

DOW CHEMICAL CO /DE/  
Form 10-K  
February 14, 2014  
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, 2013

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

The aggregate market value of voting common stock held by non-affiliates as of June 30, 2013 (based upon the closing price of \$32.17 per common share as quoted on the New York Stock Exchange), was approximately \$38.9

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, 2013 was 1,210,213,904 shares.

Total common stock outstanding at January 31, 2014 was 1,215,829,233 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Part III: Proxy Statement for the Annual Meeting of Stockholders to be held on May 15, 2014.

---

Table of Contents

The Dow Chemical Company  
 ANNUAL REPORT ON FORM 10-K  
 For the fiscal year ended December 31, 2013  
 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>27</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>28</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>67</u>
<u>Item 8.</u> Financial Statements and Supplementary Data	<u>68</u>
<u>Item 9.</u> Changes in and Disagreements With Accountants on Accounting and Financial Disclosure	<u>139</u>
<u>Item 9A.</u> Controls and Procedures	<u>140</u>
<u>Item 9B.</u> Other Information	<u>142</u>
<u>PART III</u>	
<u>Item 10.</u> Directors, Executive Officers and Corporate Governance	<u>143</u>
<u>Item 11.</u> Executive Compensation	<u>143</u>
<u>Item 12.</u> Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	<u>143</u>

<u>Item 13.</u>	Certain Relationships and Related Transactions, and Director Independence	<u>143</u>
<u>Item 14.</u>	Principal Accounting Fees and Services	<u>143</u>
<u>PART IV</u>		
<u>Item 15.</u>	Exhibits, Financial Statement Schedules	<u>144</u>
<u>SIGNATURES</u>		<u>146</u>

Table of Contents

The Dow Chemical Company and 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 “believe,” “project,” “expect,” “anticipate,” “estimate,” “intend,” “strategy,” “future,” “opportunity,” “plan,” “may,” “should,” “will,” “would,” “will be,” “will continue,” “will likely result,” and similar expressions. Forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties which may cause actual results to differ materially from the forward-looking statements. A detailed discussion of principal risks and uncertainties which may cause actual results and events to differ materially from such forward-looking statements is included in the section titled “Risk Factors” (Part I, Item 1A of this Form 10-K). 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 the intersection of chemical, physical 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 2013, Dow had annual sales of more than \$57 billion and employed approximately 53,000 people worldwide. The Company's more than 6,000 products are manufactured at 201 sites in 36 countries across the globe. The Company conducts its worldwide operations through global businesses, which are reported in six operating segments: Electronic and Functional Materials, Coatings and Infrastructure Solutions, Agricultural Sciences, Performance Materials, Performance Plastics and Feedstocks and Energy.

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.

Table of Contents

BUSINESS SEGMENTS AND PRODUCTS

ELECTRONIC AND FUNCTIONAL MATERIALS

Electronic and Functional Materials develops and markets customized materials using advanced technology and unique chemistries for specialty applications ranging from semiconductors and organic light-emitting diodes to microbial protection for the oil and gas industry and cellulotics for innovative pharmaceutical drug formulation and healthier foods. These businesses serve the needs of market segments as diverse as: electronics and entertainment; healthcare and medical; energy; water; and consumer and home goods. The segment's commitment to continuous innovation and rapid new product development enable it to maximize opportunities in emerging geographies and high-growth industries.

Details on Electronic and Functional Materials' 2013 sales, by business and geographic area, are as follows:

Dow Electronic Materials

Dow Electronic Materials is a leading global supplier of enabling materials for applications such as consumer electronic devices, flat-panel displays and telecommunications. The business produces materials for chemical mechanical planarization ("CMP"); materials used in the production of electronic displays, including films and filters; metalorganic precursors for light-emitting diodes ("LEDs"); organic light-emitting diode ("OLED") materials; 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, electronics 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

Functional Materials

The Functional Materials portfolio of businesses creates performance-enhancing solutions that enable customers to differentiate their products in the global pharmaceutical, food, water, energy and home and personal care markets. This group also provides key materials for industrial uses around the world.

Table of Contents

Functional Materials principal businesses each serve one or more key market segments, as noted below:

Business	Market Segment	Technologies
Dow Consumer and Industrial Solutions	Personal care, home care, industrial materials and specialty applications	Technologies that differentiate our customers' products often with improved sustainability profiles
Dow Microbial Control	Energy (oil and gas), industrial and consumer goods, water and water processing	Comprehensive microbial control technology to predict, diagnose and sustainably solve the planet's most difficult microbial challenges Cellulosic and other technologies used to help bring new classes of medicines to market and enable foods that are healthier (gluten-free, reduced oil/fat content). Materials used in coatings, oil and gas drilling and many other industrial applications
Dow Pharma and Food Solutions	Pharmaceutical, food and nutrition; energy (oil and gas); industrial materials	

Competition

Electronic and Functional Materials 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, JSR Micro, Lonza and Shin-Etsu Chemical.

Joint Ventures

Electronic and Functional Materials includes a portion of the Company's share of the results of Dow Corning Corporation, a joint venture that manufactures silicone and silicone products, which is owned 50 percent by the Company.

COATINGS AND INFRASTRUCTURE SOLUTIONS

Coatings and Infrastructure Solutions is comprised of an industry-leading portfolio of businesses utilizing advanced technology to deliver products ranging from low volatile organic compound ("VOC") coatings to building insulation and adhesives to water technologies. With unmatched research and development ("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 140 countries and R&D and manufacturing facilities located in key geographic areas.

Details on Coatings and Infrastructure Solutions' 2013 sales, by business and geographic area, are as follows:

Dow Building and Construction

Dow Building and Construction is comprised of three businesses - Dow Building Solutions, Dow Construction Chemicals and Dow Solar Solutions. Leveraging more than 60 years of building science experience and deep application expertise, Dow creates high-performance solutions designed to help make residential and commercial buildings more comfortable, last longer, save energy and reduce emissions. The business offers extensive lines of industry-leading insulation, air sealing and weatherization products and systems; construction chemical solutions for increased durability, water resistance and lower systems costs; and, building-integrated photovoltaics.





Table of Contents

## 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 VOC and an improved sustainability profile while pushing performance boundaries.

## Dow Water and Process Solutions

Dow Water and Process Solutions is a leading provider of purification and separation technologies. The business provides the critical technology, 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, making controlled release drugs possible, and removing impurities in dairy processing. A primary goal of the business is to drive down the cost and energy requirements to treat water.

## Performance Monomers

The Performance Monomers business produces specialty 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 cleaning materials, personal care products, paints, coatings and inks.

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

Business	Major Products	Applications/Market Segments
Dow Building and Construction	AQUASET™ acrylic thermosetting resins, DOW™ latex powders, FROTH-PAK™ foam insulation and sealants, GREAT STUFF™ insulating foam sealants and adhesives, RHOPLEX™ and PRIMAL™ acrylic polymer emulsions, STYROFOAM™ brand insulation products, WALOCEL™ cellulose ethers, XENERGY™ high performance insulation	Delivering energy efficiency and durability to new and retrofit construction; insulation, weatherization and air sealing; caulks and sealants; elastomeric roof coatings; exterior insulation finishing systems; roof tiles; siding coatings; roofing and solar energy collector
Dow Coating Materials	ACRYSOL™ Rheology Modifiers, AVANSE™ acrylic binders, EVOQUE™ Pre-Composite Polymer, FORMASHIELD™ acrylic binder, RHOPLEX™ acrylic resin, TAMOL™ Dispersant, 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	Acrylic binders; architectural paint and coatings; dispersants; rheology modifiers; surfactants for both architectural and industrial applications
Dow Water and Process Solutions		Providing the right, cost effective separation technology for water treatment and filtration; energy (power, oil and gas); pharmaceutical; food and beverage; chemical processing
Performance Monomers	Acrylates, methacrylates, vinyl acetate monomers	Super absorbents, water treatment, flocculants and detergents, acrylic sheets, coatings, inks and paints, molding compounds, impact modifiers and electronic displays, adhesives, textiles, automotive and architectural safety glass

## Competition

Competitors of the Coatings and 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, Owens-Corning and Shin-Etsu Chemical.

#### Joint Ventures

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

Table of Contents

## AGRICULTURAL SCIENCES

The Agricultural Sciences segment is a global leader in providing crop protection and plant biotechnology products, urban pest management solutions and healthy oils. The business invents, develops, manufactures and markets products for use in agriculture, industrial and commercial pest management, and food service. The segment has broad global reach with sales in 130 countries and 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, cost competitive positions, strategic bolt-on acquisitions, and commercial and R&D collaborations. The Company is committed to the development of innovative new biological and crop protection products and technologies.

Details on Agricultural Sciences' 2013 sales, by business and geographic area, are as follows:

## Products

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

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

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

Major brands, by key product line, are listed below:

## Key Product Lines Brands

Insecticides LORSBAN™; RADIANT™; SENTRICON™; TELONE™; TRACER™

Fungicides DITHANE™

Herbicides BROADWAY™; CLINCHER™; FENCER™; GARLON™; LONTREL™; MILESTONE™; PRIMUS™; STARANE™; SURESTART™; TORDON™

Seeds, Traits and Oils AGROMEN™ seeds; BRODBECK™ seeds; DAIRYLAND SEED™; Grand Valley Hybrids; HYLAND™ seeds; MYCOGEN™ seeds; NEXERA™; PFISTER™ seeds; PHYTOGEN™; PRAIRIE BRAND SEEDS™; Renze Seeds; TRIUMPH™ seed

Other HARVISTA™; N-SERVE™; RIPELOCK™

## Table of Contents

Agricultural Sciences is focused on delivering results through technology leadership, including the following:

- SmartStax® Insect Trait Technology<sup>(1)</sup>
- POWERCORE™ Insect Trait Technology
- REFUGE ADVANCED® powered by SmartStax®<sup>(1)</sup>
- ENLIST™ Weed Control System<sup>(2)</sup>
- Omega-9 Healthier Oils
- New crop protection technologies - sulfoxaflor, spinetoram, pyroxsulam, aminopyralid and penoxsulam  
Smartstax® and POWERCORE™ multi-event technology developed by Dow AgroSciences LLC and Monsanto.

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

(2) Components of the ENLIST™ Weed Control System have not yet received regulatory approvals; approvals are pending.

## 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, E. I. DuPont de Nemours, Monsanto and Syngenta.

## 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 65 percent of the segment's annual sales are generated. Inventory tends to be at its low point in the second quarter of the year, consistent with peak sales in the northern hemisphere, and reaches its highest levels in the third and fourth quarters. Accounts receivable tend to be highest in the first quarter of the year, also consistent with the peak sales period.

## PERFORMANCE MATERIALS

The Performance Materials segment is comprised of eleven market-focused, technology-driven, customer-centric businesses that are advantaged through integration and driven by innovative technology and solutions. Products produced by this segment are back-integrated into feedstocks, supporting a low-cost manufacturing base and consistent, reliable supply. The Performance Materials segment is positioned for growth through diverse markets and product offerings. The segment has broad geographic reach with sales in over 140 countries and manufacturing facilities located in all geographic areas. Performance Materials has a diverse product line that serves customers in a large number of industries, including automotive, consumer, construction, infrastructure, oil and gas, appliance and electronics.

Details on Performance Materials' 2013 sales, by business and geographic area, are as follows:



Table of Contents

## Products

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

Business	Major Products	Applications/Market Segments
Amines	Chelants, ethanolamines, ethyleneamines, isopropanolamines	Agriculture, construction, consumer and institutional goods, electronics, home and personal care, industrial applications, paper, transportation, utilities
Chlorinated Organics	Chloroform, methyl chloride, methylene chloride, perchloroethylene, trichloroethylene	Cleaning applications, construction, fluoropolymers, pharmaceuticals, refrigerants, water treatment
Dow Automotive Systems	Composites, polyurethane foams, composite, elastic and structural adhesives, acoustical foam, one-coat adhesives	Automotive, transportation
Dow Formulated Systems	Formulated epoxy and polyurethane systems	Construction insulation, commercial appliances, composites, flooring, footwear, furniture, industrial applications, infrastructure, wind energy solutions
Dow Oil, Gas & Mining	Demulsifiers, drilling and completion fluids, heat transfer fluids, perchloroethylene, rheology modifiers, scale inhibitors, shale inhibitors, specialty amine solvents, surfactants, water clarifiers	Enhanced oil recovery, gas processing, oil and gas exploration and production, oil and gas transmission, power, refining
Dow Plastics Additives	Additives for the processing and modification of thermoplastic and thermosetting plastic materials	Building and construction, consumer goods, electronics, packaging, transportation
Epoxy	Epoxy resins, hardeners and intermediates	Civil engineering, composites, consumer goods, electrical laminates, infrastructure
Oxygenated Solvents	Acetone derivatives, butyl glycol ethers, glycol ethers, low-VOC solvents, methyl isobutyl	Agriculture, coatings, consumer and industrial goods, electronics, lubricant additives
Polyglycols, Surfactants & Fluids (PS&F)	Heat-transfer fluids, polyalkylene glycol, polyethylene glycol, surfactants	Aircraft deicing, consumer goods, industrial goods, infrastructure, food, pharmaceutical, transportation
Polyurethanes	Polyether polyols, methylene diphenyl diisocyanate ("MDI"), toluene diisocyanate ("TDI")	Appliances, automotive, bedding, building and construction, electronics, flooring, footwear, furniture, industrial, infrastructure, packaging and transportation
Propylene Oxide / Propylene Glycol (PO/PG)	Propylene oxide (produced via the chlorohydrin process; also produced using hydrogen peroxide to propylene oxide manufacturing technology (1)), propylene glycol, synthetic glycerine	Aircraft deicing fluids, animal feed, beverages, cosmetics, food and flavorings, heat transfer fluids, hydraulic and brake fluids, paints and coatings, pharmaceuticals, unsaturated polyester resins, urethanes

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 (1) 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.

## Competition

Competition for the Performance Materials 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 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 and Huntsman.

#### Distribution

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



Table of Contents

## Joint Ventures

Key joint ventures that impact the Performance Materials segment are listed below:

Map Ta Phut Olefins Company Limited - effective ownership is 32.77 percent of which the 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. This Thailand-based company manufactures propylene and ethylene. A portion of the results of 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.

## Divestitures

The Performance Materials segment included Dow Haltermann until it was fully divested at December 31, 2011.

## PERFORMANCE PLASTICS

The Performance Plastics segment is a solution-oriented portfolio composed primarily of three businesses, Dow Elastomers, Dow Electrical and Telecommunications, and Dow Packaging and Specialty Plastics. These businesses serve high-growth, high value sectors where Dow's world-class technology and rich innovation pipeline creates competitive advantages for customers and the entire value chain. These businesses have complimentary market reach, asset capabilities and technology platforms that provide the Company with immediate and long-term growth synergies. The segment has broad geographic reach with sales in more than 100 countries and manufacturing facilities located in all geographic areas. 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.

Details on Performance Plastics' 2013 sales, by business and geographic area, are as follows:

## Products

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

Business	Major Products	Applications/Market Segments
Dow Elastomers	Elastomers, polyolefin plastomers, ethylene propylene diene monomer elastomers ("EPDMs")	Adhesives, footwear, housewares, infrastructure, sports recreation, toys and infant products, transportation
Dow Electrical and Telecommunications	Wire and cable insulation, semiconductive and jacketing compound solutions, bio-based plasticizers	Building and construction, electrical transmission and distribution infrastructure, telecommunications infrastructure
Dow Packaging and Specialty Plastics	Acrylics, polyethylene, low-density polyethylene, linear low-density polyethylene, high-density polyethylene, polyolefin emulsions, polyolefin plastomers	Adhesives, food and specialty packaging, hygiene and medical, industrial and consumer packaging, photovoltaic

## Table of Contents

The segment strategically locates its polyethylene production units near its hydrocarbon cracking facilities to enable back-integration into feedstocks. As a result, the segment sources ethylene primarily from internally produced sources and propylene from both internal and external sources. In 2013, the Performance Plastics segment consumed 71 percent of Dow's internal ethylene production.

### 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 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. Key joint ventures are listed below:

#### Aligned 100 percent with Performance Plastics

Univation Technologies, LLC - a United States-based company that develops, markets and licenses the UNIPOL™ polyethylene process technology and related catalysts, including metallocene catalysts; owned 50 percent by the Company.

Performance Plastics includes a portion of the results of:

• EQUATE Petrochemicals Company K.S.C. - 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.

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

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.

### Divestitures

On December 2, 2013, the Company sold its Polypropylene Licensing and Catalysts business to W. R. Grace & Co. On September 30, 2011, the Company sold its global Polypropylene business to Braskem SA. Both businesses were reported in the Performance Plastics segment through the date of divestiture.

### Future Investments

During 2013, the Company announced the location of four new Performance Plastics production units to be built on the U.S. Gulf Coast. Leveraging an advantaged feedstock position from U.S. shale gas, these production units will support expected profitable growth of the Company's high value Performance Plastics franchise. The businesses, production units and locations impacted are as follows:

• Dow Packaging and Specialty Plastics: An ELITE™ polymer production unit will be built in Freeport, Texas; and a Low Density Polyethylene (LDPE) production unit will be built in Plaquemine, Louisiana.

Dow Elastomers: A NORDEL™ metallocene EPDM production unit will be built in Plaquemine, Louisiana; and a High Melt Index (HMI) AFFINITY™ polymer production unit will be built in Freeport, Texas.

Table of Contents**FEEDSTOCKS AND ENERGY**

The Feedstocks and Energy segment is the largest global producer of ethylene, chlorine, caustic soda and purified ethylene oxide. This segment is also a leading purchaser and producer of propylene and one of the world's largest industrial energy producers. Combining best-in-class technologies, unparalleled scale and highly integrated operations, Feedstocks and Energy supplies cost-advantaged building blocks to our performance and market driven businesses. The majority of Dow's advantaged internal feedstock supply is used to enable our downstream businesses. In 2013, Dow's higher-margin performance businesses consumed 100 percent of propylene, approximately 90 percent of ethylene and ethylene oxide and more than 80 percent of chlorine produced internally by Dow. The Company strategically locates its downstream production units near its hydrocarbon cracking facilities to enable back-integration into feedstocks.

Dow's global scale and feedstock flexibility creates a cost-advantaged foundation for the Company's downstream, market-driven businesses. In North America, new shale gas opportunities - and the resulting increased supplies and stabilized raw material prices - have made the Company's ethane- and propane-based production more cost-competitive and also offer cost benefits to the energy-intensive chlor-alkali manufacturing process. The Company's U.S. and European hydrocarbon cracking 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.

Details on Feedstocks and Energy's 2013 sales, by business and geographic area, are as follows:

**Products**

A listing of the businesses, with products and key applications/market segments, are listed below:

Business	Major Products	Applications/Market Segments
	Chlor-Alkali provides cost-advantaged chlorine and caustic soda feedstock for Dow's performance businesses	Chlor-Alkali - Automobiles, bedding, electronics, furniture, personal protection equipment, pharmaceuticals, textiles
Chlor-Alkali / Chlor-Vinyl	Chlor-Vinyl includes the marketing of caustic soda, a co-product of the Chlor-Alkali manufacturing process; ethylene dichloride (EDC) and vinyl chloride monomer (VCM) essential to production of polyvinyl chloride (PVC)	Chlor-Vinyl - Agricultural chemicals; alumina, pulp and paper; bleaches and detergents; building and construction materials; medical devices; municipal and residential water piping systems; pharmaceuticals; textiles
Energy	Power, steam and other utilities Ethylene oxide (EO) feedstock supply for downstream derivatives; approximately 90 percent EO - intermediates that are used in personal of EO manufactured by Dow is consumed by Dow businesses or joint ventures	Primarily for use in Dow's global operations and oil and gas exploration
Ethylene Oxide / Ethylene Glycol (EO/EG)	Ethylene glycol (EG) is supplied to MEGlobal, a 50:50 joint venture and a world leader in the manufacturing and marketing of merchant monoethylene glycol and diethylene glycol	EG - aircraft and runway deicers, food and beverage containers, polyester fiber and polyester film
Hydrocarbons	Ethylene, propylene, benzene, butadiene, cumene, octene, aromatics co-products, crude C4	Product integration ranging from feedstocks and monomers to a myriad of products used by derivative businesses

Advantaged feedstock positions in the United States, Canada, Argentina and the Middle East

## Table of Contents

### Joint Ventures

Joint ventures play an integral role within the Feedstocks and Energy segment by dampening earnings cyclicality, improving earnings growth and enabling access to high growth markets. Key joint ventures are listed below:

#### Aligned 100 percent with Feedstocks and Energy

MEGlobal - headquartered in Dubai, United Arab Emirates and manufactures and markets monoethylene glycol, diethylene glycol and polyethylene terephthalate resins; owned 50 percent by the Company.

Feedstocks and Energy includes a portion of the results of:

EQUATE Petrochemicals Company K.S.C. - 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.

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

### Freeport LNG

Dow has a long-term agreement with Freeport LNG Development, L.P. ("FLNG") to use 0.5 billion cubic-feet-per-day of regasification capacity at FLNG's 1.6 billion cubic-feet-per-day liquified natural gas ("LNG") receiving terminal in Quintana, Texas. In addition, Texas LNG Holdings LLC, a subsidiary of Dow, owns a 7.5 percent limited partner interest in FLNG. The initial investment in FLNG was made in 2004 when the cost of developing oil and gas reserves in the United States was sufficiently high that LNG was a competitive alternative for securing natural gas, an essential raw material and energy source for Dow's operations. Current market conditions favor the flow of LNG to overseas markets; therefore, Dow's utilization of the FLNG's terminal is expected to be limited. Dow is responsible for monthly process-or-pay payments to FLNG irrespective of whether it utilizes the terminal for regasification. The financial impact of this capacity underutilization is not expected to be material to the Company's future earnings or cash flows.

On November 25, 2013, the Company sold 50 percent of its 15 percent limited partner interest in FLNG.

### CORPORATE

Corporate includes results of the Company's insurance company operations, the results of Ventures (which includes new business incubation platforms focused on identifying and pursuing new commercial opportunities); Venture Capital; non-business aligned technology licensing and catalyst activities; environmental operations; enterprise level mega project activities; gains and losses on sales of financial assets; stock-based compensation expense and severance costs; asbestos-related defense and resolution costs; foreign exchange results; and certain corporate overhead costs and cost recovery variances not allocated to the operating segments.

### INDUSTRY SEGMENTS AND GEOGRAPHIC AREA RESULTS

See Note 24 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.

Thirteen percent of the sales of the Feedstocks and Energy segment in 2013 were to one customer with which the Company has ongoing supply contracts. Other than sales to this customer, no significant portion of any operating segment's sales is dependent upon a single customer.

No single product accounted for more than 5 percent of the Company's consolidated net sales in 2013.

Table of Contents

## 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 integrated production of the Company's finished goods are chlorine-based and hydrocarbon-based raw materials.

Salt, natural brine and electricity are the base raw materials used in the production of chlor-alkali products and derivatives. The Company owns salt deposits in Louisiana and Texas; Alberta, Canada; Brazil; and Germany. 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, mainly to generate electricity, and purchases electric power to supplement internal generation. Expenditures for hydrocarbon feedstocks and energy accounted for 38 percent of the Company's production costs and operating expenses for the year ended December 31, 2013. The Company purchases these raw materials on both short- and long-term contracts.

The Company had adequate supplies of raw materials during 2013, and expects to continue to have adequate supplies of raw materials in 2014. Significant raw materials, by operating segment, are listed below:

## Significant Raw Materials

Raw Material	Electronic and Functional Materials	Coatings and Infrastructure Solutions	Agricultural Sciences	Performance Materials	Performance Plastics	Feedstocks and Energy
Acetone		x		x		
Ammonia		x		x		
Aniline				x		
Benzene		x		x		x
Bisphenol A					x	
Butadiene				x		
Butane						x
Butene				x	x	x
Carbon Monoxide				x		
Cumene				x		
Chlorine (1)	x		x	x		x
Condensate						x
Electric Power						x
Ethane						x
Ethylene (2)		x			x	x
Hexene					x	
Hydrogen Peroxide (3)				x		
Liquified Petroleum Gases						x
Methanol		x		x		
Naphtha						x
Natural Brine						x
Natural Gas						x
Octene					x	x



Phenol				x	
Propane	x				x
Propylene (2)	x	x		x	x
Pygas					x
Salt					x
Styrene		x		x	
Toluene Diamine				x	

- (1) Produced by the Company for internal consumption.
- (2) Produced by the Company and procured from external sources for internal consumption.
- (3) 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 \$1,747 million in 2013, \$1,708 million in 2012 and \$1,646 million in 2011. At December 31, 2013, the Company employed approximately 6,400 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, 2013, the Company owned 3,879 active U.S. patents and 15,556 active foreign patents as follows:

## Patents Owned at December 31, 2013

	United States	Foreign
Electronic and Functional Materials	1,049	3,864
Coatings and Infrastructure Solutions	607	2,887
Agricultural Sciences	706	2,789
Performance Materials	586	2,547
Performance Plastics	720	2,975
Feedstocks and Energy	68	213
Corporate	143	281
Total	3,879	15,556

## Remaining Life of Patents Owned at December 31, 2013

	United States	Foreign
Within 5 years	923	2,761
6 to 10 years	1,074	4,842
11 to 15 years	1,040	6,224
16 to 20 years	842	1,729
Total	3,879	15,556

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 \$327 million in 2013, \$448 million in 2012 and \$437 million in 2011. The Company incurred royalties to others of \$198 million in 2013, \$185 million in 2012 and \$114 million in 2011. 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, 2013, including direct or indirect ownership interest for each, are listed below:

Principal Nonconsolidated Affiliate	Ownership Interest	Business Description
Dow Corning Corporation	50.00	% A U.S. company that manufactures silicone and silicone products
EQUATE Petrochemical Company K.S.C.	42.50	% A Kuwait-based company that manufactures ethylene, polyethylene and ethylene glycol
The Kuwait Olefins Company K.S.C.	42.50	% A Kuwait-based company that manufactures ethylene and ethylene glycol
Map Ta Phut Olefins Company Limited (1)	32.77	% A Thailand-based company that manufactures propylene and ethylene
MEGlobal	50.00	% A company, headquartered in Dubai, United Arab Emirates, that manufactures and markets monoethylene glycol, diethylene glycol and polyethylene terephthalate resins
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
Univation Technologies, LLC	50.00	% A United States-based company that develops, markets and licenses the UNIPOL™ polyethylene process technology and sells related catalysts, including metallocene catalysts

The Company's effective ownership of Map Ta Phut Olefins Company Limited is 32.77 percent, of which the (1) 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 8 to the Consolidated Financial Statements for additional information regarding nonconsolidated affiliates.

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

In 2013, the Company derived 67 percent of its sales and had 47 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 24 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 10 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 14 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.

#### EMPLOYEES

As of December 31, 2013, the Company employed approximately 53,000 people on a full-time basis, with approximately 50 percent located in North America, 25 percent located in Europe, Middle East and Africa, 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.

Table of Contents

## EXECUTIVE OFFICERS OF THE REGISTRANT

Set forth below is information related to the Company's executive officers as of February 14, 2014.

Name - Age	Present Position with Registrant	Year Elected to be an Officer	Other Business Experience since January 1, 2009
Ronald C. Edmonds, 56	Vice President and Controller	2009	Business Finance Vice President for Performance Plastics and Chemicals and Market Facing Businesses 2007 to June 2009. Vice President and Assistant Controller July 2009 to November 2009. Present position held since November 2009.
James R. Fitterling, 52	Executive Vice President, Feedstocks, Performance Plastics and Supply Chain	2010	President Basic Plastics 2007 to 2009. Vice President Corporate Development 2009 to August 2010. 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. Present position held since December 2013.
Gregory M. Freiwald, 60	Chief Human Resources Officer, Aviation, Corporate Affairs, and Executive Vice President	2008	Senior Vice President, Human Resources and Corporate Affairs 2008 to 2009. Present position held since 2009.
Heinz Haller, 58	Chief Commercial Officer, President of Dow Europe, Middle East and Africa, and Executive Vice President	2006	Executive Vice President, Performance Plastics and Chemicals 2007 to 2009. Executive Vice President, Health, Agriculture and Infrastructure Group February 2009 to May 2009. Executive Vice President, Performance Systems May 2009 to August 2010. Executive Vice President and Chief Commercial Officer August 2010 to September 2012. Present position held since September 2012.
Joe E. Harlan, 54	Executive Vice President, Chemicals, Energy and Performance Materials	2011	Executive Vice President of Electro and Communications Business, 3M Company 2004 to 2009. Executive Vice President of Consumer & Office Business, 3M Company 2009 to August 2011. Executive Vice President, Performance Materials September 2011 to September 2012. Present position held since September 2012.
Peter Holicki, 53	Corporate Vice President, Manufacturing and Engineering, and Environment, Health & Safety Operations	2014	Global Manufacturing Vice President, Hydrocarbons May 2009 to October 2012. Vice President for Manufacturing & Engineering Europe, Middle East & Africa May 2009 to October 2012. Vice President of Operations for Europe, Middle East and Africa and the Ethylene Envelope October 2012 to December 2013. Present position held since 2014.
Charles J. Kalil, 62		2004	

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

	General Counsel, Corporate Secretary, and Executive Vice President		General Counsel 2004 to date and Corporate Secretary 2005 to date. Executive Vice President 2008 to date.
David E. Kepler, 61	Executive Vice President, Chief Sustainability Officer and Chief Information Officer	2000	Chief Information Officer 1998 to date. Corporate Vice President with responsibility for eBusiness 2000 to date. Responsibility for Business Services 2004 to date. Chief Sustainability Officer 2007 to date. Executive Vice President 2008 to date.
Andrew N. Liveris, 59	President, Chief Executive Officer and Chairman of the Board	2003	President and Chief Executive Officer 2004 to date and Chairman 2006 to date.
Fernando Ruiz, 58	Corporate Vice President and Treasurer	2001	Corporate Vice President and Treasurer 2001 to date.
A. N. Sreeram, 46	Corporate Vice President, Research & Development	2013	Vice President, Research & Development, Dow Advanced Materials 2009 to October 2013. Present position held since October 2013.
Howard I. Ungerleider, 45	Executive Vice President, Advanced Materials	2011	Vice President, Investor Relations 2008 to March 2011. Senior Vice President and President, Performance Plastics March 2011 to September 2012. Present position held since September 2012.
William H. Weideman, 59	Chief Financial Officer and Executive Vice President	2006	Vice President and Controller 2006 to November 2009. Vice President and Interim Chief Financial Officer November 2009 to March 2010. Dow Executive Vice President and Chief Financial Officer March 2010 to date. Executive Vice President of Finance, Dow AgroSciences and Corporate Strategic Development since September 2012.

