 2010, incorporated by reference to Exhibit 3(i) to The Dow Chemical

Company Quarterly Report on Form 10-Q for the quarter ended September 30, 2010.

3(i)(a) Certificate of Designations for the Cumulative Convertible Perpetual Preferred Stock, Series A, as originally filed with the Secretary of State, State of Delaware on March 31, 2009, incorporated by reference to Exhibit 3.1 to The Dow Chemical Company Current Report on Form 8-K filed on April 1, 2009; and as re-filed with the Secretary of State, State of Delaware on May 17, 2010.

Table of Contents

The Dow Chemical Company and Subsidiaries  
Exhibit Index

EXHIBIT NO. DESCRIPTION

The Bylaws of The Dow Chemical Company, as amended and re-adopted in full on October 12, 2011, effective 3(ii)October 12, 2011, incorporated by reference to Exhibit 99.1 to The Dow Chemical Company Current Report on Form 8-K filed on October 13, 2011.

Indenture, dated as of April 1, 1992, between The Dow Chemical Company and the First National Bank of Chicago, as trustee (incorporated by reference to Exhibit 4.1 to The Dow Chemical Company's Registration Statement on Form S-3, File No. 333-88617 (the "S-3 Registration Statement")), as amended by the Supplemental Indenture, dated as of January 1, 1994, between The Dow Chemical Company and The First National Bank of Chicago, as trustee (incorporated by reference to Exhibit 4.2 to the S-3 Registration Statement), as amended by the Second Supplemental Indenture, dated as of October 1, 1999, between The Dow Chemical Company and Bank One Trust 4Company, N.A. (formerly The First National Bank of Chicago), as trustee (incorporated by reference to Exhibit 4.3 to the S-3 Registration Statement), as amended by the Third Supplemental Indenture, dated as of May 15, 2001, between The Dow Chemical Company and Bank One Trust Company, N.A. (formerly The First National Bank of Chicago), as trustee (incorporated by reference to Exhibit 4.4 to The Dow Chemical Company's Registration Statement on Form S-4, File No. 333-67368); and all other such indentures that define the rights of holders of long-term debt of The Dow Chemical Company and its consolidated subsidiaries as shall be requested to be furnished to the Securities and Exchange Commission pursuant to Item 601(b)(4)(iii)(A) of Regulation S-K.

Indenture, dated May 1, 2008, between The Dow Chemical Company and The Bank of New York Trust 4(a)Company, N.A., as trustee, incorporated by reference to Exhibit 4.1 to Post-Effective Amendment No. 1 to The Dow Chemical Company's Registration Statement on Form S-3, File No. 333-140859.

The Dow Chemical Company Executives' Supplemental Retirement Plan, as amended, restated and effective as 10(a)of April 14, 2010, incorporated by reference to Exhibit 10.1 to The Dow Chemical Company Current Report on Form 8-K filed on May 3, 2010.

An Amendment to The Dow Chemical Company Executives' Supplemental Retirement Plan, effective as of 10(a)(i)April 14, 2010, incorporated by reference to Exhibit 10.4 to The Dow Chemical Company Current Report on Form 8-K filed on May 3, 2010.

An Amendment to The Dow Chemical Company Executives' Supplemental Retirement Plan, effective as of 10(a)(ii)July 19, 2013, incorporated by reference to Exhibit 10(a)(ii) to The Dow Chemical Company Annual Report on Form 10-K for the year ended December 31, 2013.

Support Agreement, dated November 20, 2014, by and among The Dow Chemical Company and Third Point 10(b)LLC, Third Point Partners Qualified L.P., Third Point Partners L.P., Third Point Offshore Master Fund L.P., Third Point Ultra Master Fund L.P. and Third Point Reinsurance Co., Ltd., incorporated by reference to Exhibit 10.1 to the Dow Chemical Company Current Report on Form 8-K filed on November 21, 2014.

The Dow Chemical Company Voluntary Deferred Compensation Plan for Outside Directors (for deferrals made through December 31, 2004), as amended effective as of July 1, 1994, incorporated by reference to Exhibit 10(f) 10(c)to The Dow Chemical Company Annual Report on Form 10-K for the year ended December 31, 1994, as amended in the manner described in the definitive Proxy Statement for the Annual Meeting of Stockholders of The Dow Chemical Company held on May 14, 1998, incorporated by reference.