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 Conditions:** 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.

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, mainly 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 announced 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. 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. The first project to come online was the restart of an ethylene facility in Louisiana, which was completed at the end of December, 2012. The Company intends to also build a new on-purpose propylene facility in Freeport, Texas, with start-up expected in 2015 and a new world-scale ethylene production facility in Freeport, Texas, with start-up expected in 2017.

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.



## Table of Contents

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 chemical and plastic 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 three decades. At December 31, 2013, Union Carbide's asbestos-related liability for pending and future claims was \$501 million (\$602 million at December 31, 2012) and its receivable for insurance recoveries related to the asbestos liability was \$25 million (\$25 million at December 31, 2012). At December 31, 2013, Union Carbide also had receivables of \$66 million (\$154 million at December 31, 2012) 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 or have been tolled. In January 2013, the class action lawsuit went to trial in the U.S. District Court for the District of Kansas with the Company as the sole remaining defendant. On February 20, 2013, the jury in the matter returned a damages verdict of approximately \$400 million against the Company. The Company filed post-trial motions on March 5, 2013, requesting the District Court grant judgment in favor of the Company, grant the Company a new trial and/or decertify the class. On May 15, 2013, the District Court denied the Company's request to overturn the verdict and, under antitrust laws, tripled the damages verdict resulting in a \$1.2 billion judgment. On July 26, 2013, the District Court entered an amended judgment in the amount of \$1.06 billion. The Company is appealing this amended judgment. The Company has concluded it is not probable that a loss will occur and, therefore, a liability has not been recorded with respect to these matters.

**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, 2013, the Company had accrued obligations of \$722 million (\$754 million at December 31, 2012) for probable

environmental remediation and restoration costs, including \$73 million (\$69 million at December 31, 2012) 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.

## Table of Contents

**Chemical Safety:** Increased concerns regarding the safe use of chemicals in commerce and their potential impact on 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 reflect a growing trend in societal demands for increasing levels of product safety and environmental protection. These concerns could manifest themselves in stockholder proposals, preferred purchasing and continued pressure for more stringent regulatory intervention. These concerns could also influence public perceptions, the viability of the 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.

**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 or cause a disruption in the Company's operations. 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; 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.

**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.

Table of Contents

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.

Implementation of ERP system: The Company's implementation of a new enterprise resource planning ("ERP") system may adversely affect the Company's business and results of operations or the effectiveness of internal control over financial reporting.

Beginning in the first quarter of 2011, the Company began business implementation of a new ERP system that will deliver a new generation of work processes and information systems. ERP implementations are complex and time-consuming projects that involve substantial expenditures on system software and implementation activities that take several years. ERP implementations also require transformation of business and financial processes in order to reap the benefits of the ERP system. The staging of implementation allows a gradual build of risk in terms of business impact. The Company expects to complete its ERP system implementation in 2014. If the Company does not effectively implement the ERP system as planned or if the system does not operate as intended, it could adversely affect financial reporting systems, the Company's ability to produce financial reports, and/or the effectiveness of internal control over financial reporting.

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 201 manufacturing sites in 36 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 2013, the Company's production facilities and plants operated at 81 percent of capacity. The Company's major production sites, including consolidated variable interest entities, are as follows:

Location	Segment using manufacturing facility					
	Electronic and Functional Materials	Coatings and Infrastructure Solutions	Agricultural Sciences	Performance Materials	Performance Plastics	Feedstocks and Energy
United States:						
Plaquemine, Louisiana	x	x		x	x	x
Hahnville (St. Charles), Louisiana	x	x		x	x	x
Louisville, Kentucky		x		x	x	
Midland, Michigan	x	x	x	x	x	x
Freeport, Texas	x		x	x	x	x
Seadrift, Texas				x	x	x
Texas City, Texas		x		x		x
Deer Park, Texas	x	x				
Canada:						
Fort Saskatchewan, Alberta					x	x
Joffre, Alberta						x
Germany:						
Boehlen		x				x
Bomlitz				x		
Leuna					x	
Schkopau	x	x		x	x	x
Stade	x		x	x		x
Terneuzen, The Netherlands				x	x	x
Tarragona, Spain				x	x	x
Bahia Blanca, Argentina					x	x
Candeias, Brazil				x		
Map Ta Phut, Thailand	x	x		x	x	

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

United States:	73 manufacturing locations in 25 states.
Canada:	6 manufacturing locations in 3 provinces.
Europe, Middle East and Africa:	51 manufacturing locations in 18 countries.
Latin America:	29 manufacturing locations in 5 countries.
Asia Pacific:	42 manufacturing locations in 11 countries.

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 7 to the Consolidated Financial Statements. Additional information regarding leased properties can be found in Note 18 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 three 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 14 to the Consolidated Financial Statements.

Environmental Matters

Following a 2008 Risk Management Program ("RMP") inspection by the Environmental Protection Agency ("EPA") at the Company's Freeport, Texas manufacturing facility, the EPA determined that the facility had two deficiencies in its then-applicable RMP plan. Although EPA Region Six officials confirmed that all corrective actions were made within a reasonable period of time, the EPA sought to collect an administrative penalty in excess of \$100,000. On May 7, 2013, a proposed settlement between the Company and the EPA was finalized whereby the Company was assessed a \$134,500 administrative penalty of which \$82,000 was paid to the EPA and \$52,500 was allocated to a Supplemental Environmental Project ("SEP"). The SEP was resolved when a report documenting the completion of the SEP was submitted to the EPA on January 10, 2014.

Dow Benelux B.V., 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 B.V.'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. If convicted, Dow Benelux B.V. may face sanctions including fines in excess of \$100,000 for some of the violations. The trial on this matter was held in the District Court in Middelburg and began on January 14, 2014 and ended on February 7, 2014. The Court is expected to render its judgment by the end of March 2014.

The Company received an Administrative Complaint dated May 23, 2013 from the Texas Council of Environmental Quality ("TCEQ") alleging violations of various environmental requirements regulating air emissions from operations at its Freeport, Texas manufacturing facility. The TCEQ is seeking a fine in excess of \$100,000 for a number of independent violations of air permits and regulations. The Company is currently negotiating with the TCEQ.



Table of Contents

Derivative Litigation

On March 6, 2013, Jeffrey Kaufman, purportedly in the name of and on behalf of the Company (“Kaufman”), commenced an action in the United States District Court for the District of Delaware against the Company and certain officers and directors of the Company (“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 (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 monetary damages and attorneys' fees. The Company first moved to dismiss the complaint on May 14, 2013. In response to the subsequent filing by Kaufman of an amended complaint, the Company filed an amended motion to dismiss on August 30, 2013, and that motion remains pending. The Company believes the lawsuit to be without merit.

Table of Contents

The Dow Chemical Company and Subsidiaries

PART I, Item 4. Mine Safety Disclosures.

MINE SAFETY DISCLOSURES

Not applicable.

27

---

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, 2013, there were 69,810 registered common stockholders. The Company estimates that there were an additional 525,618 stockholders whose shares were held in nominee names at December 31, 2013. At January 31, 2014, there were 69,486 registered common stockholders.

On December 12, 2013, the Board of Directors declared a quarterly dividend of \$0.32 per share, payable January 30, 2014, to stockholders of record on December 31, 2013. On January 29, 2014, the Board of Directors announced the declaration of a quarterly dividend of \$0.37 per share, payable April 30, 2014, to stockholders of record on March 31, 2014. The 15 percent increase in the dividend in the first quarter of 2014 demonstrates Dow's commitment to consistently and increasingly reward shareholders through ongoing earnings growth. 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 102-year period, Dow has increased the amount of the quarterly dividend 50 times (approximately 12 percent of the time), reduced the dividend once and maintained the amount of the quarterly dividend approximately 88 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, 2013:

Issuer Purchases of Equity Securities				
Period	Total number of shares purchased	Average price paid per share	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)
October 2013	238,000	\$39.32	238,000	\$1,356,458,256
November 2013	2,613,300	\$39.37	2,613,300	\$1,253,577,619
December 2013	1,533,869	\$39.17	1,533,869	\$1,193,489,017
Fourth quarter 2013	4,385,169	\$39.30	4,385,169	\$1,193,489,017

On February 13, 2013, the Company announced the Board of Directors approved a share buy-back program, (1) authorizing up to \$1.5 billion to be spent on the repurchase of the Company's common stock. Purchases under this program began in May 2013.

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. As a result, the authorized amount of the current ongoing share repurchase program has increased to \$4.5 billion. The Company expects the share repurchase program to be completed in 2014.

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)	2013	2012	2011	2010	2009	
Summary of Operations (1)						
Net sales	\$57,080	\$56,786	\$59,985	\$53,674	\$44,875	
Net income from continuing operations	4,816	1,100	2,784	2,321	566	
Per share of common stock (in dollars):						
Net income from continuing operations per common share - basic	3.72	0.71	2.06	1.75	0.22	
Net income from continuing operations per common share - diluted	3.68	0.70	2.05	1.72	0.22	
Cash dividends declared per share of common stock	1.28	1.21	0.90	0.60	0.60	
Book value per share of common stock	22.59	17.73	19.28	19.23	18.42	
Year-end Financial Position						
Total assets	\$69,501	\$69,605	\$69,224	\$69,588	\$66,018	
Long-term debt	16,820	19,919	18,310	20,605	19,152	
Financial Ratios						
Research and development expenses as percent of net sales	3.1	% 3.0	% 2.7	% 3.1	% 3.3	%
Income from continuing operations before income taxes as percent of net sales	11.9	% 2.9	% 6.0	% 5.2	% 1.0	%
Return on stockholders' equity	19.4	% 5.0	% 13.1	% 11.0	% 2.0	%
Debt as a percent of total capitalization	39.0	% 48.8	% 48.0	% 51.3	% 51.4	%

(1) Adjusted to report sale of the Calcium Chloride business in 2009 as discontinued operations.

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
<u>2013 Overview</u>	<u>30</u>
<u>Results of Operations</u>	<u>32</u>
<u>Segment Results</u>	<u>39</u>
<u>Electronic and Functional Materials</u>	<u>39</u>
<u>Coatings and Infrastructure Solutions</u>	<u>41</u>
<u>Agricultural Sciences</u>	<u>42</u>
<u>Performance Materials</u>	<u>43</u>
<u>Performance Plastics</u>	<u>45</u>
<u>Feedstocks and Energy</u>	<u>47</u>
<u>Sales Price and Volume Charts</u>	<u>50</u>
<u>Liquidity and Capital Resources</u>	<u>51</u>
<u>Other Matters</u>	<u>57</u>
<u>Critical Accounting Policies</u>	<u>57</u>
<u>Environmental Matters</u>	<u>62</u>
<u>Asbestos-Related Matters of Union Carbide Corporation</u>	<u>66</u>
<u>K-Dow Arbitration</u>	<u>66</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 the intersection of chemical, physical 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 2013, Dow had annual sales of more than \$57 billion and employed approximately 53,000 people worldwide. The Company's more than 6,000 products are manufactured at 201 sites in 36 countries across the globe. The Company conducts its worldwide operations through global businesses, which are reported in six operating segments: Electronic and Functional Materials, Coatings and Infrastructure Solutions, Agricultural Sciences, Performance Materials, Performance Plastics and Feedstocks and Energy.

In 2013, 36 percent of the Company's sales were to customers in North America; 32 percent were in Europe, Middle East and Africa ("EMEA"); while the remaining 32 percent were to customers in Asia Pacific and Latin America.

## 2013 OVERVIEW

During 2013, Dow continued to face a challenging business environment with ongoing, persistent headwinds in Western Europe and hesitant growth in other geographic areas. In this uncertain economic environment, the Company remained committed to its strategy - implementing cost and cash flow actions, which gained momentum as the year progressed; liberating and deploying cash to enhance the Company's capital structure and reward shareholders; and investing in strategic projects focused on long-term sustainable growth. The Company also paid down debt, continued to maintain a strong liquidity position and rewarded shareholders through dividends and share repurchases.



Net sales for 2013 were \$57.1 billion, up 1 percent from \$56.8 billion in 2012. Sales increased in all operating segments except Performance Materials (down 2 percent) and Feedstocks and Energy (down 8 percent). Excluding the impact of a divestiture<sup>(1)</sup>, sales increased in all geographic areas except Europe, Middle East and Africa ("EMEA") (down 5 percent).

(1) Excludes sales related to Nippon Unicar Company Limited, which was divested on July 1, 2013.

Table of Contents

Price increased 1 percent in 2013 compared with 2012, driven by increases in Performance Plastics (up 4 percent) and Agricultural Sciences (up 1 percent).

Volume remained flat in 2013 compared with 2012, with mixed results by operating segment. Excluding the impact of a divestiture, volume increased in all geographic areas except EMEA (down 5 percent).

On May 6, 2013, the Company and Petrochemical Industries Company (K.S.C.) ("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 confirmed the receipt of a \$2.195 billion cash payment from PIC. The cash was utilized for debt reduction measures. The Company delivered \$7.8 billion of cash from operating activities in 2013, which includes the impact of the K-Dow arbitration award, and ended the year with \$5.9 billion of cash and cash equivalents. Interest expense and amortization of debt discount declined \$168 million compared with 2012 as the Company reported a \$3 billion reduction in total debt in 2013.

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. As a result, the Company repurchased \$307 million of common stock during 2013.

Other notable highlights from 2013 include:

On March 14, 2013, the Company announced the Dow Polypropylene Licensing and Catalysts business was being marketed for divestment, as part of the Company's ongoing commitment to portfolio management. The business was sold to W.R. Grace and Co. on December 2, 2013 for \$490 million, net of working capital adjustments and costs to sell.

On March 18, 2013, the Company announced its intention to build several new Performance Plastics production units on the U.S. Gulf Coast, further connecting the Company's U.S. manufacturing operations with cost-advantaged feedstocks resulting from increasing supplies of shale gas in North America. These production units will support expected profitable growth of the Company's high value Performance Plastics franchise. On August 27, 2013, the Company announced the location of these four new production units:

Dow Packaging and Specialty Plastics: An ELITE™ polymer production unit will be built in Freeport, Texas; and a Low Density Polyethylene (LDPE) production unit will be built in Plaquemine, Louisiana.

Dow Elastomers: A NORDEL™ metallocene ethylene propylene diene monomer ("EPDM") production unit will be built in Plaquemine, Louisiana; and a High Melt Index (HMI) AFFINITY™ polymer production unit will be built in Freeport, Texas.

On June 17, 2013, the Company announced the signing of the main financing for Sadara Chemical Company ("Sadara") whereby Sadara entered into definitive agreements with certain export agencies, commercial banks and the Public Investment Fund of the Kingdom of Saudi Arabia for approximately \$10.5 billion of additional project financing ("Additional Project Financing"). The Additional Project Financing closed on June 28, 2013, bringing the total project financing for Sadara to approximately \$12.5 billion.

On December 2, 2013, the Company announced the planned carve-out of a portion of its chlorine chain, including the Company's U.S. Gulf Coast Chlor-Alkali/Chlor-Vinyl business, the global Chlorinated Organics business and the Epoxy business, in preparation for transactions involving select chlorine and derivative businesses over the next 12-24 months.

Dow was named to the Dow Jones Sustainability World Index - the 13th time the Company has received this recognition since the index was launched.

Dow earned an A+ Rating by UN Global Compact Communication on Progress for its 2012 Global Reporting Initiative (GRI) Sustainability Report - the 6th year in a row Dow has received this designation.

Dow was named to the Thomson Reuters 2013 Top 100 Global Innovators - the Company has received this recognition in each of the three years since the program was launched.

Dow was named by Chief Executive Magazine as one of the 40 best companies for leaders for the second consecutive year.

Dow was awarded the 2013 U.S. Presidential Green Chemistry Challenge Award for its EVOQUE™ Pre-Composite Polymer Technology which helps coatings formulators improve paint performance while using less titanium dioxide.



## Table of Contents

Dow AgroSciences received registration in the United States for sulfoxaflor, a new insecticidal active ingredient that offers extremely effective control of many important sap-feeding insect pests.

Dow and its joint venture partner Tasnee Sahara Olefins Company announced the mechanical completion of the first acrylic monomer production facility in the Middle East. The plant will help provide a reliable, cost-advantaged supply of acrylic emulsion polymers for coatings and adhesives applications to support growth in emerging geographies.

Dow AgroSciences and Monsanto Company reached new cross-licensing agreements to enable the creation of next-generation SmartStax® corn, including additional insect protection and access to Dow AgroSciences' new ENLIST™ Weed Control System herbicide-tolerant trait, pending regulatory approval.

Dow inaugurated its new Northeast Technology Center, a state-of-the-art innovation hub for Dow's Advanced Materials businesses. Located in Collegeville, Pennsylvania, the technology center is one of Dow's largest global research and development hubs and serves key end-markets including electronics, consumer non-durables, infrastructure, transportation and energy.

Dow Packaging and Specialty Plastics launched Pack Studios Freeport, the first of four Pack Studio centers around the globe, to help customers turn packaging ideas into innovative solutions. Once fully launched, studios will be located in Freeport, Texas; São Paulo, Brazil; Horgen, Switzerland; and Shanghai, China.

Dow's SILVADUR™ antimicrobial technology for fabrics and EVOQUE™ Pre-Composite Polymer Technology for paints won R&D 100 Awards.

The Polyurethanes business launched two expansion projects to meet customer needs in Asia Pacific and the United States. The business will construct a polyether polyols facility at the Company's Map Ta Phut, Thailand site. In addition, the Company will increase its polyol and copolymer capacity as a result of debottlenecking at its Freeport, Texas facility.

Dow Water and Process Solutions announced the global launch of TEQUATIC™ PLUS fine particle filter. The cost-effective, high-performance filter will be supported by a new manufacturing center in Menlo Park, California.

On July 30, 2013, the Company announced that Bill Banholzer, Chief Technology Officer and Executive Vice President, had elected to retire. A. N. Sreeram was named Corporate Vice President of Research and Development, effective August 1, 2013.

On December 31, 2013, Carol Williams, Executive Vice President, Manufacturing and Engineering, Supply Chain and Environmental, Health and Safety ("EH&S") relinquished her line responsibilities and will retire from Dow later in 2014.

Dow's results of operations and financial condition for the year ended December 31, 2013 are described in further detail in the following discussion and analysis.

## RESULTS OF OPERATIONS

### Net Sales

Net sales for 2013 were \$57.1 billion, up 1 percent from \$56.8 billion in 2012, with price up 1 percent and volume flat. Price increases in Performance Plastics (up 4 percent) and Agricultural Sciences (up 1 percent) more than offset price declines in Feedstocks and Energy (down 3 percent), Electronic and Functional Materials (down 2 percent) and Coatings and Infrastructure Solutions (down 1 percent). Performance Materials prices remained flat. Price increased in North America and Latin America (both up 2 percent), which more than offset a decline in Asia Pacific (down 2 percent). Prices in EMEA remained flat. Volume was mixed by operating segment, with increases in Agricultural Sciences (up 11 percent), Electronic and Functional Materials and Coatings and Infrastructure Solutions (both up 4 percent) offset by volume declines in Feedstocks and Energy (down 5 percent), Performance Plastics (down 3 percent) and Performance Materials (down 2 percent). Excluding the impact of a recent divestiture, Performance Plastics

volume was down 1 percent. Volume increased in Latin America (up 8 percent), Asia Pacific (up 4 percent) and North America (up 1 percent), which was offset by a decline in EMEA (down 5 percent).

Net sales for 2012 were \$56.8 billion, down 5 percent from \$60.0 billion in 2011, with price down 3 percent and volume down 2 percent. Price was unfavorably impacted by currency, which contributed to more than 60 percent of the price decrease. Price declined in all geographic areas, with the largest decrease in Asia Pacific (down 5 percent), and all operating segments except Agricultural Sciences (up 3 percent) with the most pronounced decreases in Coatings and Infrastructure Solutions and Performance Materials (both down 6 percent). The decline in volume reflected the impact of recent divestitures including: the

## Table of Contents

Polypropylene business, divested on September 30, 2011, and Dow Haltermann, divested during 2011. Excluding these divestitures, volume increased 1 percent. Volume improved or remained flat in all operating segments except Feedstocks and Energy (down 3 percent) and Electronic and Functional Materials (down 1 percent), with the most pronounced increase in Agricultural Sciences (up 10 percent). Volume increased in Asia Pacific (up 3 percent) and EMEA (up 1 percent), remained unchanged in North America, and declined in Latin America (down 1 percent). See Note 5 to the Consolidated Financial Statements for additional information concerning the Company's divestitures.

Sales in the United States accounted for 33 percent of total sales in 2013 and 32 percent of total sales in 2012 and 2011. See the Sales Price and Volume tables at the end 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 24 to the Consolidated Financial Statements.

### Gross Margin

Gross margin was \$9.5 billion in 2013, and \$9.0 billion in 2012 and 2011. Gross margin in 2013 was positively impacted by higher selling prices, lower 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/Chlor-Vinyl business, Dow Building and Construction business, Dow Formulated Systems business, Dow Plastics Additives business, Epoxy business and Corporate. The asset impairments and related costs were reflected in the following segments: Coatings and Infrastructure Solutions (\$61 million), Performance Materials (\$38 million), Feedstocks and Energy (\$66 million) and Corporate (\$16 million). Gross margin in 2013 was also reduced by \$40 million in implementation costs related to the Company's restructuring programs (reflected in Corporate). See Note 11 to the Consolidated Financial Statements for additional information regarding the asset impairments.

Gross margin was \$9.0 billion in 2012 and 2011. Gross margin in 2012 was flat compared with the prior year as a decline in selling prices and decreased volume was offset by a \$2.5 billion decrease in purchased feedstock and energy costs and the favorable impact of currency on costs. Gross margin was also favorably impacted by the recovery of previously expensed product liability claims, pursuant to an Insurance Allocation Agreement with Dow Corning.

Gross margin in 2011 was positively impacted by higher selling prices, which more than offset a \$4.3 billion increase in purchased feedstock and energy costs, lower operating rates, increases in other raw material costs and the unfavorable impact of currency on costs. In 2011, gross margin was reduced by \$77 million in asset impairments and related costs, including environmental costs, in the Polyurethanes business (reflected in Performance Materials) and a \$60 million warranty accrual adjustment related to an exited business (reflected in Coatings and Infrastructure Solutions). See Environmental Matters in Management's Discussion and Analysis of Financial Condition and Results of Operations; and Note 11 to the Consolidated Financial Statements for additional information concerning these matters.

### Operating Rate

Dow's global plant operating rate was 81 percent of capacity in 2013 and 2012 and 80 percent in 2011. Operating rates remained flat in 2013 compared with the prior year. In 2012, operating rates increased from 2011 due to actions taken by management to rationalize capacity through shutdowns contributing to the improvement.

### Personnel Count

Personnel count was 52,731 at December 31, 2013, down from 54,353 at December 31, 2012. Headcount decreased from year end 2012 due primarily to the Company's 2012 restructuring programs. Personnel count at December 31, 2012 increased from 51,705 at December 31, 2011 due to growth initiatives and the inclusion of 1,946 seasonal employees in the Agricultural Sciences operating segment as part of the Company's personnel count. This increase

was partially offset by decreases related to the 2012 restructuring programs.

#### Research and Development Expenses

Research and development (“R&D”) expenses were \$1,747 million in 2013, compared with \$1,708 million in 2012 and \$1,646 million in 2011. In 2013 and 2012, R&D expense increased largely due to higher spending on strategic growth initiatives in Agricultural Sciences. In 2013, R&D expenses were also 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 \$3,024 million in 2013, compared with \$2,861 million in 2012 and \$2,788 million in 2011. In 2013, SG&A expenses increased 6 percent from 2012, primarily due to increased performance-based compensation costs and increased spending on growth initiatives in Agricultural Sciences. In 2012, SG&A expenses

Table of Contents

increased 3 percent from 2011, primarily due to increases in Agricultural Sciences due to growth initiatives. In addition, SG&A expenses were impacted by \$2 million of implementation costs related to the Company's restructuring programs in 2013 and \$21 million of restructuring program implementation costs in 2012 (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	2013		2012		2011	
Hydrocarbon feedstocks and energy	38	%	37	%	42	%
Salaries, wages and employee benefits	15		13		13	
Maintenance	4		4		4	
Depreciation	4		4		4	
Restructuring charges	—		3		—	
Supplies, services and other raw materials	39		39		37	
Total	100	%	100	%	100	%

**Amortization of Intangibles**

Amortization of intangibles was \$461 million in 2013, \$478 million in 2012 and \$496 million in 2011. In 2013, amortization of intangibles was impacted by a \$3 million asset impairment charge (impacting Corporate). See Notes 9 and 11 to the Consolidated Financial Statements for additional information regarding this matter.

**Goodwill Impairment/Testing**

The Company performs annual goodwill impairment tests during the fourth quarter of the year. In 2013, the Company performed qualitative testing for 14 of its 19 reporting units carrying goodwill and quantitative testing for 5 of its reporting units. As a result of this testing, no goodwill impairments were identified.

During the fourth quarter of 2012, the Company performed qualitative testing for 11 of the 20 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. The Company performed the first step of the quantitative testing for the remaining 9 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 except the Dow Formulated Systems reporting unit. Management completed the second step of the quantitative test for Dow Formulated Systems which compared the implied fair value of the reporting unit's goodwill to the carrying value. As a result of this test, the Company recorded an impairment loss of \$220 million in the fourth quarter of 2012, which is included in "Goodwill impairment loss" in the consolidated statements of income and reflected in Performance Materials. The goodwill impairment loss represents the total amount of goodwill carried by the Dow Formulated Systems reporting unit.

During the fourth quarter of 2011, the Company performed qualitative testing for all reporting units carrying goodwill. As a result of this testing, no goodwill impairments were identified. See Critical Accounting Policies in Other Matters in Management's Discussion and Analysis of Financial Condition and Results of Operations and Note 9 to the Consolidated Financial Statements for additional information regarding goodwill and the impairment tests conducted in each year.



#### Restructuring Charges (Credits)

On March 27, 2012, the Company's Board of Directors approved a restructuring plan ("1Q12 Restructuring") as part of a series of actions to optimize its portfolio, respond to changing and volatile economic conditions, particularly in Western Europe, and to advance the Company's Efficiency for Growth program, which was initiated by the Company in the second quarter of 2011. The 1Q12 Restructuring plan included the shutdown of a number of facilities and a global workforce reduction. These actions were substantially complete at December 31, 2013. As a result of the 1Q12 Restructuring activities, the Company recorded pretax restructuring charges of \$357 million in the first quarter of 2012 consisting of costs associated with exit and disposal activities of \$150 million, severance costs of \$113 million and asset write-downs and write-offs of \$94 million. 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: \$17 million in Electronic and Functional Materials, \$41 million in Coatings and Infrastructure Solutions, \$186 million in Performance Materials and \$113 million in Corporate. During the fourth quarter of 2012, the Company recorded a favorable adjustment to the 1Q12 Restructuring charge related to the impairment of long-lived assets and other assets of \$4 million, impacting the Coatings and Infrastructure Solutions segment.

## Table of Contents

On October 23, 2012, the Company's Board of Directors approved a restructuring plan ("4Q12 Restructuring") to advance the next stage of the Company's transformation and to address macroeconomic uncertainties. The restructuring plan included the shutdown of a number of facilities, an impairment charge related to the write-down of Dow Kokam LLC's ("Dow Kokam") long-lived assets and a global workforce reduction. These actions are expected to be completed primarily by March 31, 2015. As a result of the 4Q12 Restructuring activities, the Company recorded pretax restructuring charges of \$990 million in the fourth quarter of 2012 consisting of costs associated with exit or disposal activities of \$39 million, severance costs of \$375 million and asset write-downs and write-offs of \$576 million. The impact of these charges is shown as "Restructuring charges (credits)" in the consolidated statements of income and reflected in the Company's segments results as follows: \$48 million in Electronic and Functional Materials, \$16 million in Coatings and Infrastructure Solutions, \$192 million in Performance Materials, \$26 million in Performance Plastics, \$7 million in Feedstocks and Energy and \$701 million in Corporate.