10(e) The Dow Chemical Company Dividend Unit Plan, incorporated by reference to Exhibit 10(e) to The Dow Chemical Company Quarterly Report on Form 10-Q for the quarter ended March 31, 2009.

10(f) The Dow Chemical Company 1988 Award and Option Plan, as amended and restated on December 10, 2008, effective as of January 1, 2009, incorporated by reference to Exhibit 10(f) to The Dow Chemical Company Annual Report on Form 10-K for the year ended December 31, 2008.

156

---

Table of Contents

The Dow Chemical Company and Subsidiaries  
Exhibit Index

EXHIBIT NO. DESCRIPTION

10(g) Employment Offer Letter for Joe Harlan, President, Performance Materials and Executive Vice President of The Dow Chemical Company, incorporated by reference to Exhibit 10.3 to The Dow Chemical Company Current Report on Form 8-K filed on February 14, 2012.

10(h) The Dow Chemical Company 1994 Executive Performance Plan, as amended and restated on December 10, 2008, effective as of January 1, 2009, incorporated by reference to Exhibit 10(h) to The Dow Chemical Company Annual Report on Form 10-K for the year ended December 31, 2008.

10(i) A written description of compensation for Directors of The Dow Chemical Company, incorporated by reference to the definitive Proxy Statement for the Annual Meeting of Stockholders of The Dow Chemical Company to be held on May 12, 2016.

10(m) A written description of the manner in which compensation is set for the Executive Officers of The Dow Chemical Company, incorporated by reference to the definitive Proxy Statement for the Annual Meeting of Stockholders of The Dow Chemical Company to be held on May 12, 2016.

10(o) The template used for The Dow Chemical Company Key Employee Insurance Program (“KEIP”), which provides benefits using insurance policies that replace benefits otherwise payable under The Dow Chemical Company Executives' Supplemental Retirement Plan and Company-Paid Life Insurance Plan, incorporated by reference to Exhibit 10(o) to The Dow Chemical Company Annual Report on Form 10-K for the year ended December 31, 2002. KEIP is a component of the annual pension benefits listed in and incorporated by reference to the definitive Proxy Statement for the Annual Meeting of Stockholders of The Dow Chemical Company to be held on May 12, 2016.

10(p) The Dow Chemical Company Elective Deferral Plan (for deferrals made through December 31, 2004), as amended, restated and effective as of April 14, 2010, incorporated by reference to Exhibit 10.2 to The Dow Chemical Company Current Report on Form 8-K filed on May 3, 2010.

10(p)(i) An Amendment to The Dow Chemical Company Elective Deferral Plan (for deferrals made through December 31, 2004), effective as of April 14, 2010, incorporated by reference to Exhibit 10.5 to The Dow Chemical Company Current Report on Form 8-K filed on May 3, 2010.

10(s) The Summary Plan Description for The Dow Chemical Company Company-Paid Life Insurance Plan, Employee-Paid Life Insurance Plan, and Dependent Life Insurance Plan, amended and restated effective as of January 1, 2014, incorporated by reference to Exhibit 10.1 to The Dow Chemical Company Current Report on Form 8-K filed on February 13, 2014.

10(t) The Summary Plan Description for The Dow Chemical Company Retiree Company-Paid Life Insurance Plan, Retiree Optional Life Insurance Plan, and Retiree Dependent Life Insurance Plan, amended and restated effective as of January 1, 2014, incorporated by reference to Exhibit 10.2 to The Dow Chemical Company Current Report on Form 8-K filed on February 13, 2014.

10(u) Amended and Restated 2003 Non-Employee Directors' Stock Incentive Plan, adopted by the Board of Directors of The Dow Chemical Company on December 10, 2007, incorporated by reference to Exhibit 10(u) to The Dow

Chemical Company Annual Report on Form 10-K for the year ended December 31, 2007.

Non-Qualified Stock Option Agreement Pursuant to The Dow Chemical Company 2003 Non-Employee  
10(w) Directors' Stock Incentive Plan, incorporated by reference to Exhibit 10(w) to The Dow Chemical Company  
Quarterly Report on Form 10-Q for the quarter ended September 30, 2004.

Table of Contents

The Dow Chemical Company and Subsidiaries  
Exhibit Index

EXHIBIT NO. DESCRIPTION

10(x) The Performance Shares Deferred Stock Agreement Pursuant to The Dow Chemical Company 1988 Award and Option Plan, as amended, restated and effective as of January 1, 2009, incorporated by reference to Exhibit 10(x) to The Dow Chemical Company Annual Report on Form 10-K for the year ended December 31, 2008.

10(y) The Deferred Stock Agreement Pursuant to The Dow Chemical Company 1988 Award and Option Plan, as amended, restated and effective as of January 1, 2009, incorporated by reference to Exhibit 10(y) to The Dow Chemical Company Annual Report on Form 10-K for the year ended December 31, 2008.

10(z) The Non-Qualified Stock Option Agreement Pursuant to The Dow Chemical Company 1988 Award and Option Plan, as amended, restated and effective as of January 1, 2009, incorporated by reference to Exhibit 10(z) to The Dow Chemical Company Annual Report on Form 10-K for the year ended December 31, 2008.

10(cc) The Dow Chemical Company Voluntary Deferred Compensation Plan for Non-Employee Directors, effective for deferrals after January 1, 2005, as amended and restated on December 10, 2008, effective as of January 1, 2009, incorporated by reference to Exhibit 10(cc) to The Dow Chemical Company Annual Report on Form 10-K for the year ended December 31, 2008.

10(dd) The Dow Chemical Company Elective Deferral Plan, effective for deferrals after January 1, 2005, as amended, restated and effective as of April 14, 2010, incorporated by reference to Exhibit 10.3 to The Dow Chemical Company Current Report on Form 8-K filed on May 3, 2010.

10(dd)(i) An Amendment to The Dow Chemical Company Elective Deferral Plan, effective for deferrals after January 1, 2005, effective as of April 14, 2010, incorporated by reference to Exhibit 10.6 to The Dow Chemical Company Current Report on Form 8-K filed on May 3, 2010.

10(dd)(ii) An Amendment to The Dow Chemical Company Elective Deferral Plan, effective for deferrals after January 1, 2005, dated December 11, 2014.

10(ii) Employment agreement dated February 14, 2006, between Heinz Haller and The Dow Chemical Company, incorporated by reference to Exhibit 10(ii) to The Dow Chemical Company Annual Report on Form 10-K for the year ended December 31, 2008.

10(jj) Change in Control Executive Severance Agreement - Tier 1, incorporated by reference to Exhibit 10(jj) to The Dow Chemical Company Annual Report on Form 10-K for the year ended December 31, 2007.

10(kk) Change in Control Executive Severance Agreement - Tier 2, incorporated by reference to Exhibit 10(kk) to The Dow Chemical Company Annual Report on Form 10-K for the year ended December 31, 2007.

10(nn) Investment Agreement, dated as of October 27, 2008, between The Dow Chemical Company and Berkshire Hathaway Inc., incorporated by reference to Exhibit 10.1 to The Dow Chemical Company Current Report on Form 8-K filed on October 27, 2008.

10(oo) Investment Agreement, dated as of October 27, 2008, between The Dow Chemical Company and The Kuwait Investment Authority, incorporated by reference to Exhibit 10.2 to The Dow Chemical Company Current

Report on Form 8-K filed on October 27, 2008.

The Deferred Stock Units Agreement Pursuant to The Dow Chemical Company 1988 Award and Option Plan, 10(ww) as amended, restated and effective as of January 1, 2010, incorporated by reference to Exhibit 10.7 to The Dow Chemical Company Current Report on Form 8-K filed on February 18, 2010.



Table of Contents

The Dow Chemical Company and Subsidiaries  
Exhibit Index

EXHIBIT NO. DESCRIPTION

10(xx) The Special Deferred Stock Agreement Pursuant to The Dow Chemical Company 1988 Award and Option Plan, as amended, restated and effective as of January 1, 2010, incorporated by reference to Exhibit 10.8 to The Dow Chemical Company Current Report on Form 8-K filed on February 18, 2010.