During the fourth quarter of 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 (\$15 million), Performance Plastics (\$6 million) and Coatings and Infrastructure Solutions (\$1 million). See Note 3 to the Consolidated Financial Statements for details on the restructuring charges.

### Acquisition-related Integration Expenses

Charges totaling \$31 million in 2011 were recorded for integration costs, legal expenses and other transaction costs related to the acquisition of Rohm and Haas. These charges were shown as "Acquisition-related integration expenses" in the consolidated statements of income and reflected in Corporate.

### Equity in Earnings of Nonconsolidated Affiliates

Dow's share of the earnings of nonconsolidated affiliates in 2013 was \$1,034 million, compared with \$536 million in 2012 and \$1,223 million in 2011. In 2013, equity earnings increased primarily due to increased earnings at Dow Corning Corporation ("Dow Corning"), EQUATE Petrochemical Company K.S.C., The Kuwait Sytrene Company K.S.C. and MEGlobal as well as improved results from The SCG-Dow Group, Sadara and Map Ta Phut Olefins Company Limited. Equity earnings for 2013 also include a \$10 million loss related to asset impairment charges at a formulated electrolytes manufacturing joint venture (reflected in Corporate). In 2012, equity earnings decreased primarily due to lower earnings at Dow Corning, MEGlobal and The SCG-Dow Group as well as equity losses from Sadara equal to the Company's share of development expenses. Equity earnings for 2012 also include a \$73 million loss related to project development and other costs associated with the contribution of development costs to Sadara (reflected in Corporate).

The Company's share of equity earnings from Dow Corning decreased substantially in 2012 compared with 2011, primarily due to weakness in the silicon value chain. During 2012, Dow Corning's sales of solar-grade polycrystalline silicon products declined, driven by depressed prices and declining sales volumes that resulted from the July 2012 Chinese Ministry of Commerce ("MOFCOM") antidumping and countervailing duty investigations of U.S. and Korean-based solar-grade polycrystalline silicon products. In response to these market conditions, Dow Corning recorded an impairment charge in the fourth quarter of 2012 related to the abandonment of a partially constructed polycrystalline silicon plant expansion. The Company's share of this charge was \$59 million. Dow Corning also delayed the start-up of another polycrystalline plant expansion, pending market condition improvements. Furthermore, Dow Corning initiated restructuring actions in the fourth quarter of 2012, including workforce reductions and asset impairments of which Dow's share of the charge was approximately \$30 million. During the fourth quarter of 2012, Dow Corning conducted impairment testing of its polycrystalline silicon business. The estimate of undiscounted cash flows indicated the polycrystalline silicon asset group was expected to be recovered.

During 2013, Dow Corning evaluated its polycrystalline silicon asset group for impairment, in response to a preliminary determination and imposed provisional antidumping and countervailing duties by MOFCOM. Dow Corning's estimate of future undiscounted cash flows continued to indicate the polycrystalline silicon asset group is recoverable. However, due to continued pricing deterioration, ongoing oversupply in the market and other adverse conditions that result in non-performance by customers under long-term contracts, it is reasonably possible that the estimate of undiscounted cash flows could change in the near term, resulting in the write-down of assets to fair value. If an asset impairment is recorded at Dow Corning related to the polycrystalline silicon asset group, the maximum potential after-tax impact to Dow is estimated to be approximately \$930 million.

Equity earnings for 2011 included an \$86 million gain related to cash collected on a previously impaired note receivable related to Equipolymers (reflected in Performance Plastics). See Note 8 to the Consolidated Financial Statements for additional information on nonconsolidated affiliates.

## Table of Contents

### 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 2013 was net income of \$2.554 billion, compared with net expense of \$27 million in 2012 and net expense of \$316 million in 2011. In 2013, sundry income (expense) - net included a gain of \$2.161 billion 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 Dow 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 Feedstocks and Energy), a \$26 million gain on the sale of the Company's 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).

In 2012, sundry income (expense) - net included \$123 million of losses on the early extinguishment of debt (reflected in Corporate), foreign currency exchange losses and non-income tax related expenses which were partially offset by gains related to small divestitures and asset sales and a gain related to post-closing adjustments on the sale of a contract manufacturing business (reflected in Performance Materials).

In 2011, sundry income (expense) - net included a \$482 million loss on the early extinguishment of debt (reflected in Corporate), a \$42 million loss on the sale of a contract manufacturing business (reflected in Performance Materials) and losses on foreign currency exchange, partially offset by a small gain on the divestiture of the Polypropylene business (reflected in Performance Plastics) and gains on other small divestitures and asset sales, \$25 million of dividend income received from the Company's ownership interest in Styron (reflected in Corporate), gains from the mark-to-market of trading securities, favorable working capital adjustments from prior divestitures, and a gain from the consolidation of a joint venture. See Liquidity and Capital Resources in Management's Discussion and Analysis of Financial Condition and Results of Operations; and Note 5 to the Consolidated Financial Statements for additional information concerning the Company's divestitures, Note 14 to the Consolidated Financial Statements for additional information related to the K-Dow arbitration proceeding and Note 16 for additional information related to the early extinguishment of debt.

### Net Interest Expense

Net interest expense (interest expense less capitalized interest and interest income) was \$1,060 million in 2013, down from \$1,228 million in 2012 and \$1,301 million in 2011, reflecting the impact of redemption of debt and lower debt financing costs. Interest income was \$41 million in 2013 and 2012 and \$40 million in 2011. Interest expense (net of capitalized interest) and amortization of debt discount totaled \$1,101 million in 2013, \$1,269 million in 2012 and \$1,341 million in 2011. See Liquidity and Capital Resources in Management's Discussion and Analysis of Financial Condition and Results of Operations for additional information regarding debt financing activity.

### Provision for Income Taxes

The provision for income taxes was \$1,988 million in 2013, compared with \$565 million in 2012 and \$817 million in 2011. 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 company investments are taxed at the joint venture level.

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.

The tax rate for 2012 was negatively impacted by a change in the geographic mix of earnings, notably a decrease in earnings in Europe and an increase in earnings in the United States, as well as reductions in equity earnings. Equity earnings were further impacted by asset impairment and restructuring charges at Dow Corning. Additionally, the Company's impairment of Dow Formulated Systems goodwill and the impairment of the long-lived assets of Dow Kokam received minimal tax relief. The tax rate was favorably impacted by a change in the permanent reinvestment assertions of certain affiliates in Europe and Asia Pacific; however, this was primarily offset by unfavorable adjustments to uncertain tax positions and valuation allowances. These factors resulted in an effective tax rate of 33.9 percent for 2012.

## Table of Contents

The tax rate for 2011 was positively impacted by a high level of equity earnings as a percentage of total earnings, earnings in foreign locations taxed at rates less than the U.S. statutory rate, the sale of a contract manufacturing business and the reorganization of a joint venture. The tax rate for 2011 was negatively impacted by a \$264 million valuation allowance recorded in the fourth quarter of 2011. The valuation allowance was recorded against the deferred tax assets of two Dow entities in Brazil. As a result of the global recession in 2008-2009, coupled with rapidly deteriorating isocyanate industry conditions and increasing local costs, these two entities were in a three-year cumulative pretax operating loss position at December 31, 2011. While the Company expects to realize the tax loss carryforwards generated by these operating losses based on several factors - including forecasted margin expansion resulting from improving economic conditions, higher industry growth rates in Brazil, improving Dow operating rates, and a restructuring of legal entities to maximize the use of existing tax loss carryforwards - Dow was unable to overcome the negative evidence of recent cumulative operating losses; and at December 31, 2011, the Company could not assert it was more likely than not that it will realize its deferred tax assets in the two Brazilian entities.

Accordingly, the Company established the valuation allowance against the deferred tax assets of these companies in the fourth quarter of 2011. If in the future, as a result of the Company's plans and expectations, one or both of these entities generates sufficient profitability such that the evaluation of the recoverability of the deferred tax assets changes, the valuation allowance could be reversed in whole or in part in a future period. These factors resulted in an effective tax rate of 22.7 percent for 2011.

### Net Income (Loss) Attributable to Noncontrolling Interests

Net income (loss) attributable to noncontrolling interests was net income of \$29 million in 2013, net loss of \$82 million in 2012 and net income of \$42 million in 2011. Net income (loss) attributable to noncontrolling interests increased in 2013, primarily due to reduced losses at Dow Kokam, which was impacted by a significant restructuring charge related to the write-down of long-lived assets in the fourth quarter of 2012. Net income (loss) attributable to noncontrolling interests decreased in 2012 compared with 2011 due to Dow Kokam's impairment charge and operating losses which more than offset improved results in the Performance Materials affiliates. On November 22, 2013, the Company sold its ownership interest in Dow Kokam. See Notes 3 and 5 to the Consolidated Financial Statements for details on the Dow Kokam impairment charge and divestiture. See Note 19 to the Consolidated Financial Statements for additional information concerning noncontrolling interests.

### Preferred Stock Dividends

Preferred stock dividends of \$340 million were recognized in 2013, 2012 and 2011. These dividends related to the Company's Cumulative Convertible Perpetual Preferred Stock, Series A. See Note 21 to the Consolidated Financial Statements for additional information.

### Net Income Available for Common Stockholders

Net income available for common stockholders was \$4,447 million (\$3.68 per share) in 2013, compared with \$842 million (\$0.70 per share) in 2012 and \$2,402 million (\$2.05 per share) in 2011.

### 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 2013, 2012 and 2011:

Certain Items Impacting Results In millions, except per share amounts	Pretax Impact (1)			Impact on Net Income (2)			Impact on EPS (3) (4)		
	2013	2012	2011	2013	2012	2011	2013	2012	2011
Adjusted to exclude certain items (non-GAAP measures)				\$2,981	\$2,249	\$2,959	\$2.48	\$1.90	\$2.54
Certain items:									
Cost of sales:									
Asset impairments and related costs	\$(181 )	\$—	\$(77 )	(124 )	—	(51 )	(0.10 )	—	(0.05 )
Warranty accrual adjustment of exited business	—	—	(60 )	—	—	(38 )	—	—	(0.03 )
Restructuring implementation costs	(40 )	(1 )	—	(29 )	(1 )	—	(0.03 )	—	—
Research and development expenses:									
Restructuring implementation costs	(2 )	—	—	(1 )	—	—	—	—	—
Selling, general and administrative expenses:									
Restructuring implementation costs	(2 )	(21 )	—	(2 )	(13 )	—	—	(0.01 )	—
Amortization of intangibles:									
Asset impairments and related costs	(3 )	—	—	(2 )	—	—	—	—	—
Goodwill impairment loss	—	(220 )	—	—	(220 )	—	—	(0.19 )	—
Restructuring charges (credits) (5)	22	(1,343 )	—	21	(951 )	—	0.02	(0.82 )	—
Acquisition-related integration expenses	—	—	(31 )	—	—	(20 )	—	—	(0.02 )
Equity in earnings of nonconsolidated affiliates:									
Gain on collection of impaired note receivable	—	—	86	—	—	86	—	—	0.07
Dow Corning restructuring and asset abandonment	—	(89 )	—	—	(82 )	—	—	(0.07 )	—
Sadara development and other costs	—	(73 )	—	—	(70 )	—	—	(0.06 )	—
Asset impairments at a formulated electrolytes joint venture	(10 )	—	—	(6 )	—	—	(0.01 )	—	—
Sundry income (expense) - net:									
Gain from K-Dow settlement	2,161	—	—	1,647	—	—	1.37	—	—
Gain (Loss) on sale of contract manufacturing business	—	8	(42 )	—	8	44	—	0.01	0.04
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	—	—
Loss on early extinguishment of debt	(326 )	(123 )	(482 )	(205 )	(78 )	(314 )	(0.17 )	(0.06 )	(0.27 )
Provision for income taxes:									
Uncertain tax position adjustments	—	—	—	(276 )	—	—	(0.23 )	—	—
Tax valuation allowance	—	—	—	—	—	(264 )	—	—	(0.23 )
Total certain items	\$2,183	\$(1,862)	\$(606 )	\$1,466	\$(1,407)	\$(557 )	\$1.21	\$(1.20 )	\$(0.49 )
Dilutive effect of assumed preferred stock conversion into shares of common stock							\$(0.01 )	\$—	\$—
Reported U.S. GAAP Amounts (6) (7)				\$4,447	\$842	\$2,402	\$3.68	\$0.70	\$2.05

(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 year ended December 31, 2013, 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 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) "Restructuring charges (credits)" in 2012 include \$304 million of asset impairments and severance costs related to Dow Kokam LLC ("Dow Kokam") which, at the time of the charge, was owned 63.6 percent by Dow. The Dow Kokam restructuring impact on "Net Income Available for The Dow Chemical Company Common Stockholders" was reduced by \$7 million of tax credits and \$108 million of net loss attributable to noncontrolling interests. The Company's share of the Dow Kokam charge, after tax and noncontrolling interests, was \$189 million.

(6) For the year ended December 31, 2013, 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 diluted earnings per share (reported U.S. GAAP amount).

(7) The Company used "Net Income Attributable to The Dow Chemical Company" when calculating diluted earnings per share (reported U.S. GAAP amount) for the twelve-month period ended December 31, 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 24 to the Consolidated Financial Statements.

Due to the completion of several divestitures (see Note 5 to the Consolidated Financial Statements), the change in sales volume from 2012 to 2013 and 2011 to 2012 excluding divestitures is also provided by operating segment, where applicable. Sales excluding divestitures exclude sales related to Nippon Unicar Company Limited, divested on July 1, 2013; sales of the Polypropylene business, divested on September 30, 2011; and sales of Dow Haltermann, divested during 2011.

## ELECTRONIC AND FUNCTIONAL MATERIALS

The Electronic and Functional Materials segment consists of two businesses – Dow Electronic Materials and Functional Materials – and includes a portion of the Company's share of the results of Dow Corning Corporation, a joint venture of the Company. Dow Electronic Materials includes Display Technologies, Growth Technologies, Interconnect Technologies and Semiconductor Technologies. Functional Materials includes Dow Consumer and Industrial Solutions, Dow Microbial Control and Dow Pharma and Food Solutions.

Electronic and Functional Materials In millions	2013	2012	2011		
Sales	\$4,591	\$4,481	\$4,599		
Price change from comparative period	(2	)%	(2	)%	6
Volume change from comparative period	4	%	(1	)%	3
Equity earnings	\$112	\$94	\$104		
EBITDA	\$1,040	\$958	\$1,084		
Certain items impacting EBITDA	\$—	\$(73	)	\$—	

## 2013 Versus 2012

Electronic and Functional Materials sales were \$4,591 million for 2013, up from \$4,481 million in 2012. Sales increased

2 percent from 2012, with volume up 4 percent and price down 2 percent (with nearly one-third of the price decline due to currency). Volume increased in all geographic areas, except EMEA, driven by higher demand for consumer electronics, specialty polymers used in home and personal care applications and specialty materials used in energy and industrial water applications. Price increases in North America and EMEA were more than offset by decreases in Latin America and most notably in Asia Pacific. Price decreased in most business units. EBITDA for 2013 was \$1,040 million, up from \$958 million in 2012. EBITDA improved from last year as increased sales volume, higher equity earnings from Dow Corning and lower R&D and SG&A expenses more than offset lower selling prices. EBITDA for 2012 was negatively impacted by \$65 million of restructuring charges. The 1Q12 Restructuring program included a \$17 million charge related to the write-off of a capital project. The 4Q12 Restructuring program included a \$48 million charge related to asset write-downs and write-offs and contract cancellation fees. In addition, EBITDA for 2012 included an \$8 million charge related to Dow Corning's restructuring and asset abandonment. See Notes 3 and 8 to the Consolidated Financial Statements for additional information on these charges.

Dow Electronic Materials sales in 2013 were flat compared with 2012, with volume up 3 percent and price down 3 percent. Volume was higher in Display Technologies due to increased demand for organic light emitting diode materials used in mobile applications and televisions. Volume increased in Interconnect Technologies due to higher

demand for printed circuit boards and for advanced metallization used in electronic finishing. Volume decreased in Semiconductor Technologies as customers reduced inventory levels for chemical mechanical planarization pads and slurries despite semiconductor foundry utilization rates holding steady across the industry in 2013. The decrease in price was driven by continued competitive pressure and the unfavorable impact of currency, which represented nearly 40 percent of the decrease and was primarily due to the weakening Japanese yen.

Functional Materials sales in 2013 increased 5 percent from 2012, with volume up 5 percent and price flat. Volume increased in all geographic areas, except EMEA, driven by higher demand for home and personal care products, specialty biocides used in energy applications and acrolein derivatives. Price remained flat as price increases in acrolein derivatives were offset by decreases in Dow Pharma and Food Solutions due to price/volume optimization efforts, notably cellulose.

## Table of Contents

In July 2012, the Chinese Ministry of Commerce ("MOFCOM") initiated antidumping and countervailing duty investigations of imports of solar-grade polycrystalline silicon products from the United States and Korea based on a petition filed by Chinese solar-grade polycrystalline silicon producers. The petition alleged that producers within these countries, including Dow Corning, exported solar-grade polycrystalline silicon to China at less than fair value, and that production of solar-grade polycrystalline silicon in the United States has been subsidized by the U.S. government. On January 20, 2014, MOFCOM issued a final determination that resulted in antidumping duties on producers in the United States and Korea ranging from 2.4 percent to 57 percent, including duties of 53.3 percent on future imports from Dow Corning. In addition, countervailing duties of 2.1 percent were imposed. The requirement for customers to pay provisional duties on imports from solar-grade polycrystalline silicon producers became effective July 24, 2013 for the antidumping duties and September 20, 2013 for the countervailing duties. Dow Corning will not be subject to duties for previous sales. Dow Corning is evaluating possible actions in response to the final determination. Dow Corning's polycrystalline silicon products accounted for a significant portion of its operating results.

### 2012 Versus 2011

Electronic and Functional Materials sales were \$4,481 million for 2012, down from \$4,599 million in 2011. Sales decreased 3 percent from 2011, with price down 2 percent (with more than one-half of the price decline due to currency) and volume down 1 percent. Price decreased in most geographic areas and across most major business units in response to decreasing raw material costs. Volume declined as increased demand for chemical mechanical planarization pads and slurries in Asia Pacific was more than offset by weaker demand for specialty polymers used in home and personal care applications and specialty cellulose used in food and pharmaceutical applications, notably in North America. EBITDA for 2012 was \$958 million, down from \$1,084 million in 2011. EBITDA decreased from 2011 as lower selling prices and higher operating costs associated with planned maintenance turnarounds more than offset lower raw material costs and lower SG&A expenses. EBITDA for 2012 was negatively impacted by \$65 million of certain items, as previously discussed.

Dow Electronic Materials sales in 2012 were down 3 percent from 2011, with price down 2 percent and volume down 1 percent. Price decreased in all geographic areas driven by continued competitive pricing pressure, especially in Asia Pacific. Volume declines in North America and Asia Pacific more than offset improvements in EMEA and Latin America. Volume declined in Display Technologies primarily due to lower demand for optical filters used in televisions and other displays. Volume decreased in Interconnect Technologies due to lower demand for printed circuit boards used in personal computers. Semiconductor foundry utilization rates held steady across the industry in 2012 and higher demand for chemical mechanical planarization pads and slurries drove volume growth in the Semiconductor Technologies business unit.

Functional Materials sales in 2012 were down 2 percent from 2011, entirely related to the unfavorable impact of currency on price. Price decreased in most geographic areas, especially in EMEA. Volume was flat as higher industrial demand for specialty amines and polymers was offset by lower demand for home and personal care products and lower demand for cellulose used in food and pharmaceutical applications.

### Electronic and Functional Materials Outlook for 2014

Electronic and Functional Materials sales are expected to increase due to continued global economic recovery and demand growth in the electronics, energy, pharmaceutical, food, personal care and home care industries. The Company expects continued strong demand in OLED used in mobile applications and televisions.

Dow Electronic Materials sales volume is expected to increase due to new product launches including advanced photoresists and advanced chip packaging used in personal computer memory applications and circuit boards, while continued but modest growth is expected for media tablet and mobile phone devices.

Functional Materials sales are expected to increase, especially in emerging geographies, due to higher demand for home and personal care products, higher demand for specialty biocides and for cellulose used in food and pharmaceutical applications.

Table of Contents

## COATINGS AND INFRASTRUCTURE SOLUTIONS

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

Coatings and Infrastructure Solutions	2013	2012	2011		
In millions					
Sales	\$7,132	\$6,898	\$7,200		
Price change from comparative period	(1	)%	(6	)%	13
Volume change from comparative period	4	%	2	%	(4
Volume change, excluding divestitures	4	%	2	%	(1
Equity earnings	\$121	\$50	\$321		
EBITDA	\$832	\$823	\$1,167		
Certain items impacting EBITDA	\$(60	)	\$(134	)	\$(60

## 2013 Versus 2012

Coatings and Infrastructure Solutions sales were \$7,132 million in 2013, up from \$6,898 million in 2012. Sales increased 3 percent with volume improving 4 percent and price declining 1 percent, due to currency. Volume was higher in all businesses and all geographic areas. Price increases in North America, driven by higher feedstock and energy costs, were offset by price declines in EMEA and Latin America as well as Asia Pacific, which declined due to the unfavorable impact of currency, most notably in Japan. Dow Coating Materials volume increased due to higher demand for architectural coatings in all geographic areas, except Latin America, driven by improved end-use market conditions. In addition, demand for industrial coatings was higher in North America. Dow Building and Construction volume increased due to higher demand for insulation products in all geographic areas, except North America. In North America volume was lower due to price/volume optimization and lower non-residential construction activity. Performance Monomers volume increased in all geographic areas driven by higher demand for acrylic acid used in coating and adhesive applications. Dow Water and Process Solutions volume increased as higher demand for reverse osmosis membranes used in residential and industrial water desalination projects more than offset weaker demand for ion exchange resins used in large industrial water projects.

EBITDA for 2013 was \$832 million, compared with \$823 million in 2012. EBITDA in 2013 included \$61 million of asset impairment and related costs in Dow Building and Construction and a \$1 million gain for an adjustment to asbestos abatement costs related to the 1Q12 restructuring program. EBITDA for 2012 was negatively impacted by restructuring charges of \$53 million. The 1Q12 Restructuring plan included \$37 million of restructuring charges, consisting of asset write-downs and write-offs of \$33 million and costs associated with exit or disposal activities of \$4 million. The 4Q12 Restructuring plan included \$16 million for asset write-downs and write-offs. In addition, EBITDA for 2012 included an \$81 million charge related to Dow Corning's restructuring and asset abandonment. See Notes 3 and 8 to the Consolidated Financial Statements for additional information on these charges. Excluding these certain items, EBITDA decreased in 2013 as lower selling prices and higher feedstock and energy and other raw material costs more than offset higher sales volumes and the favorable impact of currency on costs.

In July 2012, the Chinese Ministry of Commerce ("MOFCOM") initiated antidumping and countervailing duty investigations of imports of solar-grade polycrystalline silicon products from the United States and Korea based on a petition filed by Chinese solar-grade polycrystalline silicon producers. The petition alleged that producers within these countries, including Dow Corning, exported solar-grade polycrystalline silicon to China at less than fair value, and that production of solar-grade polycrystalline silicon in the United States has been subsidized by the U.S. government. On January 20, 2014, MOFCOM issued a final determination that resulted in antidumping duties on producers in the United States and Korea ranging from 2.4 percent to 57 percent, including duties of 53.3 percent on future imports from Dow Corning. In addition, countervailing duties of 2.1 percent were imposed. The requirement for customers to

pay provisional duties on imports from solar-grade polycrystalline silicon producers became effective July 24, 2013 for the antidumping duties and September 20, 2013 for the countervailing duties. Dow Corning will not be subject to duties for previous sales. Dow Corning is evaluating possible actions in response to the final determination. Dow Corning's polycrystalline silicon products accounted for a significant portion of its operating results.

#### 2012 Versus 2011

Coatings and Infrastructure Solutions sales were \$6,898 million in 2012, down from \$7,200 million in 2011. Sales decreased 4 percent with price declining 6 percent (with approximately one-third of the price decrease due to currency) and volume improving 2 percent. The decrease in price was across all geographic areas and across most businesses, driven in response to lower feedstock and energy and other raw material costs. Dow Coating Materials volume increased due to higher demand for

Table of Contents

industrial coatings. Despite market share gains achieved through technology innovations in paper coatings and in traffic paint, notably EVOQUE™, volume for architectural coatings declined slightly, driven by continued weak end-use market conditions, especially for residential construction in EMEA. Dow Water and Process Solutions volume was flat as higher demand for reverse osmosis membranes used in water desalination projects and for ion exchange resins used in ultrapure water applications was offset by weaker demand for ion exchange resins used in large industrial water projects. Dow Building and Construction volume declined due to price/volume optimization in North America and slower construction activity in EMEA, which more than offset volume gains in Asia Pacific. Performance Monomers volume increased in all geographic areas, especially in Asia Pacific, driven by favorable supply/demand conditions in Japan due to a competitor plant outage.

EBITDA for 2012 was \$823 million, down from \$1,167 million in 2011. Compared with 2011, lower selling prices and lower equity earnings from Dow Corning more than offset higher sales volumes, lower feedstock and energy costs and the favorable impact of currency on costs. EBITDA for 2012 was negatively impacted by \$134 million of certain items, as previously discussed. EBITDA was negatively impacted in 2011 by a \$60 million charge for a warranty accrual adjustment related to an exited business.

## Coatings and Infrastructure Solutions Outlook for 2014

Coatings and Infrastructure Solutions sales are expected to grow modestly in 2014. Dow Coating Materials sales are expected to increase driven by higher demand for architectural coatings due to continued recovery in the housing industry, especially in developed geographies. Increased demand is also expected for industrial coatings, driven by global economic conditions. Dow Building and Construction sales are also expected to increase, primarily driven by higher demand for insulation products in North America due to continued recovery of residential construction and continued improvement in non-residential construction activity. Dow Water and Process Solutions sales are expected to increase slightly due to higher demand for reverse osmosis membranes used in water desalination projects and ion exchange resins used in ultrapure water applications. Performance Monomers sales are expected to increase due to improved end-market conditions and increased demand from emerging geographies.

## AGRICULTURAL SCIENCES

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

Agricultural Sciences In millions	2013	2012	2011	
Sales	\$7,137	\$6,382	\$5,655	
Price change from comparative period	1	% 3	% 5	%
Volume change from comparative period	11	% 10	% 11	%
Equity earnings	\$6	\$1	\$4	
EBITDA	\$969	\$977	\$913	

## 2013 Versus 2012

Agricultural Sciences sales were \$7,137 million in 2013, up 12 percent from \$6,382 million in 2012, a record for the segment and both businesses. Sales gains were driven by the introduction and ramp up of new products and technologies. Compared with last year, volume increased 11 percent and price increased 1 percent. Latin America reported 21 percent sales growth and North America sales increased 13 percent. Crop Protection sales were up 10 percent compared with 2012, driven by new product sales which increased 14 percent, while strong sales growth was also reported for the spinosyns and the corn and cereal herbicide portfolios. Seeds, Traits and Oils sales increased 19

percent compared with 2012 with strong growth across most major crop portfolios. SmartStax® corn hybrids posted record sales growth driven by the ramp up of POWERCORE™ Insect Trait Technology in Latin America and REFUGE ADVANCED® in North America.

EBITDA for 2013 was \$969 million, compared with \$977 in 2012. EBITDA declined slightly primarily due to higher operating expenses and increased spending on growth investments which offset strong sales growth in the Americas led by favorable global agricultural and food industry conditions, new product sales and new seed technologies.



Table of Contents

## 2012 Versus 2011

Agricultural Sciences sales were \$6,382 million in 2012, up 13 percent from \$5,655 million in 2011. Compared with 2011, volume increased 10 percent and price was up 3 percent. Regionally, North America reported 27 percent sales growth while Latin America and Asia Pacific also reported strong increases. Sales growth was reported in the Seeds, Traits and Oils and Crop Protection businesses due to new product launches and the continued ramp up of new technologies. Sales of Seeds, Traits and Oils increased 27 percent compared with 2011 driven by strong growth in the corn, soybean and healthy oils portfolios. SmartStax® technology sales more than doubled from 2011 performance, driven by the 2012 introduction of POWERCORE™ Insect Trait Technology in Latin America and REFUGE ADVANCED® in North America. Crop Protection sales increased 10 percent, with volume up 8 percent and price up 2 percent. New Crop Protection product sales were up 19 percent compared with the year ago period with spinetoram insecticide up 50 percent and double-digit growth in aminopyralid herbicide and pyroxsulam herbicide.

EBITDA for 2012 was a record \$977 million, compared with \$913 million in 2011. EBITDA increased as sales volume growth in Seeds, Traits and Oils and Crop Protection combined with selling price increases more than offset increased investment in R&D and SG&A to support continuing growth initiatives.

## Agricultural Sciences Outlook for 2014

Agricultural Sciences sales for 2014 are expected to grow above the levels achieved in 2013 with growth in all geographic areas. A continuation of 2013 industry momentum is anticipated to be tempered by a greater level of uncertainty around crop commodity prices. The Seeds, Traits and Oils business expects gains in corn from the continued ramp up of SmartStax® technology, as well as growth in the soybean portfolio. The Crop Protection business is expected to experience continued growth from Isoclast™ insecticide, pyroxsulam herbicide, spinetoram insecticide, penoxsulam herbicide and aminopyralid herbicide. Investments in technology, capacity and geographic reach in the Seeds, Traits and Oils business remain a priority.

## PERFORMANCE MATERIALS

The Performance Materials segment consists of the following businesses: Amines; Chlorinated Organics; Dow Automotive Systems; Dow Formulated Systems; Dow Oil, Gas & Mining; Dow Plastics Additives; Epoxy; Oxygenated Solvents; Polyglycols, Surfactants & Fluids; Polyurethanes; and Propylene Oxide/Propylene Glycol ("PO/PG"). The segment also includes the results of Map Ta Phut Olefins Company Limited and a portion of the results of Sadara Chemical Company, both joint ventures of the Company.

The segment included Dow Haltermann until it was fully divested at December 31, 2011.

Performance Materials In millions	2013	2012	2011
Sales	\$13,415	\$13,608	\$14,647
Price change from comparative period	—	% (6	)% 12
Volume change from comparative period	(2	)% (1	)% (7
Volume change, excluding divestitures	(2	)% —	% 1
Equity losses	\$(64	) \$(92	) \$(31
EBITDA	\$1,436	\$1,036	\$1,748
Certain items impacting EBITDA	\$(23	) \$(590	) \$(119

## 2013 Versus 2012

Performance Materials sales were \$13,415 million in 2013, down 2 percent from \$13,608 million in 2012. Compared with 2012, price was flat as increases across most businesses in North America and Europe were offset by decreases in Latin America and Asia Pacific. Improved economic conditions drove price gains in Oxygenated Solvents in all geographic areas except Asia Pacific, where price declined due to the unfavorable impact of currency. Price increases

were also reported by Dow Automotive Systems, Dow Formulated Systems and Polyglycols, Surfactants & Fluids due to higher propylene and energy costs. These increases were offset by price declines in Amines, Dow Plastics Additives and most notably in Chlorinated Organics, where aggressive competitors, coupled with global industry oversupply, lowered prices. Volume for 2013 was down 2 percent compared with 2012 as modest growth in Latin America was more than offset by declines in all other geographic areas. Epoxy reported lower volume across all geographic areas, except Latin America, due to poor supply and demand fundamentals. Volume declined in Amines and Oxygenated Solvents due to the expiration of a low margin marketing agreement. Lower volume was reported by Chlorinated Organics and Dow Plastics Additives which were impacted by soft demand conditions. Dow Automotive Systems reported volume gains due to stronger demand in the North American transportation sector. Stronger consumer and industrial demand, as well as increased demand in the wind energy sector, drove volume growth in Dow Formulated Systems. Volume gains were reported in PO/PG, especially in Asia Pacific where additional

Table of Contents

propylene glycol capacity in Thailand was brought online in late 2012. Dow Oil, Gas & Mining volume was higher in all geographic areas due to strong demand fundamentals in the exploration and production and refining and processing industries. Volume increased modestly in Polyurethanes in all geographic areas except EMEA, driven primarily by increased demand for energy efficient applications.

EBITDA for 2013 was \$1,436 million, compared with \$1,036 million in 2012. EBITDA in 2013 included \$38 million of asset impairment charges and costs related primarily to the shutdown of certain assets in the Dow Plastics Additives and Epoxy businesses and a \$15 million gain for the adjustment of contract cancellation fees related to the 1Q12 restructuring program. EBITDA in 2012 was negatively impacted by a goodwill impairment loss of \$220 million in Dow Formulated Systems; \$186 million of 1Q12 Restructuring charges related to the cancellation of a project and the shutdown/consolidation of assets in the Polyurethanes and Epoxy businesses in Brazil, Texas and Germany; and \$192 million of 4Q12 Restructuring charges related primarily to the shutdown/consolidation of certain assets in the Dow Automotive Systems and Oxygenated Solvents businesses in Michigan and Texas. EBITDA in 2012 was also impacted by an \$8 million gain related to post-closing adjustments on the sale of a contract manufacturing business. See Notes 3, 5, 9 and 11 to the Consolidated Financial Statements for additional information on these charges. Excluding these certain items, EBITDA decreased in 2013 as higher propylene and energy costs, decreased sales volume and increased SG&A costs more than offset lower equity losses from Map Ta Phut Olefins Company Limited, decreased spending on planned maintenance turnarounds and improved operating rates.

On March 14, 2013, the Company announced the Dow Plastics Additives business was being marketed for divestment, as part of the Company's ongoing commitment to portfolio management. During the third quarter of 2013, the Company determined this valuable business was being undervalued by potential buyers in the market. As a result, the Dow Plastics Additives business is no longer being marketed for divestment and will continue to be operated by the Company to obtain maximum value.

## 2012 Versus 2011

Performance Materials sales were \$13,608 million in 2012, down 7 percent from \$14,647 million in 2011. Compared with 2011, price declined 6 percent with approximately 40 percent of the decline due to the unfavorable impact of currency. Lower feedstock and energy and other raw material costs drove price decreases across all geographic areas and most businesses. Amines, Epoxy and PO/PG experienced double-digit price decreases due to lower feedstock and energy and other raw material costs as well as excess industry inventories. Polyglycols, Surfactants & Fluids reported slight price increases led by favorable pricing in North America. Volume for 2012 was down 1 percent compared with 2011, reflecting the sale of Dow Haltermann in 2011. Excluding the impact of this divestiture, volume was flat as a decline in Latin America, due to the shutdown of the toluene diisocyanate manufacturing facility in Brazil, offset modest volume increases in other geographic areas. Amines reported volume growth of 8 percent due to increased sales of herbicides in the agricultural industry, as well as increased industry demand in laundry detergents, fabric softeners and industrial applications for the oil and gas industry. Strong volume growth was reported by PO/PG, driven primarily by the addition of new propylene oxide capacity in Asia Pacific in 2011. Dow Oil, Gas & Mining volume was higher in all geographic areas, except Asia Pacific, due to strong demand fundamentals in the exploration and production and refining and processing industries. These volume gains were offset by volume declines in Dow Automotive Systems, where demand softened in Latin America and Europe, as well as Polyurethanes where volume was down across all geographic areas except North America. Epoxy also reported lower volume across all geographic areas, except Latin America, due to soft demand and extended planned maintenance turnarounds in 2012.

EBITDA for 2012 was \$1,036 million, compared with \$1,748 million in 2011. EBITDA decreased in 2012 as lower selling prices, increased spending for planned maintenance turnarounds, lower equity earnings from Map Ta Phut Olefins Company Limited and equity losses from Sadara more than offset lower feedstock and energy and other raw material costs, improved operating rates, the positive impact of currency on costs and lower R&D and SG&A costs. EBITDA in 2012 was negatively impacted by \$590 million of certain items, as previously discussed. EBITDA in 2011

included \$77 million of asset impairment charges and related costs in the Polyurethanes business and a \$42 million loss on the sale of a contract manufacturing business. See Notes 5 and 11 to the Consolidated Financial Statements for additional information on these charges.

#### Performance Materials Outlook for 2014

Performance Materials volume is expected to grow modestly, at or slightly above GDP for most businesses. Volume is expected to improve in Polyurethanes as the economic recovery continues in North America and is expected across all other geographic areas. Continued sales growth is expected for Dow Oil, Gas & Mining driven by market fundamentals in exploration and production as well as market penetration in emerging geographies. Increased demand is expected to drive modest volume increases in Epoxy. Dow Plastics Additives expects lower volume due to the announced closure of the Grangemouth, United Kingdom manufacturing facility. Chlorinated Organics expects slight volume declines due to a depressed global market. A modest sales increase is expected in Dow Automotive Systems, driven by a projected increase in global production in the transportation sector. Amines, Oxygenated Solvents and Polyglycols, Surfactants & Fluids all expect sales growth, despite the

Table of Contents

expiration of a low margin marketing agreement in late 2013. Equity earnings are expected to be down due to increased start-up costs for the Sadara joint venture.

On December 2, 2013, the Company announced the planned carve-out of a portion of its chlorine chain, including the Company's global Chlorinated Organics and Epoxy businesses, in preparation for transactions involving select chlorine and derivative businesses over the next 12-24 months.

**PERFORMANCE PLASTICS**

The Performance Plastics segment is a solutions-oriented portfolio comprised of Dow Elastomers; Dow Electrical and Telecommunications; and Dow Packaging and Specialty Plastics. The Performance Plastics segment also includes the results of Equipolymers (through the July 1, 2011 merger with MEGlobal; see Note 8 to the Consolidated Financial Statements) and Univation Technologies, LLC, as well as a portion of the results of EQUATE Petrochemical Company K.S.C., The Kuwait Olefins Company K.S.C., The SCG-Dow Group and Sadara Chemical Company, all joint ventures of the Company.

On December 2, 2013, the Company sold its global Polypropylene Licensing and Catalysts business to W. R. Grace & Co. On September 30, 2011, the Company sold its global Polypropylene business to Braskem SA. These businesses were 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.

Performance Plastics In millions	2013	2012	2011		
Sales	\$14,645	\$14,479	\$16,257		
Price change from comparative period	4	% (4	)% 12		%
Volume change from comparative period	(3	)% (7	)% (5		)%
Volume change, excluding divestitures	(1	)% 1	% 4		%
Equity earnings	\$359	\$134	\$303		
EBITDA	\$4,549	\$3,018	\$3,440		
Certain items impacting EBITDA	\$457	\$(26	)	\$86	

**2013 Versus 2012**

Performance Plastics sales for 2013 were \$14,645 million, up 1 percent from \$14,479 million in 2012 with price up 4 percent and volume down 3 percent. Dow Packaging and Specialty Plastics prices were significantly higher in all geographic areas due to low industry inventories and the Company's focus on higher margin products and customers. Dow Elastomers prices were lower in all geographic areas due to increased competitive pressure from additional industry capacity. Dow Electrical and Telecommunications price increases in North America were more than offset by price declines in all other geographic areas, most notably Asia Pacific which included the unfavorable impact of currency. Volume declined by 3 percent, primarily due to the divestiture of the Company's 50 percent interest in Nippon Unicar Company Limited. Excluding the impact of this divestiture, volume was down 1 percent. Increased demand drove Dow Packaging and Specialty Plastics volume growth in all geographic areas, except EMEA, which was impacted by the Company's shutdown of a high-density polyethylene production facility at Tessenderlo, Belgium. Dow Elastomers volume was higher in all geographic areas, except Latin America, due to increased demand in the transportation, adhesive and infrastructure industries. Dow Electrical and Telecommunications volume declined in all geographic areas except Latin America, reflecting weaker demand in the telecommunications and power industries. Volume was also significantly lower in Asia Pacific, reflecting reduced supply related to the Company's divestiture of its ownership interest in Nippon Unicar Company Limited.

EBITDA for 2013 was \$4,549 million, up significantly from \$3,018 million in 2012. EBITDA improved as the impact of higher selling prices, lower feedstock costs, lower other raw material cost and improved equity earnings more than offset the decline in sales volume. Equity earnings were \$359 million in 2013, up from \$134 million in 2012, as a result of significantly improved earnings from EQUATE, The Kuwait Styrene Company K.S.C. and Univation Technologies, LLC and lower equity losses from The SCG-Dow Group. EBITDA in 2013 was also positively impacted by a pretax gain of \$451 million on the sale of the global Polypropylene Licensing and Catalysts business and a \$6 million gain for adjustments to contract cancellation fees related to the 4Q12 Restructuring plan. EBITDA in 2012 was negatively impacted by \$26 million of restructuring charges consisting of asset write-offs of \$10 million and costs associated with exit or disposal activities of \$7 million related to the shutdown of the Company's polyethylene manufacturing facility in Tessenderlo, Belgium, and a \$9 million charge related to the impairment of the Company's investment in Nippon Unicar Company Limited. See Notes 3 and 5 to the Consolidated Financial Statements for additional information on these charges.

## Table of Contents

### 2012 Versus 2011

Performance Plastics sales for 2012 were \$14,479 million, down 11 percent from \$16,257 million in 2011 with price down 4 percent (with more than half of the decrease due to currency) and volume down 7 percent. Feedstock and energy costs fell during 2012 resulting in lower selling prices across all geographic areas and businesses. Prices declined in EMEA where modest local price increases were more than offset by the unfavorable impact of currency. The decline in volume reflects the divestiture of the Polypropylene business; excluding the impact of this divestiture, volume was up 1 percent. Volume was higher in all geographic areas except EMEA, where recessionary conditions continued to negatively impact demand. Dow Elastomers reported double-digit volume growth in all geographic areas, except EMEA, due to strong demand in the transportation and adhesive industries. Volume in EMEA was lower as weak economic conditions negatively impacted the transportation and infrastructure industries. Dow Electrical and Telecommunications reported strong volume growth in Asia Pacific, notably in China, due to continued strong demand for fiber optic cable. This was partially offset by volume declines in North America, Latin America and EMEA due to lower demand in the power industry. Dow Packaging and Specialty Plastics reported volume growth due to higher demand in all geographic areas, except EMEA. Volume was higher in North America despite limited ethylene availability during the first half of the year due to a planned maintenance turnaround at the Company's St. Charles, Louisiana ethylene facility and limited ethylene supply at the Prentiss, Alberta, Canada manufacturing facility.

EBITDA for 2012 was \$3,018 million, down from \$3,440 million in 2011. EBITDA declined as lower selling prices, the absence of earnings from divested businesses, reduced equity earnings from The SCG-Dow Group and equity losses from Sadara, and the unfavorable impact of the 2012 certain items stated above more than offset the favorable impact of lower feedstock and energy costs and lower spending on planned maintenance turnarounds. In North America, favorable shale gas related feedstock dynamics allowed the Company to leverage its competitive position and expand margins. EBITDA in 2011 included an \$86 million gain related to cash collected on a previously impaired note receivable related to Equipolymers.

### Performance Plastics Outlook for 2014

In 2014, Performance Plastics growth is expected to continue at a modest pace. In North America, the availability of low-cost U.S. shale gas is expected to continue to provide a competitive advantage for the Performance Plastics businesses. These favorable dynamics will allow Dow Packaging and Specialty Plastics to improve margins and increase volume through increased exports into Asia Pacific and Latin America. Margins in EMEA are expected to remain compressed due to the high cost of naphtha-based feedstocks; however, announced industry production capacity reductions may provide some upside potential. Dow Packaging and Specialty Plastics will also begin the pre-marketing of products for the Sadara. This activity will increase as the year progresses, in anticipation of the start-up of the Sadara production facilities in the second half of 2015. In addition, Dow Packaging and Specialty Plastics will continue to benefit from the restart of an ethylene facility in Louisiana. Dow Elastomers is expected to see growth as demand increases due to continued improvement in the transportation, construction and infrastructure industries. Dow Electrical and Telecommunications expects to see improvement in 2014 due to continued growth in the U.S. housing and construction industries and government spending initiatives in Asia Pacific. Growth in EMEA will be slower due to weaker economic conditions and the startup of new industry capacity.

Construction continues on phase one of the new biopolymers manufacturing facility in Santa Vitória, Minas Gerais, Brazil. This project, which is a consolidated joint venture with Mitsui & Co. Ltd., was announced during the fourth quarter of 2011. The joint venture's ethanol mill is expected to process its first full harvest of sugarcane in 2014. 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 19 to the Consolidated Financial Statements for additional information.

On August 27, 2013, the Company announced the location of four new Performance Plastics production units to be built on the U.S. Gulf Coast. Leveraging an advantaged feedstock position from U.S. shale gas, these production units will support expected profitable growth of the Company's high value Performance Plastics franchise. The businesses, production units and locations impacted are as follows:

• Dow Packaging and Specialty Plastics: An ELITE™ polymer production unit will be built in Freeport, Texas; and a Low Density Polyethylene (LDPE) production unit will be built in Plaquemine, Louisiana.

• Dow Elastomers: A NORDEL™ metallocene EPDM production unit will be built in Plaquemine, Louisiana; and a High Melt Index (HMI) AFFINITY™ polymer production unit will be built in Freeport, Texas.



Table of Contents

## FEEDSTOCKS AND ENERGY

The Feedstocks and Energy segment includes the following businesses: Chlor-Alkali/Chlor-Vinyl; Energy; Ethylene Oxide/Ethylene Glycol ("EO/EG"); and Hydrocarbons. Also included in the Feedstocks and Energy segment are the results of MEGlobal and a portion of the results of EQUATE Petrochemical Company K.S.C., The Kuwait Olefins Company K.S.C., and The SCG-Dow Group, all joint ventures of the Company.

Feedstocks and Energy	2013	2012	2011		
In millions					
Sales	\$9,854	\$10,695	\$11,302		
Price change from comparative period	(3	)%	(2	)%	27
Volume change from comparative period	(5	)%	(3	)%	7
Equity earnings	\$539	\$452	\$561		
EBITDA	\$858	\$718	\$940		
Certain items impacting EBITDA	\$21	\$(7	)	\$—	

## 2013 Versus 2012

Feedstocks and Energy sales were \$9,854 million in 2013, down 8 percent from \$10,695 million in 2012, driven by a 5 percent decrease in volume and a 3 percent decrease in price.

Sales for the Hydrocarbons business were down 12 percent compared with 2012, due to a 7 percent decrease in volume and 5 percent decrease in price. Volume declined primarily from the expiration of propylene supply contracts related to the divestiture of Dow's Polypropylene business as well as lower co-product sales resulting from lower production and the use of lighter feedslates in Europe. Price declined primarily due to lower butadiene prices in the United States and Europe as well as lower prices for other co-products in Europe.

Sales for the Energy business are primarily opportunistic merchant sales driven by market conditions and sales to customers located on Dow manufacturing sites. In 2013, Energy business sales increased 28 percent compared with 2012. Price increased 20 percent due to higher natural gas prices in North America while volume increased 8 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 increased \$319 million in 2013, a 2 percent increase from 2012, primarily due to increased propylene and natural gas costs.

Chlor-Alkali/Chlor-Vinyl sales decreased 3 percent compared with 2012, as volume declined 4 percent and price increased 1 percent. Volume decreased primarily due to lower sales of vinyl chloride monomer ("VCM"). In addition, caustic soda volume decreased due to a planned maintenance turnaround and lower demand in the chlorine chain. Price increases were driven by ethylene dichloride ("EDC") in Asia Pacific, which was partially offset by lower caustic soda prices in North America and Latin America due to improved chlorine demand and new capacity nearing startup.

EO/EG sales increased 13 percent compared with 2012, as volume increased 10 percent while price increased 3 percent. Volume was higher due to increased catalysts sales. Ethylene oxide volumes were higher due to increased demand in North America and EMEA. Price increases were driven by monoethylene glycol ("MEG"), which increased year-over-year due to continued demand growth and limited industry capacity additions.

The Hydrocarbons 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. For the segment, EBITDA for 2013 was \$858 million, up from \$718 million in 2012. EBITDA for 2013 benefited from higher equity earnings from EQUATE and MEGlobal and an \$87 million gain on the sale of a 7.5 percent ownership interest

in Freeport LNG Development, L.P. EBITDA for 2013 was negatively impacted by \$66 million of asset impairments, including the shutdown of manufacturing facilities in the Chlor-Alkali/Chlor-Vinyl business. EBITDA in 2012 was negatively impacted by a \$7 million restructuring charge for the write-off of certain capital projects as part of the 4Q12 Restructuring plan. See Notes 3 and 11 to the Consolidated Financial Statements for additional information on these charges.

#### 2012 Versus 2011

Feedstocks and Energy sales were \$10,695 million in 2012, down 5 percent from \$11,302 million in 2011, driven by a 3 percent decrease in volume and a 2 percent decrease in price.

## Table of Contents

Sales for the Hydrocarbons business were down 2 percent compared with 2011, due to a 1 percent decrease in both price and volume. Price and volume were down in all geographic areas, except EMEA. Despite the unfavorable impact of currency, overall price increased in EMEA due to higher benzene prices and volume increased in EMEA due to increased sales of propylene.

In 2012, Energy business sales declined 23 percent compared with 2011. Volume was down 20 percent with declines in all geographic areas, primarily due to decreased sales of industrial gas. Price was down 3 percent driven by lower natural gas prices resulting from high inventory levels in the U.S. and one of the mildest winters on record in North America.

The Company's cost of purchased feedstock and energy decreased \$2.5 billion in 2012, an 11 percent decrease from 2011. The cost of purchased feedstocks decreased primarily due to lower feedstock and energy prices in the United States resulting from increased supply of shale gas and natural gas liquids.

Chlor-Alkali/Chlor-Vinyl sales declined 13 percent compared with 2011, as volume declined 9 percent and price declined 4 percent. Volume decreased primarily due to the shutdown of VCM capacity in North America in the first half of 2011. Pricing trends were mixed as price increases in caustic soda were more than offset by lower prices for EDC and VCM due to weak global construction-related demand.

EO/EG sales decreased 5 percent compared with 2011, as a 3 percent increase in volume was more than offset by an 8 percent decline in price. Volume gains were driven by increased merchant sales of purified ethylene oxide and ethylene glycol, as the business took advantage of favorable conditions to move material not needed for internal consumption by Dow's downstream derivative businesses. Price decreases were driven by ethylene glycol, as the combination of modest demand growth, stable inventory supply, high inventories in Asia Pacific and uncertainty in the global economy put downward pressure on prices.

EBITDA for the segment in 2012 was \$718 million, down from \$940 million in 2011 as lower feedstock and energy costs were more than offset by a decrease in selling prices and lower equity earnings from MEGlobal, Compañía Mega S.A and EQUATE. EBITDA in 2012 was negatively impacted by \$7 million of certain items, as previously discussed.

### Feedstocks and Energy Outlook for 2014

The Feedstocks and Energy segment expects market conditions to show slight improvement. MEG prices are expected to remain volatile but generally move upward due to improved economic conditions, rising downstream demand and limited industry capacity additions. The path and pace of economic growth will continue to be an important determinant of MEG prices and profitability. Caustic soda prices and margins are expected to weaken as new industry capacity in the U.S. Gulf Coast outweighs demand growth and global chlorine operating rates gradually improve. EDC/VCM prices and margins are expected to improve with the continued recovery of the global construction market and North America housing activity. Crude oil and feedstock prices are expected to remain volatile and sensitive to external factors, such as economic activity and geopolitical tensions. The Company expects crude oil prices, on average, to be slightly above 2013. Ethylene margins are expected to increase from 2013, however ethylene margins could vary materially from these expectations depending on global GDP growth rates and global operating rates.

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 natural gas liquids 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 feedstocks. The Company also announced investments in a new on-purpose propylene production unit (expected start-up in 2015) and a new ethylene production unit (expected start-up in 2017), both located in Freeport, Texas. As a result of these investments, Dow's ethylene production capabilities are expected to increase by as much as

20 percent.

In the fourth quarter of 2010, Dow and Mitsui & Co., Ltd. formed Dow-Mitsui Chlor-Alkali LLC, a 50:50 manufacturing joint venture to construct, own and operate a new membrane chlor-alkali facility located at Dow's Freeport, Texas, integrated manufacturing complex. Construction began in 2011 and operations are expected to begin in the first quarter of 2014. The new facility will have an annual capacity of approximately 800 kilotons. Under contract to the joint venture, Dow will operate and maintain the facility. The joint venture is a variable interest entity and is included in Dow's consolidated financial statements. See Note 19 to the Consolidated Financial Statements for additional information.

On December 2, 2013, the Company announced the planned carve-out of a portion of its chlorine chain, including the Company's U.S. Gulf Coast Chlor-Alkali/Chlor-Vinyl business, in preparation for transactions involving select chlorine and derivative businesses over the next 12-24 months. Assets included in this planned carve-out are the Chlor-Alkali and Chlor-Vinyl facilities in Plaquemine, Louisiana and Freeport, Texas, including the Company's interest in the Dow-Mitsui Chlor-Alkali LLC manufacturing joint venture.

48

---

Table of Contents

On December 18, 2013, the European Union (“EU”) initiated a state aid proceeding against the German government in relation to Germany’s current version of the Renewable Energy Act (“EEG”). Under review is the legality of the German EEG law. The outcome of the proceeding is uncertain. However, if it is determined the German EEG violated EU state aid rules, it could result in the retroactive adjustment of German EEG exemptions granted to companies since 2012. The Company operates several manufacturing sites in Germany.

**CORPORATE**

Included in the results for Corporate are:

- results of insurance company operations;
- results of Ventures (which includes new business incubation platforms focused on identifying and pursuing new commercial opportunities);
- Venture Capital;
- gains and losses on sales of financial assets;
  - stock-based compensation expense and severance costs;
- asbestos-related defense and resolution costs;
- foreign exchange results;
- non-business aligned technology licensing and catalyst activities;
- environmental operations;
- enterprise level mega project activities; and
- certain corporate overhead costs and cost recovery variances not allocated to the operating segments.

Corporate In millions	2013	2012	2011
Sales	\$306	\$243	\$325
Equity losses	\$(39	) \$(103	) \$(39
EBITDA	\$861	\$(1,939	) \$(1,507
Certain items impacting EBITDA	\$1,788	\$(1,032	) \$(513

**2013 Versus 2012**

Sales for Corporate, which primarily relate to the Company's insurance operations, were \$306 million in 2013 up from \$243 million in 2012.

EBITDA for 2013 was a gain of \$861 million, compared with a loss of \$1,939 million in 2012. Compared with the same period last year, 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 \$326 million of losses 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. EBITDA in 2013 was also negatively impacted by an increase in performance-based compensation costs. See Notes 5, 11, 14 and 16 to the Consolidated Financial Statements for additional information on these matters.

EBITDA for 2012 was negatively impacted by \$113 million of severance costs related to the workforce reduction component of the Company's 1Q12 Restructuring plan and \$701 million in restructuring charges as part of the 4Q12 Restructuring plan, including impairments of long-lived and other assets of \$313 million, severance costs of \$375 million and costs associated with exit or disposal activities of \$13 million. EBITDA was also impacted by \$22 million of implementation costs related to the Company's restructuring programs, \$123 million of losses related to the early

extinguishment of debt and a \$73 million loss included in equity earnings related to project development and other costs associated with Sadara. See Notes 3, 8, 11 and 16 to the Consolidated Financial Statements for additional information on these charges.

#### 2012 Versus 2011

Sales were \$243 million in 2012 down from \$325 million in 2011.

EBITDA for 2012 was a loss of \$1,939 million, compared with a loss of \$1,507 million in 2011. Compared with 2011, EBITDA for 2012 was favorably impacted by a decrease in performance-based compensation costs (including stock-based compensation and decreased participation in the Employee Stock Purchase Plan), lower foreign currency losses and lower Corporate expenses. EBITDA in 2012 was negatively impacted by \$1,032 million of certain items, as previously discussed.

Table of Contents

EBITDA for 2011 was negatively impacted by a \$482 million loss related to the early extinguishment of debt, \$31 million of integration costs related to the April 1, 2009 acquisition of Rohm and Haas and foreign currency losses. See Notes 4 and 16 to the Consolidated Financial Statement for additional information on these matters.

## 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	2013			2012			2011			
	Volume	Price	Total	Volume	Price	Total	Volume	Price	Total	
Operating Segments:										
Electronic and Functional Materials	4	% (2 )	% 2	% (1 )	)% (2 )	)% (3 )	)% 3	% 6	% 9	%
Coatings and Infrastructure Solutions	4	(1 )	3	2	(6 )	(4 )	(4 )	13	9	
Agricultural Sciences	11	1	12	10	3	13	11	5	16	
Performance Materials	(2 )	—	(2 )	(1 )	(6 )	(7 )	(7 )	12	5	
Performance Plastics	(3 )	4	1	(7 )	(4 )	(11 )	(5 )	12	7	
Feedstocks and Energy	(5 )	(3 )	(8 )	(3 )	(2 )	(5 )	7	27	34	
Total	—	% 1	% 1	% (2 )	)% (3 )	)% (5 )	)% (1 )	)% 13	% 12	%
Geographic Areas:										
United States	—	% 2	% 2	% (2 )	)% (3 )	)% (5 )	)% (2 )	)% 13	% 11	%
Europe, Middle East and Africa	(5 )	—	(5 )	(4 )	(4 )	(8 )	(4 )	17	13	
Rest of World	5	—	5	—	(3 )	(3 )	2	10	12	
Total	—	% 1	% 1	% (2 )	)% (3 )	)% (5 )	)% (1 )	)% 13	% 12	%

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

## Excluding Divestitures (1)

Percent change from prior year	2013			2012			2011			
	Volume	Price	Total	Volume	Price	Total	Volume	Price	Total	
Operating Segments:										
Electronic and Functional Materials	4	% (2 )	% 2	% (1 )	)% (2 )	)% (3 )	)% 3	% 6	% 9	%
Coatings and Infrastructure Solutions	4	(1 )	3	2	(6 )	(4 )	(1 )	13	12	
Agricultural Sciences	11	1	12	10	3	13	11	5	16	
Performance Materials	(2 )	—	(2 )	—	(6 )	(6 )	1	13	14	
Performance Plastics	(1 )	4	3	1	(4 )	(3 )	4	13	17	
Feedstocks and Energy	(5 )	(3 )	(8 )	(3 )	(2 )	(5 )	7	27	34	

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

Total	—	% 1	% 1	% 1	% (4 )	% (3 )	% 4	% 14	% 18	%
Geographic Areas:										
United States	—	% 2	% 2	% —	% (2 )	% (2 )	% 1	% 13	% 14	%
Europe, Middle East and Africa	(5 )	—	(5 )	1	(5 )	(4 )	4	18	22	
Rest of World	6	—	6	1	(3 )	(2 )	6	10	16	
Total	—	% 1	% 1	% 1	% (4 )	% (3 )	% 4	% 14	% 18	%

(1) Excludes sales related to Nippon Unicar Company Limited, divested on July 1, 2013; sales of the Polypropylene business, divested on September 30, 2011; and sales of Dow Haltermann, divested during 2011.