10(yy) The Performance Shares Deferred Stock Units Agreement Pursuant to The Dow Chemical Company 1988 Award and Option Plan, as amended, restated and effective as of January 1, 2010, incorporated by reference to Exhibit 10.9 to The Dow Chemical Company Current Report on Form 8-K filed on February 18, 2010.

10(zz) The Special Performance Shares Deferred Stock Agreement Pursuant to The Dow Chemical Company 1988 Award and Option Plan, as amended, restated and effective as of January 1, 2010, incorporated by reference to Exhibit 10.10 to The Dow Chemical Company Current Report on Form 8-K filed on February 18, 2010.

10(aaa) The Stock Appreciation Rights Agreement Relating to a Stock Option Granted Under The Dow Chemical Company 1988 Award and Option Plan, as amended, restated and effective as of January 1, 2010, incorporated by reference to Exhibit 10.11 to The Dow Chemical Company Current Report on Form 8-K filed on February 18, 2010.

10(bbb) The Dow Chemical Company 2012 Stock Incentive Plan, effective as of May 10, 2012, incorporated by reference to Exhibit 10.1 to The Dow Chemical Company Current Report on Form 8-K filed on May 14, 2012.

10(ccc) Performance Shares Deferred Stock Agreement Pursuant to The Dow Chemical Company 2012 Stock Incentive Plan, effective as of May 10, 2012, incorporated by reference to Exhibit 10(ccc) to The Dow Chemical Company Quarterly Report on Form 10-Q for the quarter ended June 30, 2012.

10(ddd) Deferred Stock Agreement Pursuant to The Dow Chemical Company 2012 Stock Incentive Plan, effective as of May 10, 2012, incorporated by reference to Exhibit 10(ddd) to The Dow Chemical Company Quarterly Report on Form 10-Q for the quarter ended June 30, 2012.

10(eee) Non-Qualified Stock Option Agreement Pursuant to The Dow Chemical Company 2012 Stock Incentive Plan, effective as of May 10, 2012, incorporated by reference to Exhibit 10(eee) to The Dow Chemical Company Quarterly Report on Form 10-Q for the quarter ended June 30, 2012.

10(fff) The Dow Chemical Company Amended and Restated 2012 Stock Incentive Plan, effective as of May 15, 2014, incorporated by reference to Exhibit 10.1 to The Dow Chemical Company Current Report on Form 8-K filed on May 20, 2014.

12.1 Computation of Ratio of Earnings to Fixed Charges and Combined Fixed Charges and Preferred Stock Dividend Requirements.

14 Code of Ethics for Principal Executive Officer, Principal Financial Officer and Principal Accounting Officer, incorporated by reference to Exhibit 14 to The Dow Chemical Company Annual Report on Form 10-K for the year ended December 31, 2003.

21 Subsidiaries of The Dow Chemical Company.

23(a) Consent of Independent Registered Public Accounting Firm.

23(b) Analysis, Research & Planning Corporation's Consent.

31(a) Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

159

---

Table of Contents

The Dow Chemical Company and Subsidiaries  
Exhibit Index

EXHIBIT NO. DESCRIPTION

31(b) Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

32(a) Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

32(b) Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

99.4 Guarantee relating to the 6.00% Notes of Rohm and Haas Company, incorporated by reference to Exhibit 99.5 to The Dow Chemical Company Current Report on Form 8-K filed on April 1, 2009.

99.5 Guarantee relating to the 9.80% Debentures of Rohm and Haas Company, incorporated by reference to Exhibit 99.6 to The Dow Chemical Company Current Report on Form 8-K filed on April 1, 2009.

101.INSXBRL Instance Document.

101.SCHXBRL Taxonomy Extension Schema Document.

101.CALXBRL Taxonomy Extension Calculation Linkbase Document.

101.DEF XBRL Taxonomy Extension Definition Linkbase Document.

101.LABXBRL Taxonomy Extension Label Linkbase Document.

101.PREXBRL Taxonomy Extension Presentation Linkbase Document.

160