Table of Contents

## LIQUIDITY AND CAPITAL RESOURCES

The Company had cash and cash equivalents of \$5,940 million at December 31, 2013 and \$4,318 million at December 31, 2012, of which \$2,030 million at December 31, 2013 and \$845 million at December 31, 2012 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, 2013, 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.

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	2013	2012	2011
In millions			
Cash provided by (used in):			
Operating activities	\$7,823	\$4,075	\$3,879
Investing activities	(1,469)	(2,687)	(1,994)
Financing activities	(4,731)	(2,530)	(3,362)
Effect of exchange rate changes on cash	(1)	16	(121)
Cash assumed in initial consolidation of variable interest entities	—	—	3
Summary			
Increase (Decrease) in cash and cash equivalents	\$1,622	\$(1,126)	\$(1,595)
Cash and cash equivalents at beginning of year	4,318	5,444	7,039
Cash and cash equivalents at end of year	\$5,940	\$4,318	\$5,444

## Cash Flows from Operating Activities

Cash provided by operating activities increased significantly in 2013 compared with 2012 primarily due to increased earnings, which were positively impacted by the K-Dow arbitration award, and a reduction in working capital. Cash provided by operating activities improved in 2012 compared with 2011 primarily due to a decrease in working capital and an increase in dividends received in excess of equity earnings from nonconsolidated affiliates which more than offset decreased earnings and higher pension contributions.

Net Working Capital at December 31	2013	2012
In millions		
Current assets	\$24,977	\$23,684
Current liabilities	11,971	11,493
Net working capital	\$13,006	\$12,191
Current ratio	2.09	:1 2.06
Days-sales-outstanding-in-receivables	46	46
Days-sales-in-inventory	70	71

Net working capital increased from December 31, 2012 to December 31, 2013 principally due to increases in cash and cash equivalents. At December 31, 2013, trade receivables were \$4.9 billion, down from \$5.1 billion at December 31, 2012. Days-sales-outstanding-in-receivables (excluding the impact of sales of receivables) was 46 days at December 31, 2013, flat compared with December 31, 2012. At December 31, 2013, total inventories were

\$8.3 billion, down from \$8.5 billion at December 31, 2012. Days-sales-in-inventory at December 31, 2013 was 70 days compared with 71 days at December 31, 2012.

#### Cash Flows from Investing Activities

Cash used in investing activities in 2013 was primarily for capital expenditures, including projects related to the Company's U.S. Gulf Coast investments, 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. Cash used in investing activities in 2012 was primarily due to capital expenditures. Cash used in investing activities in 2011 included increased capital expenditures, which were partially offset by proceeds from the divestiture of the Polypropylene business.

Table of Contents

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 2014 to be \$3.3 billion to \$3.5 billion.

## Capital Expenditures Summary

In millions	2013	2012	2011	
Capital expenditures	\$2,302	\$2,614	\$2,687	
Spending by project type:				
Projects related to additional capacity for new and existing products	55	% 43	% 36	%
Projects related to environmental protection, safety, loss prevention and industrial hygiene	14	% 20	% 15	%
Other (primarily shared infrastructure and plant maintenance/health)	31	% 37	% 49	%

See Note 24 to the Consolidated Financial Statements for capital expenditures by operating segment.

## Cash Flows from Financing Activities

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. Cash used in financing activities in 2012 included payments on short- and long-term debt, including \$2.25 billion of early redemptions; higher dividends paid to stockholders, including the acceleration of the fourth quarter of 2012 dividend payment; partially offset by proceeds from the issuance of \$2.5 billion of long-term debt in the fourth quarter of 2012. Cash used in financing activities in 2011 included payments on short- and long-term debt, including the retirement of \$4.8 billion of debt and dividends paid to stockholders which was partially offset by proceeds from the issuance of long-term debt. See Note 16 to the Consolidated Financial Statements for additional information related to the issuance or retirement of debt.

## Liquidity &amp; Financial Flexibility

The Company's primary source of incremental liquidity is cash provided by operating activities. The generation of cash from operations is expected to meet the Company's cash requirements for working capital, capital expenditures, debt maturities, dividend payments, share repurchases, contributions to pension plans, restructuring program payments 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, 2013, 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, 2013

In millions	Effective Date	Committed Credit	Credit Available	Maturity Date	Interest
Five Year Competitive Advance and Revolving Credit Facility	October 2011	\$ 5,000	\$ 5,000	October 2016	Floating rate
Bilateral Revolving Credit Facility	October 2012	170	170	October 2016	Floating rate

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

Bilateral Revolving Credit Facility	March 2013	100	100	March 2014	Floating rate
Bilateral Revolving Credit Facility	March 2013	300	300	October 2016	Floating rate
Term Loan Facility	March 2013	300	—	March 2016	Floating rate
Bilateral Revolving Credit Facility	April 2013	200	200	April 2016	Floating rate
Bilateral Revolving Credit Facility	October 2013	200	200	October 2016	Floating rate
Bilateral Revolving Credit Facility	October 2013	100	100	October 2016	Floating rate
Total Committed and Available Credit Facilities		\$ 6,370	\$ 6,070		

On January 21, 2014, the Company entered into an additional \$100 million Bilateral Revolving Credit Facility Agreement, which has a maturity date in October 2016 and provides for interest at floating rates, as defined in the agreement.

Table of Contents

## 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 Company also filed a new prospectus supplement to register an unlimited amount of securities for issuance under the Company's U.S. retail medium-term note program ("InterNotes") on February 19, 2013.

## Shelf Registration - Japan

At December 31, 2013, the Company had Japanese yen 50 billion (approximately \$475 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 September 8, 2012, which will expire on September 7, 2014. The Company intends to renew this shelf registration in the third quarter of 2014.

## 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 2013 for a term that extends to July 2015. In February 2014, the Company renewed the United States facility for a term that extends to March 2015. See Note 15 to the Consolidated Financial Statements for further information.

As Dow continues to strengthen its balance sheet and increase financial flexibility, management is principally focused on net debt, as Dow believes this is the best measure of the Company's financial leverage. As shown in the following table, net debt is equal to total gross debt minus "Cash and cash equivalents." At December 31, 2013, net debt as a percent of total capitalization decreased to 30 percent. This decrease was primarily due to a \$3 billion reduction in gross debt; a \$1.6 billion increase in cash and cash equivalents; a significant increase in earnings in 2013, which includes the favorable impact of the K-Dow arbitration award; and favorable adjustments to the Company's defined benefit pension plans as a result of higher discount rates.

Total Debt at December 31 In millions	2013	2012		
Notes payable	\$443	\$396		
Long-term debt due within one year	697	672		
Long-term debt	16,820	19,919		
Gross debt	\$17,960	\$20,987		
Cash and cash equivalents	\$5,940	\$4,318		
Net debt	\$12,020	\$16,669		
Gross debt as a percent of total capitalization	39.0	% 48.8		%
Net debt as a percent of total capitalization	30.0	% 43.1		%

See Note 16 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, 2013.

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 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, 2013. At

December 31, 2013, 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 16 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.

Table of Contents

## Credit Ratings

As of February 14, 2014, the Company's credit ratings were as follows:

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

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

## Dividends

For the years ended December 31, 2013, 2012, and 2011, the Company paid dividends to common and preferred shareholders as noted below:

Dividends Paid at December 31	2013	2012	2011
In millions, except per share amounts			
Dividends paid, per common share	\$0.96	\$1.46	\$0.80
Dividends paid to common shareholders	\$1,139	\$1,710	\$918
Dividends paid to preferred shareholders	\$340	\$340	\$340

On December 12, 2013, the Board of Directors declared a quarterly dividend of \$0.32 per share, payable January 30, 2014, to stockholders of record on December 31, 2013. On January 29, 2014, the Board of Directors announced the declaration of a quarterly dividend of \$0.37 per share, payable April 30, 2014, to stockholders of record on March 31, 2014. The 15 percent increase in the dividend in the first quarter of 2014 demonstrates Dow's commitment to consistently and increasingly reward shareholders through ongoing earnings growth. 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 102-year period, Dow has increased the amount of the quarterly dividend 50 times (approximately 12 percent of the time), reduced the dividend once and maintained the amount of the quarterly dividend approximately 88 percent of the time.

On December 12, 2013, 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, 2013, which was paid on January 2, 2014. On February 13, 2014, the Board of Directors declared a quarterly dividend of \$85 million to these shareholders, payable on April 1, 2014. 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 over a period of time. Purchases under this program began in May 2013. During 2013, the Company repurchased 8,152,030 shares of common stock for \$307 million as part of a share repurchase program. At December 31, 2013, approximately \$1.2 billion of the share buy-back program authorization remained available for additional repurchases.

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. As a result, the authorized amount of the current ongoing share repurchase program has increased to \$4.5 billion. The Company expects the share repurchase program to be completed in 2014. 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 21 to the Consolidated Financial Statements.

#### 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 2013, 2012 and 2011, the Company contributed \$865 million, \$903 million and \$806 million to its pension plans, including contributions to fund benefit payments for its non-qualified supplemental plans. Dow expects to contribute approximately \$800 million to its pension plans in 2014. See Note 17 to the Consolidated Financial Statements for additional information concerning the Company's pension plans.



Table of Contents

## Restructuring

The Company announced two restructuring programs in 2012 in response to macroeconomic uncertainties and changing and volatile economic conditions, particularly in Western Europe. During 2013, cash payments of \$276 million were made for employee severance and exit or disposal activities. The Company expects to make additional cash payments of \$177 million, primarily by March 31, 2015, related to severance costs, contract cancellation fees and environmental remediation. See Note 3 to the Consolidated Financial Statements for additional information regarding the Company's restructuring plans.

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 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, 2013. Additional information related to these obligations can be found in Notes 14, 16, 17, 18 and 22 to the Consolidated Financial Statements.

Contractual Obligations at December 31, 2013	Payments Due by Year						
	2014	2015	2016	2017	2018	2019 and beyond	Total
In millions							
Long-term debt – current and noncurrent (1)	\$697	\$407	\$1,366	\$775	\$930	\$13,678	\$17,853
Deferred income tax liabilities – noncurrent (2)	—	—	—	—	—	718	718
Pension and other postretirement benefits	902	911	958	817	677	3,816	8,081
Other noncurrent obligations (3)	24	383	310	298	173	2,227	3,415
Uncertain tax positions, including interest and penalties (4)	8	—	—	—	—	341	349
Other contractual obligations:							
Minimum lease commitments	249	244	218	181	151	1,580	2,623
Purchase commitments – take-or-pay and throughput obligations	2,858	2,580	2,175	1,924	1,818	6,883	18,238
Purchase commitments – other (5)	149	21	19	17	16	32	254
Expected cash requirements for interest (6)	935	910	888	866	816	7,404	11,819
Total	\$5,822	\$5,456	\$5,934	\$4,878	\$4,581	\$36,679	\$63,350

(1) Excludes unamortized debt discount of \$336 million. Includes \$41 million of capital lease obligations.

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 "2019 and beyond."

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 \$434 million has been reflected in "2019 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 “2019 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, 2013, and includes approximately \$2.24 billion 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 a variable interest in a joint venture accounted for under the equity method of accounting. The Company is not the primary beneficiary of the joint venture and therefore is not required to consolidate the entity (see Note 19 to the Consolidated Financial Statements). See Note 15 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, 2013 of \$5,782 million, up from \$2,181 million at December 31, 2012. The

Table of Contents

increase in the value of the outstanding guarantees during 2013 is primarily related to debt obligations of Sadara Chemical Company, a nonconsolidated affiliate, which are guaranteed by the Company, in proportion to the Company's ownership interest, 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 for the end of 2017. Additional information related to these guarantees can be found in the "Guarantees" section of Note 14 to the Consolidated Financial Statements.

Fair Value Measurements

See Note 10 to the Consolidated Financial Statements for information related to other-than-temporary impairments; see Note 11 for additional information concerning fair value measurements, including the Company's interests held in trade receivable conduits; and, see Note 17 for information related to fair value measurements of pension and other postretirement benefit plan assets.

OUTLOOK

Dow enters 2014 accelerating its progress towards improving return on capital, growing profitability and generating cash. The Company continues to focus on attractive end-use markets as evidenced by divesting non-strategic assets and prioritizing high return projects to maximize value for our shareholders. Throughout the year, Dow will continue to benefit from the restart of an ethylene facility in Louisiana, lower pension expenses and continued cost savings actions.

While there have been positive trends indicating an improvement in the global economy, the Company believes business uncertainty will continue as global growth remains tentative. The Company's 2014 business plan assumes a macroeconomic environment that is largely unchanged from 2013.

Dow will continue to allocate capital carefully, focusing on highly-accretive growth projects. The Company's strategic investments in the U.S. Gulf Coast and the Middle East are progressing on time and on budget, as Dow maintains an active focus on investments that position the Company for long-term financial growth. Dow's actions are expected to continue to create earnings momentum and increasingly reward our shareholders.

## Table of Contents

### 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. The Company routinely assesses 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. These policies often provide coverage that is utilized to minimize the financial impact, if any, of the legal proceedings. The required reserves may change in the future due to new developments in each matter. For further discussion, see Note 14 to the Consolidated Financial Statements.

#### Asbestos-Related Matters 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 three 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 14 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, 2013, the Company had accrued obligations of \$722 million for probable environmental remediation and restoration costs,

including \$73 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 14 to the Consolidated Financial Statements.

Table of Contents

## 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, 2013, the Company has defined six operating segments and 26 reporting units; goodwill is carried by 19 of these reporting units at December 31, 2013 and December 31, 2012.

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 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 to 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 2013 testing): projected revenue growth rates, or compounded annual growth rates, over a ten-year cash flow forecast period, which ranged from 0 percent to 8 percent and varied by reporting unit based on underlying business fundamentals and future expectations; discount rates, which ranged from 8.7 percent to 10.9 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 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 hydrocarbons 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, 2013 and 2012, Dow's market capitalization exceeded book value.

## Table of Contents

### 2013 Goodwill Impairment Test

During 2013, there were no events or changes in circumstances identified that warranted interim goodwill impairment testing. During the fourth quarter of 2013, qualitative testing was performed for all but 5 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 5 reporting units due to change in business structures as well as 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, Dow Plastics Additives, Epoxy, Performance Monomers and Polyurethanes.

Changes in key assumptions can affect the results of goodwill impairment tests. The changes made to key assumptions in 2013 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 2013 impairment testing, management completed sensitivity analyses on both of these key assumptions for reporting units where a quantitative fair value analysis was completed. An increase of 100 basis points in the discount rate would have resulted in a fair value, based on discounted cash flows, which exceeded the carrying value for all reporting units tested. For the terminal value NOPAT growth rate, a decrease of 100 basis points would have resulted in a fair value, based on discounted cash flows, which exceeded the carrying value 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 fair values based on discounted cash flows that exceeded carrying values for all reporting units tested except for Dow Coating Materials and Performance Monomers. For this exception, a 100 basis point increase in the discount rate, coupled with a 100 basis point decrease in the terminal value NOPAT growth rate resulted in a fair value that was approximately \$250 million below the carrying value for Dow Coating Materials and \$20 million below the carrying value for Performance Monomers.

In completing the fair value analysis for the 2013 impairment test, management evaluated the reasonableness of differences noted between the fair value and carrying value of each reporting unit. All differences were determined to be reasonable. For Performance Monomers, fair value did not exceed carrying value by a significant margin. The fair value for Performance Monomers, which carries approximately \$150 million of goodwill, exceeded the carrying value by a margin of 11 percent.

Based on the fair value analysis completed by the Company in the fourth quarter of 2013, 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.

### 2012 Goodwill Impairment Test

During 2012, there were no events or changes in circumstances identified that warranted interim goodwill impairment testing. During the fourth quarter of 2012, qualitative testing was performed for all but 9 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 9 reporting units due to change in business structures as well as 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 Building and Construction, Dow Coating Materials, Dow Electronic Materials, Functional Materials, Dow Automotive Systems, Dow Formulated Systems, Polyurethanes, Propylene Oxide/Propylene Glycol and Dow Packaging and Specialty Plastics.



In completing the fair value analysis for the 2012 impairment test, management evaluated the reasonableness of differences noted between the fair value and carrying value of each reporting unit. All differences were determined to be reasonable. For Dow Coating Materials, fair value did not exceed carrying value by a significant margin. The fair value for Dow Coating Materials, which carries approximately \$2,325 million of goodwill, exceeded the carrying value by a margin of 7 percent.

## Table of Contents

Based on the fair value analysis completed by the Company in the fourth quarter of 2012, 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 that carry goodwill except for the Dow Formulated Systems reporting unit. Management completed the second step of the quantitative test for Dow Formulated Systems to compare the implied fair value of the reporting unit's goodwill to the carrying value. As a result, the Company recorded a goodwill impairment loss of \$220 million in the fourth quarter of 2012 which represented the total amount of goodwill carried by the Dow Formulated Systems reporting unit.

### 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, 2013, 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 17 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 71 percent of the Company's pension plan assets and 69 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 2013 was 7.85 percent. This assumption decreased to 7.82 percent for determining 2014 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 fixed income instruments at the measurement date. Future expected actuarially determined cash flows of Dow's major U.S. plans are matched against the Towers Watson RATE:Link yield curve (based on 60th to 90th percentile bond yields) to arrive at a single discount rate by plan. The weighted average discount rate increased to 4.92 percent at December 31, 2013, from 4.02 percent at December 31, 2012.

At December 31, 2013, the U.S. qualified plans were underfunded on a projected benefit obligation basis by \$3 billion. The underfunded amount decreased by approximately \$2.5 billion compared with December 31, 2012. The decrease was primarily due to higher discount rates. The Company contributed \$561 million to the U.S. qualified plans in 2013.

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.

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 plan, both gains and losses have been recognized and amortized. At December 31, 2013, net gains of \$555 million

Table of Contents

remain to be recognized in the calculation of the market-related value of plan assets. These net gains will result in decreases in future pension expense as they are recognized in the market-related value of assets. The increase in the market-related value of assets due to the recognition of prior gains is presented in the following table:

## Increase in Market-Related Asset Value Due to Recognition of Prior Gains

In millions

2014	\$202
2015	107
2016	191
2017	55
Total	\$555

Based on the 2014 pension assumptions, the Company expects net periodic benefit costs to decrease by approximately \$360 million for all pension and other postretirement benefits in 2014 compared with 2013. The decrease in net periodic benefit costs is primarily due to higher discount rates.

A 25 basis point increase or decrease in the long-term return on assets assumption would change the Company's total pension expense for 2014 by \$45 million. A 25 basis point increase in the discount rate assumption would lower the Company's total pension expense for 2014 by \$62 million. A 25 basis point decrease in the discount rate assumption would increase the Company's total pension expense for 2014 by \$54 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 2014.

## 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, 2013, the Company had a net deferred tax asset balance of \$1,856 million, after valuation allowances of \$1,112 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, 2013, the Company had deferred tax assets for tax loss and tax credit carryforwards of \$2,012 million, \$182 million of which is subject to expiration in the years 2014-2018. In order to realize these deferred tax assets for tax loss and tax credit carryforwards, the Company needs taxable income of approximately \$19,408 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 2014-2018 is approximately \$3,358 million.

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, 2013, the Company had uncertain tax positions for both domestic and foreign issues of \$266 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, 2013, the Company

had a non-income tax contingency reserve for both domestic and foreign issues of \$105 million.

For additional information, see Notes 1 and 22 to the Consolidated Financial Statements.

## Table of Contents

### 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 2015 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. As such, 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 2013. Dow’s injury/illness rates and process safety performance were excellent in 2013, and the Company is favorably positioned to achieve its 2015 sustainability goals in these key areas. 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 2014.

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 and natural disasters have increased concern about the security and safety of chemical production and distribution. In addition, recent catastrophic incidents ranging from the earthquake, tsunami and nuclear events in Japan to the explosion and ensuing destruction and fatalities in West, Texas have focused attention on the safe operation, response capability and community engagement of our manufacturing facilities. 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 (“MTSA”) 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 (“DHS”) 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. Transportation Security Administration (“TSA”). 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

## Table of Contents

interruptions of normal business work operations that could materially and adversely affect the Company's results of operations, liquidity and financial condition.

Dow implemented the Community Awareness and Emergency Responses ("CAER") initiative at its manufacturing sites around the world and the communities near those sites. The CAER initiative includes open communication, integrated planning and community drills between industry and surrounding communities. The CAER initiative continues to be a critical part of Dow's global implementation of Responsible Care®.

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 the new U.S. chemical facility regulations and other regulatory security frameworks. In addition, Dow was the first chemical company to receive coverage under the Support Anti-terrorism by Fostering Effective Technologies Act ("SAFETY Act") from the DHS in 2007 for the Company's MTSA regulated sites, and the first to receive coverage under the SAFETY Act in 2008 for the Company's Rail Transportation Security Services. This unprecedented certification helps validate Dow's efforts and provides additional liability coverage in the event of a terrorist attack.

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 continually works to strengthen partnerships with local responders, law enforcement and security agencies, and to enhance confidence in the integrity of the Company's security and risk management program, as well as strengthen its preparedness and response capabilities. Dow also works closely with its supply chain partners and strives to educate lawmakers, regulators and communities about the Company's resolve and actions to date that mitigate security and crisis threats.

### 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 2015 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 existing technologies. The nature of such remediation includes, for example, the management of soil and groundwater contamination and the 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 emerging 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 \$649 million at December 31, 2013, related to the remediation of current or former Dow-owned sites. At December 31, 2012, the liability related to remediation was \$685 million.

In addition to current and former Dow-owned sites, under the Federal Comprehensive Environmental Response, Compensation and Liability Act 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 \$73 million at December 31, 2013 (\$69 million at December 31, 2012). 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)	
	2013	2012	2013	2012
Number of sites at January 1	290	286	126	120
Sites added during year	3	8	2	11
Sites closed during year (3)	(93	) (4	) (7	) (5
Number of sites at December 31	200	290	121	126

(1)Dow-owned sites are sites currently or formerly owned by Dow, where remediation obligations are imposed in the United States by the Resource Conservation Recovery Act or analogous state law. At December 31, 2013, 64 of these sites (150 sites at December 31, 2012) 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.

- (3) The increase in the number of Dow-owned sites closed during 2013 is primarily due to expiration of the term of an agreement with Schlumberger, which expiration terminated Dow's remediation obligations at a large number of sites formerly owned by Dowell Schlumberger.

Additional information is provided below for the Company's manufacturing sites in Freeport, Texas; Midland, Michigan; Philadelphia, Pennsylvania; and Camaçari, Brazil, the sites for which the Company has the largest environmental remediation accruals; as well as a Superfund site in Wood-Ridge, New Jersey.

Table of Contents

From the start of operations at the Freeport site in the 1940s until the mid-1970s, manufacturing wastes were typically placed in on-site pits and landfills. The resulting soil and groundwater contamination is being assessed and remediated under the provisions of the Resource Conservation and Recovery Act ("RCRA"), in concert with the state of Texas. At December 31, 2013, the Company had an accrual of \$35 million (\$31 million at December 31, 2012) related to environmental remediation at the Freeport manufacturing site. In 2013, \$5 million (\$5 million in 2012) was spent on environmental remediation at the Freeport site.

Similar to the Freeport site, in the early days of operations at the Midland site, manufacturing 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 RCRA permits and regulatory agreements. The most recent Hazardous Waste Operating License for the Midland site, issued in 2003, also included provisions for the Company to conduct an investigation to determine the nature and extent of off-site contamination from historic Midland site operations. The scope of the investigation includes the City of Midland area soils; the Tittabawassee and Saginaw River sediment and floodplain soils; and the Saginaw Bay, and requires the Company to conduct interim response actions. 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 will pay the oversight costs of the EPA and the State under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act Administrative Order. See Note 14 to the Consolidated Financial Statements for additional information. At December 31, 2013, the Company had an accrual of \$77 million (\$85 million at December 31, 2012) for environmental remediation and investigation associated with the Midland site. In 2013, the Company spent \$27 million (\$24 million in 2012) on environmental remediation at the Midland site.

On April 1, 2009, the Company acquired Rohm and Haas' Philadelphia Plant, which has been an industrial site since the early 1700s, and since the 1920s used by Rohm and Haas for the manufacture of a wide range of chemical products. Chemical disposal practices in the early years resulted in soil and groundwater contamination at the site and in the sediments of the adjacent Frankford Inlet. The site has undergone a number of investigations and interim cleanup measures under the RCRA Corrective Action Program and, in 2009, was transferred to the regulatory management of the Pennsylvania One Cleanup Program. At December 31, 2013, the Company had an accrual of \$48 million (\$57 million at December 31, 2012) for environmental remediation at the Philadelphia Plant. In 2013, the Company spent \$3 million (\$1 million in 2012) on environmental remediation at the Philadelphia Plant.

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"). 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. Remediation of the upland portions of the Ventron/Velsicol site was completed in 2011. Currently, the Berry's Creek Study Area PRP group is undertaking a multi-stage Remedial Investigation/Feasibility Study ("RI/FS") to identify contamination in surface water, sediment and biota related to numerous contaminated sites in the Berry's Creek watershed. The RI/FS eventually will support a remedial action plan for the BCSA and is expected to require several more years to complete. At December 31, 2013, the Company had an accrual of \$15 million (\$15 million at December 31, 2012) for environmental remediation at the Wood-Ridge sites. In 2013, the Company spent \$4 million (\$4 million in 2012) on environmental remediation at the two Wood-Ridge sites.

Dow Brasil Indústria e Comércio de Produtos Químicos Ltda. acquired a toluene diisocyanate ("TDI") manufacturing plant located within the Camaçari, Brazil petrochemical complex from Pronor in 1998. Since the acquisition, the TDI plant has undergone a number of environmental investigations that indicate that pre-acquisition materials/waste management practices resulted in extensive soil and groundwater contamination with mono and dichlorobenzenes, dinitrotoluene, and toluene, among other compounds. Additional investigation is needed to further delineate the

vertical limits of soil and groundwater impacts. An initial accrual was recorded in December 2011 in the amount of \$50 million to address environmental remediation of soils and long-term groundwater remediation at the site. At December 31, 2013, the Company had an accrual of \$43 million (\$44 million at December 31, 2012) for environmental remediation at the Camaçari TDI manufacturing site. In 2013, the Company spent \$1 million (less than \$1 million in 2012) on environmental remediation at the Camaçari TDI manufacturing site.

In total, the Company's accrued liability for probable environmental remediation and restoration costs was \$722 million at December 31, 2013, compared with \$754 million at the end of 2012. 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.

Table of Contents

The amounts charged to income on a pretax basis related to environmental remediation totaled \$203 million in 2013, \$197 million in 2012 and \$261 million in 2011. The amounts charged to income on a pretax basis related to operating the Company's current pollution abatement facilities totaled \$720 million in 2013, \$717 million in 2012 and \$744 million in 2011. Capital expenditures for environmental protection were \$102 million in 2013, \$145 million in 2012 and \$170 million in 2011.

**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 three 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.

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

	2013	2012	2011
Claims unresolved at January 1	33,449	53,225	62,582
Claims filed	12,069	9,627	7,810
Claims settled, dismissed or otherwise resolved	(16,513	) (29,403	) (17,167
Claims unresolved at December 31	29,005	33,449	53,225
Claimants with claims against both UCC and Amchem	(8,331	) (9,542	) (16,304
Individual claimants at December 31	20,674	23,907	36,921

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 14 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 confirmed the receipt of 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, and India, Middle East and Africa.

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 historical simulation model which captures co-movements in market rates across different instruments and market risk exposure categories. The historical simulation model uses a 97.5 percent confidence level and the historical scenario period includes at least six months of historical data. The 2013 and 2012 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	2013		2012	
	Year-end	Average	Year-end	Average
Commodities	\$1	\$5	\$7	\$8
Equities	\$13	\$12	\$12	\$14
Foreign exchange	\$5	\$4	\$1	\$2



Interest rate	\$167	\$160	\$159	\$166
Composite	\$173	\$164	\$159	\$176

The Company's daily VAR for the aggregate of all positions increased from a composite VAR of \$159 million at December 31, 2012 to a composite VAR of \$173 million at December 31, 2013. The increase in interest rate VAR drives the composite VAR higher and is due to increased interest rate volatility. The commodities VAR decreased due to reduced hedging activity. The equities VAR increased due to the appreciation in global equity prices resulting in an increased equity exposure. The foreign exchange VAR increased due to increased hedging activity and volatility.

See Note 10 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, 2013 and 2012, and the related consolidated statements of income, comprehensive income (loss), equity, and cash flows for each of the three years in the period ended December 31, 2013. 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 the 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, 2013 and 2012, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2013, 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, 2013, based on the criteria established in Internal Control-Integrated Framework (1992) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 14, 2014 expressed an unqualified opinion on the Company's internal control over financial reporting.

/s/ DELOITTE & TOUCHE LLP  
Deloitte & Touche LLP  
Midland, Michigan  
February 14, 2014

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	2013	2012	2011	
Net Sales	\$57,080	\$56,786	\$59,985	
Cost of sales	47,594	47,792	51,029	
Research and development expenses	1,747	1,708	1,646	
Selling, general and administrative expenses	3,024	2,861	2,788	
Amortization of intangibles	461	478	496	
Goodwill impairment loss	—	220	—	
Restructuring charges (credits)	(22	) 1,343	—	
Acquisition-related integration expenses	—	—	31	
Equity in earnings of nonconsolidated affiliates	1,034	536	1,223	
Sundry income (expense) - net	2,554	(27	) (316	)
Interest income	41	41	40	
Interest expense and amortization of debt discount	1,101	1,269	1,341	
Income Before Income Taxes	6,804	1,665	3,601	
Provision for income taxes	1,988	565	817	
Net Income	4,816	1,100	2,784	
Net income (loss) attributable to noncontrolling interests	29	(82	) 42	
Net Income Attributable to The Dow Chemical Company	4,787	1,182	2,742	
Preferred stock dividends	340	340	340	
Net Income Available for The Dow Chemical Company Common Stockholders	\$4,447	\$842	\$2,402	
Per Common Share Data:				
Earnings per common share - basic	\$3.72	\$0.71	\$2.06	
Earnings per common share - diluted	\$3.68	\$0.70	\$2.05	
Common stock dividends declared per share of common stock				
	\$1.28	\$1.21	\$0.90	
Weighted-average common shares outstanding - basic				
	1,186.2	1,169.7	1,149.0	
Weighted-average common shares outstanding - diluted				
	1,290.4	1,176.4	1,158.2	
See Notes to the Consolidated Financial Statements.				

Table of Contents

## The Dow Chemical Company and Subsidiaries

## Consolidated Statements of Comprehensive Income (Loss)

(In millions) For the years ended December 31

	2013	2012	2011
Net Income	\$4,816	\$1,100	\$2,784
Other Comprehensive Income (Loss), Net of Tax			
Net change in unrealized gains (losses) on investments	13	69	(33 )
Translation adjustments	148	256	(295 )
Adjustments to pension and other postretirement benefit plans	2,535	(1,861 )	(1,263 )
Net gains (losses) on cash flow hedging derivative instruments	(7 )	16	(6 )
Total other comprehensive income (loss)	2,689	(1,520 )	(1,597 )
Comprehensive Income (Loss)	7,505	(420 )	1,187
Comprehensive income (loss) attributable to noncontrolling interests, net of tax	29	(82 )	42
Comprehensive Income (Loss) Attributable to The Dow Chemical Company	\$7,476	\$(338 )	\$1,145

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

	2013	2012
Assets		
Current Assets		
Cash and cash equivalents (variable interest entities restricted - 2013: \$147; 2012: \$146)	\$5,940	\$4,318
Accounts and notes receivable:		
Trade (net of allowance for doubtful receivables - 2013: \$148; 2012: \$121)	4,935	5,074
Other	4,712	4,605
Inventories	8,303	8,476
Deferred income tax assets - current	743	877
Other current assets	344	334
Total current assets	24,977	23,684
Investments		
Investment in nonconsolidated affiliates	4,501	4,121
Other investments (investments carried at fair value - 2013: \$2,056; 2012: \$2,061)	2,541	2,565
Noncurrent receivables	365	313
Total investments	7,407	6,999
Property		
Property	55,114	54,366
Less accumulated depreciation	37,660	36,846
Net property (variable interest entities restricted - 2013: \$2,646; 2012: \$2,554)	17,454	17,520
Other Assets		
Goodwill	12,798	12,739
Other intangible assets (net of accumulated amortization - 2013: \$3,270; 2012: \$2,785)	4,314	4,711
Deferred income tax assets - noncurrent	1,964	3,333
Asbestos-related insurance receivables - noncurrent	86	155
Deferred charges and other assets	501	464
Total other assets	19,663	21,402
Total Assets	\$69,501	\$69,605
Liabilities and Equity		
Current Liabilities		
Notes payable	\$443	\$396
Long-term debt due within one year	697	672
Accounts payable:		
Trade	4,590	5,010
Other	2,290	2,327
Income taxes payable	435	251
Deferred income tax liabilities - current	133	95
Dividends payable	467	86
Accrued and other current liabilities	2,916	2,656
Total current liabilities	11,971	11,493
Long-Term Debt (variable interest entities nonrecourse - 2013: \$1,360; 2012: \$1,406)	16,820	19,919
Other Noncurrent Liabilities		
Deferred income tax liabilities - noncurrent	718	837
Pension and other postretirement benefits - noncurrent	8,176	11,459
Asbestos-related liabilities - noncurrent	434	530
Other noncurrent obligations	3,302	3,353
Total other noncurrent liabilities	12,630	16,179

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

Redeemable Noncontrolling Interest	156	147
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 2013: 1,213,405,223 shares; 2012: 1,203,292,822 shares)	3,054	3,008
Additional paid-in capital	3,928	3,281
Retained earnings	21,407	18,495
Accumulated other comprehensive loss	(4,827	) (7,516 )
Unearned ESOP shares	(357	) (391 )
Treasury stock at cost (2013: 8,152,030 shares; 2012: zero shares)	(307	) —
The Dow Chemical Company's stockholders' equity	26,898	20,877
Noncontrolling interests	1,026	990
Total equity	27,924	21,867
Total Liabilities and Equity	\$69,501	\$69,605
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

	2013	2012	2011
Operating Activities			
Net income	\$4,816	\$1,100	\$2,784
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	2,681	2,698	2,883
Provision (Credit) for deferred income tax	113	(465)	) 1
Earnings of nonconsolidated affiliates less than (in excess of) dividends received	(129)	) 287	(207)
Pension contributions	(865)	) (903)	) (806)
Net gain on sales of investments	(135)	) (19)	) (39)
Net gain on sales of property, businesses and consolidated companies	(582)	) (74)	) (25)
Net gain on sales of ownership interests in nonconsolidated affiliates	(30)	) —	(61)
Other net loss	37	48	10
Goodwill impairment loss	—	220	—
Asset impairments and related costs	184	—	—
Restructuring charges (credits)	(22)	) 1,343	—
Loss on early extinguishment of debt	329	123	482
Excess tax benefits from share-based payment arrangements	(23)	) (76)	) (23)
Changes in assets and liabilities, net of effects of acquired and divested companies:			
Accounts and notes receivable	(915)	) (2,534)	) (2,184)
Proceeds from interests in trade accounts receivable conduits	1,028	2,650	1,737
Inventories	130	(871)	) (702)
Accounts payable	(408)	) 261	376
Other assets and liabilities	1,614	287	(347)
Cash provided by operating activities	7,823	4,075	3,879
Investing Activities			
Capital expenditures	(2,302)	) (2,614)	) (2,687)
Construction of assets pending sale / leaseback	—	—	(113)
Proceeds from sale / leaseback of assets	42	—	119
Proceeds from sales of property and businesses	660	77	670
Acquisitions of businesses	—	(2)	) (8)
Purchases of previously leased assets	—	—	(30)
Investments in consolidated companies, net of cash acquired	(21)	) (37)	) (218)
Proceeds from sales of consolidated companies	—	—	56
Investments in and loans to nonconsolidated affiliates	(137)	) (285)	) (248)
Distributions and loan repayments from nonconsolidated affiliates	46	130	295
Proceeds from sales of ownership interests in nonconsolidated affiliates	66	—	93
Purchases of investments	(462)	) (509)	) (797)
Proceeds from sales and maturities of investments	639	553	874
Cash used in investing activities	(1,469)	) (2,687)	) (1,994)
Financing Activities			
Changes in short-term notes payable	(37)	) (116)	) (844)
Proceeds from issuance of long-term debt	959	3,347	3,624
Payments on long-term debt	(4,272)	) (3,988)	) (5,337)
Purchases of treasury stock	(307)	) —	(19)

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

Proceeds from issuance of common stock	386	295	236
Proceeds from sales of common stock	—	—	98
Issuance costs for debt and equity securities	(7	) (22	) (27
Excess tax benefits from share-based payment arrangements	23	76	23
Distributions to noncontrolling interests	(55	) (72	) (42
Contributions from noncontrolling interests	58	—	184
Dividends paid to stockholders	(1,479	) (2,050	) (1,258
Cash used in financing activities	(4,731	) (2,530	) (3,362
Effect of Exchange Rate Changes on Cash	(1	) 16	(121
Cash Assumed in Initial Consolidation of Variable Interest Entities	—	—	3
Summary			
Increase (Decrease) in cash and cash equivalents	1,622	(1,126	) (1,595
Cash and cash equivalents at beginning of year	4,318	5,444	7,039
Cash and cash equivalents at end of year	\$5,940	\$4,318	\$5,444
See Notes to the Consolidated Financial Statements.			



Table of Contents

## The Dow Chemical Company and Subsidiaries

## Consolidated Statements of Equity

(In millions) For the years ended December 31

	2013	2012	2011
Preferred Stock			
Balance at beginning of year and end of year	\$4,000	\$4,000	\$4,000
Common Stock			
Balance at beginning of year	3,008	2,961	2,931
Common stock issued	46	47	30
Balance at end of year	3,054	3,008	2,961
Additional Paid-in Capital			
Balance at beginning of year	3,281	2,663	2,286
Common stock issued	340	248	206
Stock-based compensation and allocation of ESOP shares	307	370	171
Balance at end of year	3,928	3,281	2,663
Retained Earnings			
Balance at beginning of year	18,495	19,087	17,736
Net income available for The Dow Chemical Company common stockholders	4,447	842	2,402
Dividends declared on common stock (per share - 2013: \$1.28; 2012: \$1.21; 2011: \$0.90)	(1,520 )	(1,419 )	(1,037 )
Dividend equivalents on participating securities	(15 )	(15 )	(14 )
Balance at end of year	21,407	18,495	19,087
Accumulated Other Comprehensive Loss			
Balance at beginning of year	(7,516 )	(5,996 )	(4,399 )
Other comprehensive income (loss)	2,689	(1,520 )	(1,597 )
Balance at end of year	(4,827 )	(7,516 )	(5,996 )
Unearned ESOP Shares			
Balance at beginning of year	(391 )	(434 )	(476 )
Shares acquired	(11 )	(11 )	(5 )
Shares allocated to ESOP participants	45	54	47
Balance at end of year	(357 )	(391 )	(434 )
Treasury Stock			
Balance at beginning of year	—	—	(239 )
Purchases	(307 )	—	(19 )
Issuance to employees and employee plans	—	—	258
Balance at end of year	(307 )	—	—
The Dow Chemical Company's Stockholders' Equity	26,898	20,877	22,281
Noncontrolling Interests			
Balance at beginning of year	990	1,010	803
Net income (loss) attributable to noncontrolling interests	29	(82 )	42
Distributions to noncontrolling interests	(55 )	(73 )	(43 )
Capital contributions (noncash - 2013: \$-; 2012: \$97; 2011: \$-)	58	97	37
Consolidation of variable interest entities	—	37	31
Conversion of note payable to preferred shares of a subsidiary	—	—	158
Cumulative translation adjustments	(43 )	—	(18 )
Deconsolidation of noncontrolling interest	52	—	—
Other	(5 )	1	—
Balance at end of year	1,026	990	1,010
Total Equity	\$27,924	\$21,867	\$23,291

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>74</u>
2	<u>Recent Accounting Guidance</u>	<u>77</u>
3	<u>Restructuring</u>	<u>78</u>
4	<u>Acquisitions</u>	<u>83</u>
5	<u>Divestitures</u>	<u>83</u>
6	<u>Inventories</u>	<u>84</u>
7	<u>Property</u>	<u>85</u>
8	<u>Nonconsolidated Affiliates and Related Company Transactions</u>	<u>85</u>
9	<u>Goodwill and Other Intangible Assets</u>	<u>88</u>
10	<u>Financial Instruments</u>	<u>90</u>
11	<u>Fair Value Measurements</u>	<u>95</u>
12	<u>Supplementary Information</u>	<u>99</u>
13	<u>Earnings Per Share Calculations</u>	<u>100</u>
14	<u>Commitments and Contingent Liabilities</u>	<u>101</u>
15	<u>Transfers of Financial Assets</u>	<u>109</u>
16	<u>Notes Payable, Long-Term Debt and Available Credit Facilities</u>	<u>111</u>
17	<u>Pension Plans and Other Postretirement Benefits</u>	<u>114</u>
18	<u>Leased Property</u>	<u>122</u>
19	<u>Variable Interest Entities</u>	<u>122</u>
20	<u>Stock-Based Compensation</u>	<u>124</u>
21	<u>Stockholders' Equity</u>	<u>128</u>
22	<u>Income Taxes</u>	<u>129</u>
23	<u>Accumulated Other Comprehensive Income (Loss)</u>	<u>133</u>
24	<u>Operating Segments and Geographic Areas</u>	<u>133</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.

## 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.

#### 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 income (loss)” (“AOCI”). 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.

## Table of Contents

### 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 AOCI, 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 AOCI, 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 AOCI 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 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

75

---

## Table of Contents

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 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 9 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. Finite-lived 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 AOCI. 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, and 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 2013 related to sales of product (99 percent in 2012 and 99 percent in 2011). The remaining 1 percent in 2013 related to the Company's service offerings, insurance operations, and licensing of patents

and technology (1 percent in 2012 and 1 percent in 2011). 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.

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.



## Table of Contents

### 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 first quarter of 2013, the Company adopted Accounting Standards Update ("ASU") 2011-11, "Balance Sheet (Topic 210): Disclosures about Offsetting Assets and Liabilities," which requires entities to disclose both gross and net information about both instruments and transactions eligible for offset in the statement of financial position and instruments and transactions subject to an agreement similar to a master netting agreement and ASU 2013-01, "Balance Sheet (Topic 210): Clarifying the Scope of Disclosures about Offsetting Asset and Liabilities," which clarifies the scope of the offsetting disclosures of ASU 2011-11. The objective of the disclosure is to facilitate comparison between those entities that prepare their financial statements on the basis of U.S. GAAP and those entities

that prepare their financial statements on the basis of International Financial Reporting Standards ("IFRS"). The adoption of this standard was immaterial to the consolidated financial statements.

During the first quarter of 2013, the Company adopted ASU 2013-02, "Comprehensive Income (Topic 220): Reporting of Amounts Reclassified Out of Accumulated Other Comprehensive Income," which requires entities to provide information about the amounts reclassified out of accumulated other comprehensive income, by component. In addition, entities are required to present, either on the face of the statement where net income is presented or in the notes, significant amounts reclassified out of accumulated other comprehensive income by the respective line items of net income but only if the amount reclassified is required under U.S. GAAP to be reclassified to net income in its entirety in the same reporting period. For other amounts that are not required under U.S. GAAP to be reclassified in their entirety to net income, entities are required to cross-reference to other disclosures required under U.S. GAAP that provide additional detail on these amounts. See Note 23 for the disclosures related to this adoption.

## Table of Contents

On January 1, 2012, the Company adopted ASU 2011-05, "Comprehensive Income (Topic 220): Presentation of Comprehensive Income," as amended by ASU 2011-12, "Comprehensive Income (Topic 220): Deferral of the Effective Date for Amendments to the Presentation of Reclassifications of Items Out of Accumulated Other Comprehensive Income in Accounting Standards Update No. 2011-05." This standard improves the comparability, consistency and transparency of financial reporting and increases the prominence of items reported in other comprehensive income. See the Consolidated Statements of Comprehensive Income and Note 23 for additional information.

On January 1, 2012, the Company adopted ASU 2011-04, "Fair Value Measurement (Topic 820): Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRS," which provides common requirements for measuring fair value and disclosing information about fair value measurements in accordance with U.S. GAAP and IFRS. See Note 11 for additional information about fair value measurements.

On September 30, 2011, the Company adopted ASU 2011-08, "Intangibles-Goodwill and Other (Topic 350): Testing Goodwill for Impairment." This ASU simplifies how entities test goodwill for impairment and permits an entity 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 amount as a basis for determining whether it is necessary to perform the two-step goodwill impairment test. The Company has incorporated this guidance into its goodwill impairment testing for 2013, 2012 and 2011. See Note 9 for additional information.

On January 1, 2011, the Company adopted ASU 2009-13, "Revenue Recognition (Topic 605): Multiple-Deliverable Revenue Arrangements – a consensus of the FASB Emerging Issues Task Force." This ASU amended the criteria for when to evaluate individual delivered items in a multiple deliverable arrangement and how to allocate consideration received. The adoption of this guidance did not have a material impact on the Company's consolidated financial statements.

### Accounting Guidance Issued But Not Adopted as of December 31, 2013

In February 2013, the Financial Accounting Standards Board ("FASB") issued ASU 2013-04, "Liabilities (Topic 405): Obligations Resulting from Joint and Several Liability Arrangements for Which the Total Amount of the Obligation is Fixed at the Reporting Date," which defines how entities measure obligations from joint and several liability arrangements for which the total amount of the obligation is fixed at the reporting date and for which no guidance exists, except for obligations addressed within existing guidance in U.S. GAAP. The guidance also requires entities to disclose the nature and amount of the obligation as well as other information about those obligations. This ASU is effective for fiscal years, and interim periods within those years, beginning after December 15, 2013. Retrospective presentation for all comparative periods presented is required and early adoption is permitted. The Company is currently evaluating the impact of adopting this guidance.

In March 2013, the FASB issued ASU 2013-05, "Foreign Currency Matters (Topic 830): Parent's Accounting for the Cumulative Translation Adjustment upon Derecognition of Certain Subsidiaries or Groups of Assets within a Foreign Entity or of an Investment in a Foreign Entity," which defines the treatment of the release of cumulative translation adjustments upon derecognition of certain subsidiaries or groups of assets within a foreign entity or of an investment in a foreign entity. This ASU is effective for fiscal years, and interim periods within those years, beginning after December 15, 2013. Early adoption is permitted and prior periods should not be adjusted. The Company does not expect the adoption of this guidance to have a material impact on the consolidated financial statements.

In July 2013, the FASB issued ASU 2013-11, "Income Taxes (Topic 740): Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists," which defines the presentation requirements of an unrecognized tax benefit, or a portion of an unrecognized tax benefit, in the financial statements. This ASU is effective for fiscal years, and interim periods within those years, beginning after

December 15, 2013. Early adoption is permitted and retrospective application is permitted, but not required. The Company is currently evaluating the impact of adopting this guidance.

#### NOTE 3 – RESTRUCTURING

##### 4Q12 Restructuring

On October 23, 2012, the Company's Board of Directors approved a restructuring plan ("4Q12 Restructuring") to advance the next stage of the Company's transformation and to address macroeconomic uncertainties. The restructuring plan accelerates the Company's structural cost reduction program and will affect approximately 2,850 positions and result in the shutdown of approximately 20 manufacturing facilities. These actions are expected to be completed by March 31, 2015.

Table of Contents

As a result of the 4Q12 Restructuring activities, the Company recorded pretax restructuring charges of \$990 million in the fourth quarter of 2012 consisting of costs associated with exit or disposal activities of \$39 million, severance costs of \$375 million and asset write-downs and write-offs of \$576 million. The impact of these charges is shown as "Restructuring charges (credits)" in the consolidated statements of income and reflected in the Company's segments results as shown in the following table:

4Q12 Restructuring Charges by Operating Segment	Costs Associated with Exit or Disposal Activities	Severance Costs	Impairment of Long-Lived Assets, Other Assets and Equity Method Investments	Total
In millions				
Electronic and Functional Materials	\$5	\$—	\$43	\$48
Coatings and Infrastructure Solutions	—	—	16	16
Performance Materials	14	—	178	192
Performance Plastics	7	—	19	26
Feedstocks and Energy	—	—	7	7
Corporate	13	375	313	701
Total 4Q12 Restructuring charges	\$39	\$375	\$576	\$990
Adjustments to 4Q12 Restructuring charges				
2013 - Performance Plastics	(6	) —	—	(6
Net 4Q12 Restructuring charges	\$33	\$375	\$576	\$984

Details regarding the components of the 4Q12 Restructuring charges are discussed below:

**Costs Associated with Exit or Disposal Activities**

The restructuring charges for costs associated with exit or disposal activities totaled \$39 million in the fourth quarter of 2012 and included \$9 million of curtailment costs associated with other postretirement benefit plans, impacting Corporate; contract cancellation fees of \$25 million, impacting Performance Materials (\$13 million), Performance Plastics (\$7 million), Electronic and Functional Materials (\$5 million); and environmental remediation of \$5 million impacting Performance Materials (\$1 million) and Corporate (\$4 million).

**Severance Costs**

The restructuring charges in the fourth quarter of 2012 included severance of \$375 million for the separation of approximately 2,850 employees under the terms of the Company's ongoing benefit arrangements, primarily by March 31, 2015. These costs were charged against Corporate. At December 31, 2013, severance of \$236 million had been paid and a liability of \$139 million remained for 759 employees.

**Impairment of Long-Lived Assets, Other Assets and Equity Method Investments**

The restructuring charges related to the write-down and write-off of assets in the fourth quarter of 2012 totaled \$576 million. Details regarding the write-downs and write-offs are as follows:

As a result of weak global demand for lithium-ion batteries, the Company recorded a pretax impairment charge of \$303 million related to the write-down of Dow Kokam LLC's long-lived assets, impacting Corporate. At the time of the impairment, Dow had a 63.6 percent ownership interest in Dow Kokam LLC. The impact to Dow, after adjustments for income taxes and the portion attributable to noncontrolling interests, was \$189 million.

In response to global economic conditions and competitive dynamics, the decision was made to shut down and/or consolidate a number of manufacturing facilities, with an impact of \$246 million, summarized as follows:

A Dow Automotive Systems diesel particulate filters manufacturing facility in Midland, Michigan was shut down, resulting in the write-down of assets associated with this facility of \$114 million, impacting the Performance Materials segment. The facility was shut down in the fourth quarter of 2012.

Certain Oxygenated Solvents manufacturing facilities in Texas City, Texas were consolidated and/or shut down, resulting in an asset write-down of \$36 million against the Performance Materials segment. The assets were shut down in the fourth quarter of 2012.

Table of Contents

An asset write-down of \$17 million for a sodium borohydride manufacturing facility in Delfzijl, The Netherlands was recorded against the Electronic and Functional Materials segment in the fourth quarter of 2012. The manufacturing facility was shut down in the third quarter of 2013.

Two Interconnect Technologies manufacturing facilities, one in Lucerne, Switzerland and the other in Marlborough, Massachusetts, will be shut down, resulting in a charge in the fourth quarter of 2012 related to the write-down of assets of \$13 million against the Electronics and Functional Materials segment. The manufacturing facility in Massachusetts was shut down in the fourth quarter of 2013; the manufacturing facility in Switzerland is expected to be shut down in the fourth quarter of 2014.

An asset write-down of \$10 million for a polyethylene manufacturing facility in Tessenderlo, Belgium was recorded against the Performance Plastics segment in the fourth quarter of 2012. The manufacturing facility was shut down in the second quarter of 2013.

Certain Dow Building and Construction manufacturing assets in Midland, Michigan were shut down in the fourth quarter of 2012. As a result, an asset write-down of \$9 million was recorded against the Coatings and Infrastructure Solutions segment.

Dow Formulated Systems manufacturing capacity was consolidated in the United States, resulting in the shut down of a Solon, Ohio manufacturing facility and an asset write-down of \$5 million in the fourth quarter of 2012, impacting the Performance Materials segment. The manufacturing facility was shut down in the third quarter of 2013.

The decision was made to shut down a number of small manufacturing, research and development, and administrative facilities to optimize the assets of the Company. Write-downs of \$42 million were recorded in the fourth quarter of 2012, impacting Performance Materials (\$20 million), Electronic and Functional Materials (\$13 million), Coatings and Infrastructure Solutions (\$4 million) and Corporate (\$5 million). These facilities are expected to be shut down no later than the fourth quarter of 2014.

Certain capital projects were canceled resulting in the write-off of project spending of \$8 million against the Feedstocks and Energy (\$7 million) and Coatings and Infrastructure Solutions (\$1 million) segments.

Due to a change in the Company's strategy regarding its ownership in Nippon Unicar Company Limited ("NUC"), a 50:50 joint venture, the Company determined its equity investment in NUC to be other-than-temporarily impaired and recorded a \$9 million write-down of its interest in NUC against the Performance Plastics segment in the fourth quarter of 2012. Dow divested its ownership interest in NUC on July 1, 2013.

The fourth quarter of 2012 restructuring charge also included the write-off of other assets associated with plant closures totaling \$10 million. These charges are reflected in the results of the operating segments impacted by the restructuring activities.

The following table summarizes the activities related to the Company's 4Q12 Restructuring reserve, which is included in "Accrued and other current liabilities" and "Other noncurrent obligations" in the consolidated balance sheets:

4Q12 Restructuring Activities		Impairment of	
		Long-Lived	
		Assets, Other	
In millions	Costs Associated with Exit or Disposal Activities	Severance Costs	Assets and Equity Method Investments
			Total

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

Restructuring charges recognized in the fourth quarter of 2012	\$39	\$375	\$576	\$990
Charges against the reserve	(9	) —	(576	) (585
Cash payments	—	(8	) —	(8
Reserve balance at December 31, 2012	\$30	\$367	\$—	\$397
Adjustments to the reserve	(6	) —	—	(6
Cash payments	(5	) (228	) —	(233
Reserve balance at December 31, 2013	\$19	\$139	\$—	\$158

80

---



Table of Contents

## 1Q12 Restructuring

On March 27, 2012, the Company's Board of Directors approved a restructuring plan ("1Q12 Restructuring") to optimize its portfolio, respond to changing and volatile economic conditions, particularly in Western Europe, and to advance the Company's Efficiency for Growth program, which was initiated by the Company in the second quarter of 2011. The 1Q12 Restructuring plan includes the elimination of approximately 900 positions. In addition, the Company shut down a number of manufacturing facilities. These actions were substantially completed at December 31, 2013.

As a result of the 1Q12 Restructuring activities, the Company recorded pretax restructuring charges of \$357 million in the first quarter of 2012 consisting of costs associated with exit or disposal activities of \$150 million, severance costs of \$113 million and asset write-downs and write-offs of \$94 million. 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:

1Q12 Restructuring Charges by Operating Segment	Costs Associated with Exit or Disposal Activities	Severance Costs	Impairment of Long-Lived Assets and Other Assets	Total
In millions				
Electronic and Functional Materials	\$—	\$—	\$17	\$17
Coatings and Infrastructure Solutions	4	—	37	41
Performance Materials	146	—	40	186
Corporate	—	113	—	113
Total 1Q12 Restructuring charges	\$150	\$113	\$94	\$357
Adjustment to 1Q12 Restructuring charges:				
2012 - Coatings and Infrastructure Solutions	—	—	(4	) (4
2013 - Coatings and Infrastructure Solutions	(1	) —	—	(1
2013 - Performance Materials	(15	) —	—	(15
Net 1Q12 Restructuring charges	\$134	\$113	\$90	\$337

Details regarding the components of the 1Q12 Restructuring charge are discussed below:

## Costs Associated with Exit or Disposal Activities

The restructuring charges for costs associated with exit or disposal activities totaled \$150 million in the first quarter of 2012 and included contract cancellation fees of \$149 million, impacting Performance Materials (\$146 million) and Coatings and Infrastructure Solutions (\$3 million), and asbestos abatement costs of \$1 million impacting Coatings and Infrastructure Solutions.

## Severance Costs

The restructuring charges in the first quarter of 2012 included severance of \$113 million for the separation of approximately 900 employees under the terms of the Company's ongoing benefit arrangements, primarily by December 31, 2013. These costs were charged against Corporate. At December 31, 2013, severance of \$110 million had been paid and a liability of \$3 million remained for 42 employees.

## Impairment of Long-Lived Assets and Other Assets

The restructuring charges related to the write-down and write-off of assets in the first quarter of 2012 totaled \$94 million. Details regarding the write-downs and write-offs are as follows:

• The Company evaluated its facilities that manufacture STYROFOAM™ brand insulation and as a result, the decision was made to shut down facilities in Balatonfuzfo, Hungary; Estarreja, Portugal; and Charleston, Illinois. In addition, a facility in Terneuzen, The Netherlands was idled and impaired. Write-downs associated with these facilities of

\$37 million were recorded in the first quarter of 2012 against the Coatings and Infrastructure Solutions segment. The Netherlands facility was shut down at the end of the second quarter of 2012. The remaining facilities were shut down in the fourth quarter of 2012.

Table of Contents

The decision was made to shut down and/or consolidate certain manufacturing assets in the Polyurethanes and Epoxy businesses in Texas and Germany. Write-downs associated with these assets of \$15 million were recorded in the first quarter of 2012 against the Performance Materials segment. The manufacturing assets in Texas were shut down in the second quarter of 2012. The German manufacturing assets were shut down in 2012.

Certain capital projects were canceled resulting in the write-off of project spending of \$42 million against the Performance Materials (\$25 million) and Electronic and Functional Materials (\$17 million) segments.

During the fourth quarter of 2012, the Company recorded a favorable adjustment to the 1Q12 Restructuring charge related to the impairment of long-lived assets and other assets of \$4 million, impacting the Coatings and Infrastructure Solutions segment.

The following table summarizes the activities related to the Company's 1Q12 Restructuring reserve:

1Q12 Restructuring Activities	Costs		Impairment of	
In millions	Associated with Exit or Disposal Activities	Severance Costs	Long-Lived Assets and Other Assets	Total
Restructuring charges recognized in the first quarter of 2012	\$150	\$113	\$94	\$357
Adjustments to the reserve	—	—	(4	) (4
Charges against the reserve	—	—	(90	) (90
Cash payments	(45	) (82	) —	(127
Noncash settlements	(47	) —	—	(47
Foreign currency impact	(2	) —	—	(2
Reserve balance at December 31, 2012	\$56	\$31	\$—	\$87
Adjustments to the reserve	(16	) —	—	(16
Cash payments	(15	) (28	) —	(43
Noncash settlements	(8	) —	—	(8
Foreign currency impact	(1	) —	—	(1
Reserve balance at December 31, 2013	\$16	\$3	\$—	\$19

The reserve balance is included in the consolidated balance sheets as "Accrued and other current liabilities." The 1Q12 Restructuring activities were substantially completed in 2013, with remaining liabilities related to severance and contract cancellation fees to be settled over time.

Dow expects to incur additional costs in the future related to its 1Q12 and 4Q12 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 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.

#### 2013 Adjustments to 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 Coatings and Infrastructure Solutions (\$1 million) and Performance Materials (\$15 million).

**Restructuring Reserve Assumed from Rohm and Haas**

Included in liabilities assumed in the April 1, 2009 acquisition of Rohm and Haas Company ("Rohm and Haas") was a reserve of \$122 million for severance and employee benefits for the separation of 1,255 employees under the terms of Rohm and Haas' ongoing benefit arrangement. The separations resulted from plant shutdowns, production schedule adjustments, productivity improvements and reductions in support services. A currency adjusted liability of \$12 million remained at December 31, 2010; \$5 million for employees who had left the Company and continued to receive annuity payments primarily through the third quarter of 2011 and \$7 million for approximately 44 employees.

Table of Contents

In the first quarter of 2011, the Company decreased the restructuring reserve by \$6 million to adjust the reserve to the expected future severance payments. The impact of this adjustment is shown as "Cost of sales" in the consolidated statements of income and was reflected in Corporate. Severance payments of \$7 million were made in the first half of 2011, bringing the program to a close.

Restructuring Reserve Assumed from Rohm and Haas In millions	Severance Costs
Reserve balance at December 31, 2010	\$ 12
Cash payments	(7 )
Adjustments to reserve	(6 )
Foreign currency impact	1
Reserve balance at June 30, 2011	\$ —

## NOTE 4 – ACQUISITIONS

## Rohm and Haas Acquisition and Integration Related Expenses

During the first quarter of 2011, pretax charges totaling \$31 million were recorded for integration costs related to the April 1, 2009 acquisition of Rohm and Haas. These charges are shown as "Acquisition-related integration expenses" in the consolidated statements of income and reflected in Corporate.

## NOTE 5 – DIVESTITURES

## 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 to be finalized in subsequent periods. 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.

## 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. In the fourth quarter of 2012, the Company recorded a restructuring charge related to the impairment of Dow Kokam's long-lived assets (see Note 3 for additional information).

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, of which \$14 million is classified as "Accounts and notes receivable - other" and \$61 million is classified as "Noncurrent receivables" in the consolidated balance sheets. The note receivable is due to be paid in full by November 22, 2018. Payments received on the note receivable in future periods will be included in "Proceeds from sales of consolidated companies" in the consolidated statements of cash flows.

## Divestiture of Contract Manufacturing Business

On December 31, 2011, the Company sold the shares of Chemoxy International Limited, a contract manufacturing company located in the United Kingdom, to Crossco (1255) Limited. All assets and liabilities aligned with this

company were sold including receivables; inventory; property, plant and equipment; customer lists; trademarks; software; and trade and other payables. The sale was completed for \$6 million, net of working capital adjustments and costs to sell, with proceeds subject to customary post-closing adjustments to be finalized in subsequent periods. The value of the net assets divested was \$48 million. The Company recorded a \$42 million pretax loss on the sale, included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Performance Materials. The Company recorded an after-tax gain of \$44 million on the sale, primarily related to a tax benefit triggered by the recognition of capital losses on the share sale.

Post-closing adjustments were finalized in the fourth quarter of 2012 and the Company recognized a pretax and after-tax gain of \$8 million for the post-closing adjustments. The gain was included in "Sundry income (expense) - net" and reflected in Performance Materials.

Table of Contents

## Divestiture of Polypropylene Business

On July 27, 2011, the Company entered into a definitive agreement to sell its global Polypropylene business (a Performance Plastics business) to Braskem SA. The definitive agreement specified the assets and liabilities related to the business to be included in the sale: the Company's polypropylene manufacturing facilities at Schkopau and Wesseling, Germany, and Freeport and Seadrift, Texas; railcars; inventory; receivables; business know-how; certain product and process technology; and customer contracts and lists. On September 30, 2011, the sale was completed for \$459 million, net of working capital adjustments and costs to sell, with proceeds subject to customary post-closing adjustments to be finalized in subsequent periods. Immaterial post-closing adjustments were finalized in the second quarter of 2012. The proceeds included a \$474 million receivable that was paid to the Company on October 3, 2011. Dow's Polypropylene Licensing and Catalysts business and related catalyst facilities were excluded from this sale. The transaction resulted in several long-term supply, service and purchase agreements between Dow and Braskem SA, which are expected to generate significant ongoing cash flows. As a result, the divestiture of this business was not reported as discontinued operations.

## Divestiture of the Styron Business Unit

On June 17, 2010, the Company sold the Styron business unit ("Styron") to an affiliate of Bain Capital Partners. The proceeds received on the sale included a \$75 million long-term note receivable. In addition, the Company elected to acquire a 7.5 percent equity interest in the resulting privately held, global materials company.

On February 3, 2011, Styron repaid the \$75 million long-term note receivable, plus interest. In the first quarter of 2011, the Company received dividend income of \$25 million, recorded in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Corporate. The Company continued to hold a 6.5 percent equity interest at December 31, 2013.

## NOTE 6 – INVENTORIES

The following table provides a breakdown of inventories:

Inventories at December 31	2013	2012
In millions		
Finished goods	\$4,717	\$4,880
Work in process	1,948	1,910
Raw materials	760	866
Supplies	878	820
Total inventories	\$8,303	\$8,476

The reserves reducing inventories from a FIFO basis to a LIFO basis amounted to \$854 million at December 31, 2013 and \$842 million at December 31, 2012. Inventories valued on a LIFO basis, principally hydrocarbon and U.S. chemicals and plastics product inventories, represented 25 percent of the total inventories at December 31, 2013 and 29 percent of total inventories at December 31, 2012.

A reduction of certain inventories resulted in the liquidation of some of the Company's LIFO inventory layers, increasing pretax income \$55 million in 2013, \$91 million in 2012 and \$126 million in 2011.

Table of Contents

## NOTE 7 – PROPERTY

Property at December 31 In millions	Estimated Useful Lives (Years)	2013	2012
Land	—	\$ 907	\$ 916
Land and waterway improvements	15-25	1,404	1,377
Buildings	5-55	4,945	4,886
Machinery and equipment	3-20	39,971	39,828
Utility and supply lines	5-20	2,446	2,350
Other property	3-50	2,430	2,267
Construction in progress	—	3,011	2,742
Total property		\$ 55,114	\$ 54,366

In millions	2013	2012	2011
Depreciation expense	\$ 2,051	\$ 2,057	\$ 2,177
Manufacturing maintenance and repair costs	\$ 2,325	\$ 2,188	\$ 2,247
Capitalized interest	\$ 78	\$ 84	\$ 90

## NOTE 8 – NONCONSOLIDATED AFFILIATES AND RELATED COMPANY TRANSACTIONS

The Company's investments in companies accounted for using the equity method ("nonconsolidated affiliates") were \$4,501 million at December 31, 2013 and \$4,121 million at December 31, 2012. At December 31, 2013, the carrying amount of the Company's investments in nonconsolidated affiliates was \$67 million more than its share of the investees' net assets, exclusive of additional differences for Dow Corning Corporation ("Dow Corning") and MEGlobal, which are discussed separately below. At December 31, 2012, the carrying amount of the Company's investments in nonconsolidated affiliates was \$69 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 \$905 million in 2013, \$823 million in 2012 and \$1,016 million in 2011.

At December 31, 2013, the Company's investment in Dow Corning was \$149 million less than the Company's proportionate share of Dow Corning's underlying net assets (\$227 million less at December 31, 2012). 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.

At December 31, 2013, the Company's investment in MEGlobal was \$184 million less than the Company's proportionate share of MEGlobal's underlying net assets (\$193 million less at December 31, 2012). This amount represents 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 \$45 million (including \$3 million related to Equipolymers) is being amortized over the remaining useful lives of the assets and \$139 million is considered to be a permanent difference. On July 1, 2011, Equipolymers was merged into MEGlobal, with MEGlobal continuing as the surviving entity. In the third quarter of 2011, the Company received \$115 million on a previously impaired note receivable related to its investment in Equipolymers and recognized \$86 million in income, included in "Equity in earnings of nonconsolidated affiliates" in the consolidated statements of income and reflected in Performance Plastics.

On October 30, 2011, 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. Construction began immediately and the first production units are expected to come on-line in the second half



of 2015, with all units expected to be up and running in 2016. On December 8, 2012, Sadara's shareholders received approval to increase their share capital. Pursuant to this approval, Dow's \$905 million of development costs related to Sadara were converted to equity and classified as "Investments in nonconsolidated affiliates" in the consolidated balance sheets. The Company's investment in Sadara is included in "Investments in and loans to nonconsolidated affiliates" in the consolidated statements of cash flows. Prior to the fourth quarter of 2011, the Company's investment in the Sadara project was included in "Investments in consolidated companies, net of cash acquired" in the consolidated statements of cash flows.

All of the nonconsolidated affiliates in which the Company has investments 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, 2013 and 2012 are as follows:

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

In millions	2013	2012
Accounts and notes receivable - other	\$512	\$632
Noncurrent receivables	5	8
Total assets	\$517	\$640
Notes payable	\$137	\$66
Accounts payable - other	221	331
Total current liabilities	\$358	\$397

## Principal Nonconsolidated Affiliates

Dow had an ownership interest in 63 nonconsolidated affiliates at December 31, 2013 (67 at December 31, 2012). The Company's principal nonconsolidated affiliates and its ownership interest (direct and indirect) for each at December 31, 2013, 2012 and 2011 are as follows:

## Principal Nonconsolidated Affiliates at December 31

	Ownership Interest			
	2013	2012	2011	
Compañía Mega S.A. (1)	N/A	N/A	28	%
Dow Corning Corporation	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	%
Map Ta Phut Olefins Company Limited (2)	32.77	% 32.77	% N/A	
MEGlobal	50	% 50	% 50	%
Sadara Chemical Company (3)	35	% 35	% N/A	
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	50	% 50	% 50	%

(1) Compañía Mega S.A. is no longer considered a principal nonconsolidated affiliate as of the fourth quarter of 2012.

(1) The Company continues to maintain a 28 percent equity interest in this nonconsolidated affiliate.

(2) Map Ta Phut Olefins Company Limited was added as a principal nonconsolidated affiliate in the fourth quarter of 2012. The Company's effective ownership of Map Ta Phut Olefins Company Limited is 32.77 percent, of which the 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.

(3) Sadara Chemical Company became a principal nonconsolidated affiliate in the fourth quarter of 2012.

The Company's investment in its principal nonconsolidated affiliates was \$3,625 million at December 31, 2013 and \$3,243 million at December 31, 2012. Equity earnings from these companies were \$951 million in 2013, \$479 million in 2012 and \$1,132 million in 2011. Equity earnings from principal nonconsolidated affiliates increased in 2013 compared with 2012 primarily due to increased equity earnings at Dow Corning, EQUATE Petrochemical Company K.S.C. and MEGlobal as well as lower equity losses from The SCG-Dow Group, Sadara and Map Ta Phut Olefins Company Limited. Equity earnings from Dow Corning were negatively impacted in 2012 by asset impairment and restructuring charges.



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	2013	2012
Current assets	\$8,675	\$8,841
Noncurrent assets	24,166	20,109
Total assets	\$32,841	\$28,950
Current liabilities	\$5,972	\$6,903
Noncurrent liabilities	17,129	12,788
Total liabilities	\$23,101	\$19,691
Noncontrolling interests	\$624	\$708

## Summarized Income Statement Information

In millions	2013 (1)	2012 (1)	2011 (2)
Sales	\$18,257	\$17,668	\$16,396
Gross profit	\$3,403	\$2,911	\$4,176
Net income	\$1,906	\$872	\$2,470

(1) The summarized income statement information for 2013 and 2012 do not include the results for Compañía Mega S.A. which is no longer considered a principal nonconsolidated affiliate as of the fourth quarter of 2012.

The summarized income statement information for 2011 does not include the results for Map Ta Phut Olefins (2) Company Limited and Sadara Chemical Company as these entities became principal nonconsolidated affiliates in 2012.

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 and lease agreements.

Excess ethylene glycol produced in Dow's plants in the United States and Europe is sold to MEGlobal and represented 1 percent of total net sales in 2013 (1 percent of total net sales in 2012 and 1 percent of total net sales in 2011). In addition, the Company sells ethylene to MEGlobal as a raw material for its ethylene glycol plants in Canada. Sales of ethylene and ethylene glycol to MEGlobal are reflected in the Feedstocks and Energy segment and represented 7 percent of the segment's sales in 2013 (4 percent in 2012 and 5 percent in 2011).

Table of Contents

## NOTE 9 – GOODWILL AND OTHER INTANGIBLE ASSETS

The following tables show changes in the carrying amount of goodwill for the years ended December 31, 2013 and 2012, by operating segment:

2013 Goodwill	Electronic and Functional Materials	Coatings and Infrastructure Solutions	Ag Sciences	Perf Materials	Perf Plastics	Feedstocks and Energy	Total
In millions							
Gross goodwill at Jan 1, 2013	\$4,945	\$4,052	\$1,558	\$1,169	\$1,381	\$63	\$13,168
Accumulated impairments at Jan 1, 2013	—	—	—	(429 )	—	—	(429 )
Net goodwill at Jan 1, 2013	\$4,945	\$4,052	\$1,558	\$740	\$1,381	\$63	\$12,739
Acquisition of a seed company	—	—	5	—	—	—	5
Sale of Dow Plastics Additives product line	—	—	—	(3 )	—	—	(3 )
Foreign currency impact	18	24	—	1	14	—	57
Net goodwill at Dec 31, 2013	\$4,963	\$4,076	\$1,563	\$738	\$1,395	\$63	\$12,798
Accumulated impairments at Dec 31, 2013	—	—	—	429	—	—	429
Gross goodwill at Dec 31, 2013	\$4,963	\$4,076	\$1,563	\$1,167	\$1,395	\$63	\$13,227

2012 Goodwill	Electronic and Functional Materials	Coatings and Infrastructure Solutions	Ag Sciences	Perf Materials	Perf Plastics	Feedstocks and Energy	Total
In millions							
Gross goodwill at Jan 1, 2012	\$4,934	\$4,041	\$1,558	\$1,168	\$1,375	\$63	\$13,139
Accumulated impairments at Jan 1, 2012	—	—	—	(209 )	—	—	(209 )
Net goodwill at Jan 1, 2012	\$4,934	\$4,041	\$1,558	\$959	\$1,375	\$63	\$12,930
Lightscape Materials, Inc	3	—	—	—	—	—	3
Goodwill impairment	—	—	—	(220 )	—	—	(220 )
Foreign currency impact	8	11	—	1	6	—	26
Net goodwill at Dec 31, 2012	\$4,945	\$4,052	\$1,558	\$740	\$1,381	\$63	\$12,739
Accumulated impairments at Dec 31, 2012	—	—	—	429	—	—	429
Gross goodwill at Dec 31, 2012	\$4,945	\$4,052	\$1,558	\$1,169	\$1,381	\$63	\$13,168

## 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 amount. The qualitative factors assessed by the Company 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 for the reporting units 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 each reporting unit.

#### 2013 Goodwill Impairment Testing

In 2013, the Company assessed qualitative factors for 14 of its 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 5 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.

Table of Contents

## 2012 Goodwill Impairment Testing

In 2012, the Company assessed qualitative factors for 11 of its 20 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 9 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 except Dow Formulated Systems. Management completed the second step of the quantitative test for Dow Formulated Systems which compared the implied fair value of the reporting unit's goodwill to the carrying value. As a result, the Company recorded an impairment loss of \$220 million in the fourth quarter of 2012, which is included in "Goodwill impairment loss" in the consolidated statements of income and reflected in the Performance Materials segment. The goodwill impairment loss represents the total amount of goodwill carried by the Dow Formulated Systems reporting unit.

## 2011 Goodwill Impairment Testing

In 2011, the Company assessed qualitative factors for each reporting unit carrying goodwill. The qualitative assessment indicated that it was more likely than not that the fair value of each reporting unit exceeded its carrying value. Additional quantitative testing was not required for any of the Company's reporting units.

## Other Intangible Assets

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

Other Intangible Assets at December 31	2013			2012		
In millions	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Intangible assets with finite lives:						
Licenses and intellectual property	\$1,774	\$(908)	) \$866	\$1,729	\$(747)	) \$982
Patents	125	(109)	) 16	120	(100)	) 20
Software	1,186	(591)	) 595	1,047	(548)	) 499
Trademarks	686	(345)	) 341	691	(285)	) 406
Customer related	3,622	(1,181)	) 2,441	3,688	(974)	) 2,714
Other	154	(136)	) 18	158	(131)	) 27
Total other intangible assets, finite lives	\$7,547	\$(3,270)	) \$4,277	\$7,433	\$(2,785)	) \$4,648
IPR&D (1), indefinite lives	37	—	) 37	63	—	) 63
Total other intangible assets	\$7,584	\$(3,270)	) \$4,314	\$7,496	\$(2,785)	) \$4,711

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

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

Amortization Expense	2013	2012	2011
In millions			
Other intangible assets, excluding software (1)	\$461	\$478	\$496
Software, included in "Cost of sales"	\$67	\$63	\$94

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

During 2013, the Company recognized a \$3 million asset impairment charge related to software, which is recorded in "Cost of sales" 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

2014	\$ 509
2015	\$ 491
2016	\$ 481
2017	\$ 447
2018	\$ 429

89

---



Table of Contents

## NOTE 10 – FINANCIAL INSTRUMENTS

## Investments

The Company's investments in marketable securities are primarily classified as available-for-sale securities.

## Investing Results

In millions	2013	2012	2011
Proceeds from sales of available-for-sale securities	\$486	\$514	\$764
Gross realized gains	\$66	\$40	\$44
Gross realized losses	\$(4	) \$(11	) \$(14

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

Contractual Maturities of Debt Securities  
at December 31, 2013

In millions	Amortized Cost	Fair Value
Within one year	\$17	\$16
One to five years	533	567
Six to ten years	519	527
After ten years	134	149
Total	\$1,203	\$1,259

At December 31, 2013, the Company had \$1,581 million (\$1,701 million at December 31, 2012) 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, 2013, the Company had investments in money market funds of \$1,331 million classified as cash equivalents (\$252 million at December 31, 2012).

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 \$13 million loss in 2013, a \$1 million gain in 2012 and a \$13 million gain in 2011.

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, 2013 and 2012, aggregated by investment category:

## Temporarily Impaired Securities at December 31 (1)

In millions	2013		2012	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Government debt (2)	\$160	\$(8	) \$—	\$—
Corporate bonds	213	(7	) 22	(1
Equity securities	144	(4	) 30	(2
Total temporarily impaired securities	\$517	\$(19	) \$52	\$(3

(1) Unrealized losses of 12 months or more were less than \$1 million.

(2) 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 2013, 2012 or 2011.

Table of Contents

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 2013, other-than-temporary impairment write-downs on investments still held by the Company were \$2 million (\$7 million in 2012).

The aggregate cost of the Company's cost method investments totaled \$185 million at December 31, 2013 (\$176 million at December 31, 2012). 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. The Company's impairment analysis resulted in a \$6 million reduction in the cost basis of these investments for the year ended December 31, 2013; the analysis in 2012 resulted in \$3 million reduction for the year ended December 31, 2012.

The following table summarizes the fair value of financial instruments at December 31, 2013 and 2012:

## Fair Value of Financial Instruments at December 31

In millions	2013				2012			
	Cost	Gain	Loss	Fair Value	Cost	Gain	Loss	Fair Value
Marketable securities: (1)								
Debt securities:								
Government debt (2)	\$544	\$28	\$(8)	\$564	\$506	\$59	\$—	\$565
Corporate bonds	659	43	(7)	695	676	81	(1)	756
Total debt securities	\$1,203	\$71	\$(15)	\$1,259	\$1,182	\$140	\$(1)	\$1,321
Equity securities	605	196	(4)	797	634	109	(3)	740
Total marketable securities	\$1,808	\$267	\$(19)	\$2,056	\$1,816	\$249	\$(4)	\$2,061
Long-term debt including debt due within one year (3)	\$(17,517)	\$296	\$(2,246)	\$(19,467)	\$(20,591)	\$24	\$(3,195)	\$(23,762)
Derivatives relating to:								
Interest rates	\$—	\$—	\$(5)	\$(5)	\$—	\$1	\$(6)	\$(5)
Commodities (4)	\$—	\$11	\$(2)	\$9	\$—	\$26	\$(7)	\$19
Foreign currency (5)	\$—	\$45	\$(13)	\$32	\$—	\$34	\$(20)	\$14

(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 \$22 million at December 31, 2013 and \$23 million at December 31, 2012.

(4) Presented net of cash collateral, as disclosed in Note 11.

(5) For 2013, includes interest rate derivative component of cross currency swaps, which was less than \$1 million at December 31, 2013.

Cost approximates fair value for all other financial instruments.

**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

## Table of Contents

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, 2013. 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 2014.

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, 2013, 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, 2013, 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 2014.

### 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, 2013, 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 2015.

### 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 income (loss)" ("AOCI"); it is reclassified to "Cost of sales" in the same period or periods that the hedged transaction affects income. The unrealized amounts in AOCI fluctuate based on changes in the fair value of open contracts at the end of each reporting period. The Company anticipates volatility in AOCI 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.

The Company had open interest rate derivatives designated as cash flow hedges at December 31, 2013 with a net loss of \$3 million after tax and a notional U.S. dollar equivalent of \$417 million (net loss of \$3 million after tax and a notional U.S. dollar equivalent of \$433 million at December 31, 2012).

Current open foreign currency forward contracts hedge the currency risk of forecasted feedstock purchase transactions until July 2014. The effective portion of the mark-to-market effects of the foreign currency forward contracts is recorded in AOCI; it is reclassified to income in the same period or periods that the underlying feedstock purchase affects income. The net loss from the foreign currency hedges included in AOCI at December 31, 2013 was \$11 million after tax (net loss of \$14 million after tax at December 31, 2012). During 2013, 2012 and 2011, there was no material impact on the consolidated financial statements due to foreign currency hedge ineffectiveness. At December 31, 2013, 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 \$459 million (\$366 million at December 31, 2012).

Table of Contents

Commodity swaps, futures and option contracts with maturities of not more than 36 months are utilized and designated as cash flow hedges of forecasted commodity purchases. Current open contracts hedge forecasted transactions until March 2015. The effective portion of the mark-to-market effect of the cash flow hedge instrument is recorded in AOCI; it is reclassified to income in the same period or periods that the underlying commodity purchase affects income. The net gain from commodity hedges included in AOCI at December 31, 2013 was \$14 million after tax (\$24 million after tax gain at December 31, 2012). During 2013, 2012 and 2011, there was no material impact on the consolidated financial statements due to commodity hedge ineffectiveness. At December 31, 2013 and 2012, the Company had the following gross aggregate notionals of outstanding commodity forward and futures contracts to hedge forecasted purchases:

Commodity	Dec 31, 2013	Dec 31, 2012	Notional Volume Unit
Corn	2.7	1.9	million bushels
Crude Oil	0.5	0.4	million barrels
Ethane	1.0	1.8	million barrels
Naphtha	3.0	90.0	kilotons
Natural Gas	82.9	186.0	million million British thermal units
Soybeans	0.8	1.3	million bushels

The net after-tax amounts to be reclassified from AOCI to income within the next 12 months are a \$13 million gain for commodity contracts, an \$11 million loss for foreign currency contracts and a \$4 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. At December 31, 2013 and 2012, 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 AOCI. At December 31, 2013 and 2012, 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, 2013, the Company had outstanding foreign-currency denominated debt designated as a hedge of net foreign investment of \$190 million (\$233 million at December 31, 2012). The results of hedges of the Company's net investment in foreign operations included in "Cumulative Translation Adjustments" in AOCI was a net gain of \$27 million after tax for the period ended December 31, 2013 (net gain of \$22 million after tax for the period ended December 31, 2012). During 2013, 2012 and 2011 there was no material impact on the consolidated financial statements due to hedge ineffectiveness. See Note 23 for further detail on changes in AOCI.

**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, 2013 and 2012, the Company had the following gross aggregate notionals of outstanding commodity contracts:

Commodity	Notional Volume Unit
-----------	----------------------

	Dec 31, 2013	Dec 31, 2012	
Ethane	0.3	1.0	million barrels
Natural Gas	5.2	33.0	million million British thermal units

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 \$17,228 million at December 31, 2013 (\$17,637 million at December 31, 2012) and had no open interest rate swaps at December 31, 2013 (\$472 million notional U.S. dollar equivalent of open interest rate swaps at December 31, 2012).



Table of Contents

The following table provides the fair value and gross balance sheet classification of derivative instruments at December 31, 2013 and 2012:

Fair Value of Derivative Instruments In millions	Balance Sheet Classification	2013	2012
<b>Asset Derivatives</b>			
Derivatives designated as hedges:			
Interest rates	Other current assets	\$—	\$1
Commodities	Other current assets	13	28
Foreign currency	Accounts and notes receivable – Other	—	3
Total derivatives designated as hedges		\$13	\$32
Derivatives not designated as hedges:			
Commodities	Other current assets	\$1	\$3
Foreign currency	Accounts and notes receivable – Other	65	52
Total derivatives not designated as hedges		\$66	\$55
Total asset derivatives		\$79	\$87
<b>Liability Derivatives</b>			
Derivatives designated as hedges:			
Interest rates	Accounts payable – Other	\$5	\$5
Commodities	Accounts payable – Other	5	21
Foreign currency	Accounts payable – Other	9	14
Total derivatives designated as hedges		\$19	\$40
Derivatives not designated as hedges:			
Interest rates	Accounts payable – Other	\$—	\$1
Commodities	Accounts payable – Other	1	6
Foreign currency	Accounts payable – Other	24	27
Total derivatives not designated as hedges		\$25	\$34
Total liability derivatives		\$44	\$74

Foreign currency derivatives not designated as hedges are offset by foreign exchange gains/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 gain of \$89 million for 2013, loss of \$9 million for 2012 and gain of \$1 million for 2011.

Table of Contents

## NOTE 11 – 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, 2013	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)	\$—	\$2,912	\$—	\$—	\$2,912
Interests in trade accounts receivable conduits (3)	—	—	1,227	—	1,227
Equity securities (4)	760	37	—	—	797
Debt securities: (4)					
Government debt (5)	—	564	—	—	564
Corporate bonds	—	695	—	—	695
Derivatives relating to: (6)					
Commodities	3	11	—	(3	) 11
Foreign currency	—	65	—	(20	) 45
Total assets at fair value	\$763	\$4,284	\$1,227	\$(23	) \$6,251
Liabilities at fair value:					
Long-term debt (7)	\$—	\$19,467	\$—	\$—	\$19,467
Derivatives relating to: (6)					
Interest rates	—	5	—	—	5
Commodities	4	2	—	(4	) 2
Foreign currency	—	33	—	(20	) 13
Total liabilities at fair value	\$4	\$19,507	\$—	\$(24	) \$19,487

(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 15 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 10 for the classification of derivatives in the consolidated balance sheets.

(7) See Note 10 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, 2012	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)	\$—	\$1,953	\$—	\$—	\$1,953
Interests in trade accounts receivable conduits (3)	—	—	1,057	—	1,057
Equity securities (4)	702	38	—	—	740
Debt securities: (4)					
Government debt (5)	—	565	—	—	565
Corporate bonds	—	756	—	—	756
Derivatives relating to: (6)					
Interest rates	—	1	—	—	1
Commodities	9	22	—	(5	) 26
Foreign currency	—	55	—	(21	) 34
Total assets at fair value	\$711	\$3,390	\$1,057	\$(26	) \$5,132
Liabilities at fair value:					
Long-term debt (7)	\$—	\$23,762	\$—	\$—	\$23,762
Derivatives relating to: (6)					
Interest Rates	—	6	—	—	6
Commodities	16	11	—	(20	) 7
Foreign currency	—	41	—	(21	) 20
Total liabilities at fair value	\$16	\$23,820	\$—	\$(41	) \$23,795

(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 15 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 10 for the classification of derivatives in the consolidated balance sheets.

(7) See Note 10 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 \$5 million at December 31, 2013 (\$20 million of cash collateral at December 31, 2012).

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/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.

Table of Contents

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 10 for further information on the types of instruments used by the Company for risk management.

There were transfers of \$4 million between Levels 1 and 2 during the year ended December 31, 2013 and no transfers in the year ended December 31, 2012.

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 15 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, 2013 and 2012:

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

Receivable Conduits (1)	2013	2012
In millions		
Balance at January 1	\$1,057	\$1,141
Gain included in earnings (2)	—	8
Purchases	1,198	2,558
Settlements	(1,028	) (2,650
Balance at December 31	\$1,227	\$1,057

(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 2013, 2012 and 2011:

Basis of Fair Value Measurements on a Nonrecurring Basis	Significant Other Unobservable Inputs (Level 3)	Total Losses
In millions		
2013		
Assets at fair value:		
Long-lived assets, other assets and equity method investments	\$127	\$(178)
2012		
Assets at fair value:		
Long-lived assets, other assets and equity method investments	\$45	\$(693)
Goodwill	\$—	\$(220)
2011		
Assets at fair value:		
Long-lived assets, other assets and equity method investments	\$—	\$(27)

## 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: Dow Building and Construction business, part of the Coatings and Infrastructure Solutions segment (\$61 million); Dow Formulated Systems, Dow Plastics Additives and Epoxy businesses, part of the Performance Materials segment (\$36 million); Chlor-Alkali/Chlor-Vinyl, part of the Feedstocks and Energy segment (\$66 million); and Corporate (\$15 million).

## Table of Contents

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: Coatings and Infrastructure Solutions assets were valued at \$100 million; Performance Materials assets were written down to zero; Feedstocks and Energy assets were valued at \$9 million; and Corporate assets were valued at \$18 million.

### 2012 Fair Value Measurements on a Nonrecurring Basis

As part of the 1Q12 Restructuring plan that was approved on March 27, 2012, the Company shut down a number of manufacturing facilities during 2012. The manufacturing assets and facilities associated with this plan were written down to zero in the first quarter of 2012 and a \$94 million impairment charge was included in "Restructuring charges (credits)" in the consolidated statements of income. During the fourth quarter of 2012, the Company reduced the 1Q12 Restructuring reserve by \$4 million. See Note 3 for additional information.

In the second half of 2012, a \$27 million asset impairment charge was recognized in the Performance Materials segment. The assets, classified as Level 3 measurements, were valued at \$12 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.

As part of the 4Q12 Restructuring plan that was approved on October 23, 2012, the Company will shut down a number of manufacturing facilities during the next two years. The manufacturing assets and facilities associated with this plan were written down to zero in the fourth quarter of 2012. In addition, an equity investment was impaired. The equity investment, classified as a Level 3 measurement, was valued at \$33 million using unobservable inputs, including assumptions a market participant would use to measure the fair value of the investment, which included projected cash flows. These impairment charges, totaling \$576 million, were included in "Restructuring charges (credits)" in the consolidated statements of income. See Note 3 for additional information.

In the fourth quarter of 2012, the Company performed its annual goodwill impairment testing utilizing a discounted cash flow methodology as its valuation technique. As a result of this testing, the Company recognized a \$220 million goodwill impairment charge related to its Dow Formulated Systems reporting unit (part of the Performance Materials segment), which was included in "Goodwill impairment loss" in the consolidated statements of income. See Note 9 for additional information.

### 2011 Fair Value Measurements on a Nonrecurring Basis

After evaluating expected future investments in conjunction with expected future cash flows, a \$27 million asset impairment charge was recognized in the fourth quarter of 2011 related to a manufacturing facility in Brazil aligned with the Polyurethanes business. The long-lived assets and supplies associated with this facility were written down to zero. The charge was included in "Cost of sales" in the consolidated statements of income and reflected in the Performance Materials segment. The decision was made to shut down this facility as part of the 1Q12 Restructuring plan.

Table of Contents

## NOTE 12 – SUPPLEMENTARY INFORMATION

## Sundry Income (Expense) – Net

In millions	2013	2012	2011	
Gain on sales of other assets and investments (1)	\$98	\$81	\$119	
Foreign exchange loss	(31	) (51	) (53	)
Dividend income	3	1	25	
K-Dow settlement (2)	2,161	—	—	
Gain on sale of Polypropylene Licensing and Catalysts business (3)	451	—	—	
Loss on early extinguishment of debt	(329	) (123	) (482	)
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)	21	—	33	
Gain (loss) on sale of a contract manufacturing business (5)	—	8	(36	)
Gain on consolidation of a joint venture	—	—	21	
Other-net	67	57	57	
Total sundry income (expense) – net	\$2,554	\$(27	) \$(316	)

(1) 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 14 for additional information.

(3) See Note 5 for additional information.

(4) Cumulative translation adjustments reclassified from "Accumulated other comprehensive income (loss)" into income resulted from transactions that qualified as a complete liquidation of an investment in a foreign entity.

(5) The 2011 loss on the sale of a contract manufacturing business also included a \$6 million loss reported as

(5) "Reclassification of cumulative translation adjustments."

## Accrued and Other Current Liabilities

"Accrued and other current liabilities" were \$2,916 million at December 31, 2013 and \$2,656 million at December 31, 2012. Accrued payroll, which is a component of "Accrued and other current liabilities," was \$968 million at December 31, 2013 and \$620 million at December 31, 2012. No other component of accrued liabilities was more than 5 percent of total current liabilities.

## Other Income Statement Information

In millions	2013	2012	2011
Provision for doubtful receivables (1)	\$59	\$13	\$18

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

## Supplemental Disclosure of Cash Flow Information

In millions	2013	2012	2011
Cash payments for interest	\$1,191	\$1,345	\$1,434
Cash payments for income taxes	\$1,708	\$1,107	\$1,056



Table of Contents

## NOTE 13 – EARNINGS PER SHARE CALCULATIONS

The following tables provide the earnings per share calculations for the years ended December 31, 2013, 2012 and 2011:

Net Income for Earnings Per Share Calculation - Basic	2013	2012	2011
In millions			
Net income	\$4,816	\$1,100	\$2,784
Net (income) loss attributable to noncontrolling interests	(29)	) 82	(42)
Net income attributable to The Dow Chemical Company	\$4,787	\$1,182	\$2,742
Preferred stock dividends	(340)	) (340)	) (340)
Net income attributable to participating securities (1)	(38)	) (13)	) (30)
Net income attributable to common stockholders	\$4,409	\$829	\$2,372
Earnings Per Share Calculations - Basic	2013	2012	2011
Dollars per share			
Net income	\$4.06	\$0.94	\$2.42
Net (income) loss attributable to noncontrolling interests	(0.02)	) 0.07	(0.03)
Net income attributable to The Dow Chemical Company	\$4.04	\$1.01	\$2.39
Preferred stock dividends	(0.29)	) (0.29)	) (0.30)
Net income attributable to participating securities (1)	(0.03)	) (0.01)	) (0.03)
Net income attributable to common stockholders	\$3.72	\$0.71	\$2.06
Net Income for Earnings Per Share Calculation - Diluted	2013	2012	2011
In millions			
Net income	\$4,816	\$1,100	\$2,784
Net (income) loss attributable to noncontrolling interests	(29)	) 82	(42)
Net income attributable to The Dow Chemical Company	\$4,787	\$1,182	\$2,742
Preferred stock dividends (2)	—	(340)	) (340)
Net income attributable to participating securities (1)	(38)	) (13)	) (30)
Net income attributable to common stockholders	\$4,749	\$829	\$2,372
Earnings Per Share Calculations - Diluted	2013	2012	2011
Dollars per share			
Net income	\$3.73	\$0.93	\$2.40
Net (income) loss attributable to noncontrolling interests	(0.02)	) 0.07	(0.03)
Net income attributable to The Dow Chemical Company	\$3.71	\$1.00	\$2.37
Preferred stock dividends (2)	—	(0.29)	) (0.29)
Net income attributable to participating securities (1)	(0.03)	) (0.01)	) (0.03)
Net income attributable to common stockholders	\$3.68	\$0.70	\$2.05
Additional Share Count Information	2013	2012	2011
Shares in millions			
Weighted-average common shares - basic	1,186.2	1,169.7	1,149.0
Plus dilutive effect of stock options and awards	7.4	6.7	9.2
Plus dilutive effect of assumed conversion of preferred stock (3)	96.8	—	—
Weighted-average common shares - diluted	1,290.4	1,176.4	1,158.2
Stock options and deferred stock awards excluded from EPS calculations (4)	47.4	52.6	44.7
(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 periods ended December 31, 2012 and 2011 because the effect of adding them back would have been antidilutive.

(3) Conversion of the 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 periods ended December 31, 2012 and 2011 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 14 – COMMITMENTS AND CONTINGENT LIABILITIES

## Dow Corning Credit Facility

The Company is a 50 percent shareholder in Dow Corning Corporation ("Dow Corning"). On June 1, 2004, the Company agreed to provide a credit facility to Dow Corning as part of Dow Corning's Joint Plan of Reorganization. The aggregate amount of the facility was originally \$300 million; it was reduced to \$50 million effective June 1, 2013, of which the Company's share is \$25 million. At December 31, 2013, no draws had been taken against the credit facility.

## 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, 2013, the Company had accrued obligations of \$722 million for probable environmental remediation and restoration costs, including \$73 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. 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, 2012, the Company had accrued obligations of \$754 million for probable environmental remediation and restoration costs, including \$69 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, 2013 and 2012:

## Accrued Obligations for Environmental Matters

In millions	2013	2012
Balance at January 1	\$754	\$733
Additional accruals	200	203
Charges against reserve	(222)	) (176)
Foreign currency impact	(10)	) (6)
Balance at December 31	\$722	\$754

The amounts charged to income on a pretax basis related to environmental remediation totaled \$203 million in 2013, \$197 million in 2012 and \$261 million in 2011. Capital expenditures for environmental protection were \$102 million in 2013, \$145 million in 2012 and \$170 million in 2011.

## 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 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. During 2012 and 2013, the Company submitted and had approved by the MDEQ, amendments to the Work Plan to sample properties in 2012 and 2013 that were originally scheduled for sampling in 2014 through 2017. At December 31, 2013, all properties identified through sampling as being above the remediation criteria have been remediated.

## Table of Contents

### 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 (“CERCLA”). These actions, to be conducted under the lead oversight of the EPA, will build upon the investigative work completed under the State Resource Conservation Recovery Act (“RCRA”) 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 as an additional segment. 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. In addition, the Company and the EPA have entered into two separate orders to address remedial actions in two of the nine geographic segments in the first Operable Unit.

### 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 to provide a mechanism for the Company to fund cooperative studies related to the assessment of natural resource damages. This Memorandum of Understanding was amended and extended until March 2014. 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, 2013, the accrual for these off-site matters was \$47 million (included in the total accrued obligation of \$722 million). At December 31, 2012, the Company had an accrual for these off-site matters of \$42 million (included in the total accrued obligation of \$754 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

#### DBCP Matters

Numerous lawsuits have been brought against the Company and other chemical companies, both inside and outside of the United States, alleging that the manufacture, distribution or use of pesticides containing dibromochloropropane (“DBCP”) has caused personal injury and property damage, including contamination of groundwater. It is the opinion of the Company’s management that the possibility is remote that the resolution of such lawsuits will have a material impact on the Company’s consolidated financial statements.

#### 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 three decades. These suits principally allege

## Table of Contents

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.

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 November 2011, Union Carbide requested ARPC to review its historical asbestos claim and resolution activity and determine the appropriateness of updating its then most recent study completed in December 2010. In response to that request, ARPC reviewed and analyzed data through October 31, 2011. In January 2012, 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 2010 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. At December 31, 2011, the asbestos-related liability for pending and future claims was \$668 million.

In October 2012, Union Carbide requested ARPC to review its historical asbestos claim and resolution activity and determine the appropriateness of updating its then most recent study completed in December 2010. In response to that request, ARPC reviewed and analyzed data through September 30, 2012. In December 2012, based upon ARPC's December 2012 study and Union Carbide's own review of the asbestos claim and resolution activity for 2012, it was determined that no adjustment to the accrual was required at December 31, 2012. Union Carbide's asbestos-related liability for pending and future claims was \$602 million at December 31, 2012.

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. At December 31, 2013, the asbestos-related liability for pending and future claims was \$501 million.

At December 31, 2013, approximately 19 percent of the recorded liability related to pending claims and approximately 81 percent related to future claims. At December 31, 2012, approximately 18 percent of the recorded liability related to pending claims and approximately 82 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



Table of Contents

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 has reached settlements with several of the carriers involved in the Insurance Litigation and continues to pursue settlements with the remaining carriers.

Union Carbide's receivable for insurance recoveries related to its asbestos liability was \$25 million at December 31, 2013 and \$25 million at December 31, 2012. At December 31, 2013 and December 31, 2012, all of the receivable for insurance recoveries was related to insurers that are not signatories to the Wellington Agreement and/or do not otherwise have agreements in place regarding their asbestos-related insurance coverage.

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	2013	2012
Receivables for defense and resolution costs – carriers with settlement agreements	\$66	\$154
Receivables for insurance recoveries – carriers without settlement agreements	25	25
Total	\$91	\$179

The decrease in 2013 in the receivables for asbestos-related costs was principally due to the resolution of receivables related to two insolvent insurance carriers.

Union Carbide expenses defense costs as incurred. The pretax impact for defense and resolution costs, net of insurance, was \$107 million in 2013, \$100 million in 2012 and \$88 million in 2011, and was reflected in "Cost of sales" in the consolidated statements of income.

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.

#### 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.

#### Synthetic Rubber Industry Matters

In 2003, the U.S., Canadian and European competition authorities initiated separate investigations into alleged anticompetitive behavior by certain participants in the synthetic rubber industry. Certain subsidiaries of the Company (but as to the investigation in Europe only) responded to requests for documents and otherwise cooperated in the investigations.

Table of Contents

On June 10, 2005, the Company received a Statement of Objections from the European Commission (the "EC") stating that it believed that the Company and certain subsidiaries of the Company (the "Dow Entities"), together with other participants in the synthetic rubber industry, engaged in conduct in violation of European competition laws with respect to the butadiene rubber and emulsion styrene butadiene rubber businesses. In connection therewith, on November 29, 2006, the EC issued its decision alleging infringement of Article 81 of the Treaty of Rome and imposed a fine of Euro 64.575 million (approximately \$85 million at that time) on the Dow Entities; several other companies were also named and fined. As a result, the Company recognized a loss contingency of \$85 million related to the fine in the fourth quarter of 2006. The Company appealed the EC's decision and a hearing was held before the Court of First Instance on October 13, 2009. On July 13, 2011, the General Court issued a decision that partly affirmed the EC's decision with regard to the amount of the fine and the liability of the parent company, but rejected the EC's decision regarding the length of the conspiracy and determined that it was of a shorter duration. The Dow Entities filed an appeal of this decision to the Court of Justice of the European Union. This appeal was denied on July 18, 2013. The Dow Entities paid the fine, including accrued interest, on August 12, 2013. This proceeding is now considered resolved. Subsequent to the imposition of the fine in 2006, the Company and/or certain subsidiaries of the Company became named parties in various related U.S., United Kingdom and Italian civil actions. The U.S. matter was settled in March 2010 through a confidential settlement agreement, with an immaterial impact on the Company's consolidated financial statements. The United Kingdom and Italian civil actions are still pending.

Additionally, on March 10, 2007, the Company received a Statement of Objections from the EC stating that it believed that DuPont Dow Elastomers L.L.C. ("DDE"), a former 50:50 joint venture with E.I. du Pont de Nemours and Company ("DuPont"), together with other participants in the synthetic rubber industry, engaged in conduct in violation of European competition laws with respect to the polychloroprene business. This Statement of Objections specifically names the Company, in its capacity as a former joint venture owner of DDE. On December 5, 2007, the EC announced its decision to impose a fine on the Company, among others, in the amount of Euro 48.675 million (\$66 million equivalent at September 30, 2013). The Company previously transferred its joint venture ownership interest in DDE to DuPont in 2005, and DDE then changed its name to DuPont Performance Elastomers L.L.C. ("DPE"). In February 2008, DuPont, DPE and the Company each filed an appeal of the December 5, 2007 decision of the EC. On February 2, 2012, the European General Court denied the appeals of the December 5, 2007 decision. The Company appealed this decision to the Court of Justice of the European Union. This appeal was denied on September 26, 2013. Based on the Company's 2004 Allocation Agreement with DuPont, the Company's share of this fine (which DuPont previously caused to be paid) did not have a material impact on the Company's consolidated financial statements and there was no financial impact to Dow as a result of this final ruling. This matter is now considered resolved.

**Rohm and Haas Pension Plan Matters**

In December 2005, a federal judge in the U.S. District Court for the Southern District of Indiana (the "District Court") issued a decision granting a class of participants in the Rohm and Haas Pension Plan (the "Rohm and Haas Plan") who had retired from Rohm and Haas Company ("Rohm and Haas"), now a wholly owned subsidiary of the Company, and who elected to receive a lump sum benefit from the Rohm and Haas Plan, the right to a cost-of-living adjustment ("COLA") as part of their retirement benefit. In August 2007, the Seventh Circuit Court of Appeals (the "Seventh Circuit") affirmed the District Court's decision, and in March 2008, the U.S. Supreme Court denied the Rohm and Haas Plan's petition to review the Seventh Circuit's decision. The case was returned to the District Court for further proceedings. In October 2008 and February 2009, the District Court issued rulings that have the effect of including in the class all Rohm and Haas retirees who received a lump sum distribution without a COLA from the Rohm and Haas Plan since January 1976. These rulings are subject to appeal, and the District Court has not yet determined the amount of the COLA benefits that may be due to the class participants. The Rohm and Haas Plan and the plaintiffs entered into a settlement agreement that, in addition to settling the litigation with respect to the Rohm and Haas retirees, provides for the amendment of the complaint and amendment of the Rohm and Haas Plan to include active employees in the settlement benefits. The District Court preliminarily approved the settlement on November 24, 2009 and,

following a hearing on March 12, 2010, issued a final order approving the settlement on April 12, 2010. A group of objectors to the settlement filed an appeal from the final order. In November 2010, the District Court issued an order approving class counsel's fee award petition in an amount consistent with the terms of the settlement. The same objectors also appealed this order. On September 2, 2011, the Seventh Circuit affirmed the approval of the settlement and award of attorneys' fees. A lone objector filed a petition for rehearing, which was denied on October 17, 2011. The objector continued the appeal process by timely filing a petition for a writ of certiorari to the U.S. Supreme Court, which was denied on April 16, 2012, rendering the settlement and award of attorneys' fees final.

A pension liability associated with this matter of \$185 million was recognized as part of the acquisition of Rohm and Haas on April 1, 2009. The liability, which was determined in accordance with the accounting guidance for contingencies, recognized the estimated impact of the above described judicial decisions on the long-term Rohm and Haas Plan obligations owed to the applicable Rohm and Haas retirees and active employees. The Company had a liability associated with this matter of \$50 million at December 31, 2012. The remaining liability will be resolved over time through the administration of the Rohm and Haas Plan.

## Table of Contents

### 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. Shortly thereafter, a series of "opt-out" cases were filed by a number of large volume purchasers; these cases are substantively identical to the class action lawsuit, but expanded the time period to include 1994 through 1998. 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 in the matter returned a damages verdict of approximately \$400 million against the Company, which would be trebled under applicable antitrust laws - less offsets from other settling defendants - if the verdict is not vacated or otherwise set aside by the District Court. The Company filed post-trial motions on March 5, 2013, requesting the District Court grant judgment in favor of the Company, grant the Company a new trial and/or decertify the class.

On May 15, 2013, the District Court denied the Company's request to overturn the verdict and, under antitrust laws, tripled the damages verdict resulting in a \$1.2 billion judgment. On July 26, 2013, the District Court entered an amended judgment in the amount of \$1.06 billion. The Company is appealing this amended judgment.

In addition to the matters described above, there are two separate but inter-related matters in Ontario and Quebec, Canada, both of which are pending a decision on class certification.

The Company has concluded it is not probable that a loss will occur and, therefore, a liability has not been recorded with respect to these matters.

### 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 commercial matters, including product liability, governmental regulation 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 often provide coverage that will be utilized to minimize the financial impact, if any, of the contingencies described above.

### Summary

Except for the possible effect of Union Carbide's Asbestos-Related Matters and the Urethane Matters described above, it is the opinion of the Company's management that the possibility is remote that the aggregate of all 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 numerous agreements for the purchase of ethylene-related products globally. The purchase prices are determined primarily on a cost-plus basis. Total purchases under these agreements were \$405 million in 2013, \$304 million in 2012 and \$552 million in 2011. The Company's take-or-pay commitments associated with these agreements at December 31, 2013 are included in the table below.

The Company also 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 one to 32 years. One agreement has a remaining term of 64 years. The determinable future commitments for this specific agreement for a period of 10 years are included in the following table along with the fixed and determinable portion of all other obligations under the Company's purchase commitments at December 31, 2013:

## Fixed and Determinable Portion of Take-or-Pay and Throughput Obligations at December 31, 2013

In millions

2014	\$2,858
2015	2,580
2016	2,175
2017	1,924
2018	1,818
2019 and beyond	6,883
Total	\$18,238

In addition to the take-or-pay obligations at December 31, 2013, the Company had outstanding commitments which ranged from one to seven years for materials, services and other items used in the normal course of business of approximately \$254 million. Such commitments were at prices not in excess of current market prices.

## Guarantees

The Company provides a variety of guarantees, as described more fully in the following sections.

## 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 eight 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.

## 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.

Table of Contents

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, 2013	Final	Maximum Future	Recorded
In millions	Expiration	Payments	Liability
Guarantees	2021	\$5,074	\$137
Residual value guarantees	2021	708	27
Total guarantees		\$5,782	\$164

Guarantees at December 31, 2012	Final	Maximum Future	Recorded
In millions	Expiration	Payments (1)	Liability
Guarantees	2021	\$1,544	\$48
Residual value guarantees (2)	2021	637	31
Total guarantees		\$2,181	\$79

(1) The Company was indemnified by a third party for \$49 million if required to perform under a \$98 million guarantee.

(2) Does not include the residual value guarantee related to the Company's variable interest in an owner trust; see Note 19.

During the first six months of 2013, the Company entered into guarantee agreements (“Guarantees”) related to project financing for Sadara Chemical Company (“Sadara”), a nonconsolidated affiliate. On April 2, 2013, Sadara issued an Islamic bond (“Sukuk”) in the amount of SAR 7.5 billion (approximately \$2 billion). On June 16, 2013, Sadara entered into definitive agreements with certain export credit agencies, commercial banks and the Public Investment Fund of the Kingdom of Saudi Arabia for approximately \$10.5 billion of project financing (“Additional Project Financing”). The Additional Project Financing closed on June 28, 2013. The total of the Sukuk and Additional Project Financing (collectively “Total Project Financing”) obtained by Sadara is approximately \$12.5 billion. At December 31, 2013, Sadara had \$5.8 billion of Total Project Financing outstanding. The Company's guarantee of the Sukuk and the Additional 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 for the end of 2017.

#### Asset Retirement Obligations

Dow has 201 manufacturing sites in 36 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 in the United States, Canada, Brazil, China, Argentina, Australia, Japan, India and Europe; and capping activities at landfill sites in the United States, Canada, Brazil and Europe. 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 in the United States, Canada, Brazil, China, Argentina, Australia, Japan, India 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 \$34 million at December 31, 2013 (\$34 million at December 31, 2012).

108

---



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, 2013 and 2012:

Asset Retirement Obligations	2013	2012
In millions		
Balance at January 1	\$92	\$88
Additional accruals	5	2
Liabilities settled	(2	) (6
Accretion expense	1	1
Revisions in estimated cash flows	(8	) 7
Other	1	—
Balance at December 31	\$89	\$92

The discount rate used to calculate the Company's asset retirement obligations at December 31, 2013 was 0.88 percent (0.87 percent at December 31, 2012). 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 44 underground storage wells and 140 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 petrochemical 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 confirmed the receipt of 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. 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.

**NOTE 15 – TRANSFERS OF FINANCIAL ASSETS**

Sale of Trade Accounts Receivable in North America and Europe

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 Company maintains servicing responsibilities and the related costs are insignificant. 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.

Table of Contents

During the year ended December 31, 2013, the Company recognized a loss of \$17 million on the sale of these receivables (\$17 million loss for the year ended December 31, 2012, and \$24 million loss for the year ended December 31, 2011), 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	2013	2012		
Carrying value of interests held	\$1,227	\$1,057		
Percentage of anticipated credit losses	0.71	% 0.73		%
Impact to carrying value - 10% adverse change	\$1	\$1		
Impact to carrying value - 20% adverse change	\$2	\$2		

Credit losses, net of any recoveries, were \$1 million for the year ended December 31, 2013 (\$1 million for the year ended December 31, 2012, and \$8 million for the year ended December 31, 2011).

Following is an analysis of certain cash flows between the Company and the conduits:

## Cash Proceeds

In millions	2013	2012	2011
Sale of receivables	\$34	\$57	\$16
Collections reinvested in revolving receivables	\$25,864	\$25,828	\$28,609
Interests in conduits (1)	\$1,028	\$2,650	\$1,737

(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

In millions	2013	2012
Delinquencies on sold receivables still outstanding	\$138	\$164
Trade accounts receivable outstanding and derecognized	\$2,494	\$2,294

In 2013, the Company repurchased \$10 million of previously sold receivables related to divestitures. In 2011, the Company repurchased \$71 million of previously sold receivables related to a divestiture.

## Sale of Trade Accounts Receivable in Asia Pacific

The Company sells participating interests in trade accounts receivable of select Asia Pacific entities. The Company maintains servicing responsibilities and the related costs are insignificant. The third-party holders of the participating interests do not have recourse to the Company's assets in the event of nonpayment by the debtors.

During the years ended December 31, 2013, 2012 and 2011, the Company recognized insignificant losses on the sale of the participating interests in the receivables, which is included in "Interest expense and amortization of debt discount" in the consolidated statements of income. The Company receives cash upon the sale of the participating interests in the receivables.

Table of Contents

Following is an analysis of certain cash flows between the Company and the third-party holders of the participating interests:

Cash Proceeds			
In millions	2013	2012	2011
Sale of participating interests	\$59	\$64	\$143
Collections reinvested in revolving receivables	\$48	\$58	\$120

Following is additional information related to the sale of participating interests in the receivables under this facility:

Trade Accounts Receivable at December 31	2013	2012
In millions		
Derecognized from the consolidated balance sheets	\$15	\$13
Outstanding in the consolidated balance sheets	195	283
Total accounts receivable in select Asia Pacific entities	\$210	\$296

There were no credit losses on receivables relating to the participating interests sold during the years ended December 31, 2013, 2012 and 2011. There were no delinquencies on the outstanding receivables related to the participating interests sold at December 31, 2013 or December 31, 2012.

## NOTE 16 – NOTES PAYABLE, LONG-TERM DEBT AND AVAILABLE CREDIT FACILITIES

Notes Payable at December 31	2013	2012	
In millions			
Notes payable to banks	\$300	\$319	
Notes payable to related companies	137	66	
Notes payable trade	6	11	
Total notes payable	\$443	\$396	
Year-end average interest rates	3.23	% 3.14	%

Long-Term Debt at December 31	2013		2012	
In millions	Average	2013	Average	2012
	Rate		Rate	
Promissory notes and debentures:				
Final maturity 2013	—	\$—	6.01	% \$404
Final maturity 2014	5.33	% 399	6.86	% 1,138
Final maturity 2015	2.89	% 56	5.82	% 1,290
Final maturity 2016	2.53	% 805	2.54	% 789
Final maturity 2017	5.65	% 491	5.88	% 890
Final maturity 2018	5.43	% 570	5.59	% 840
Final maturity 2019 and thereafter	5.94	% 12,200	5.96	% 12,148
Other facilities:				
U.S. dollar loans, various rates and maturities	1.44	% 490	2.30	% 288
Foreign currency loans, various rates and maturities	3.18	% 1,140	3.50	% 1,336
Medium-term notes, varying maturities through 2023	3.76	% 1,143	4.26	% 1,132
Pollution control/industrial revenue bonds, varying maturities through 2038	5.59	% 518	5.67	% 718

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

Capital lease obligations	—	41	—	21
Unamortized debt discount	—	(336	) —	(403 )
Long-term debt due within one year	—	(697	) —	(672 )
Long-term debt	—	\$ 16,820	—	\$ 19,919

111

---

Table of ContentsAnnual Installments on Long-Term Debt  
for Next Five Years

In millions

2014	\$697
2015	\$407
2016	\$1,366
2017	\$775
2018	\$930

## 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; redeemed \$82 million principal amount of InterNotes at maturity; and repurchased \$200 million of pollution control/industrial revenue tax-exempt bonds of which \$126 million is available for re-marketing. 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).

## 2012 Activity

On December 17, 2012, the Company redeemed \$1.0 billion aggregate principal amount of 7.6 percent notes due May 15, 2014, at a price of 109.6 percent of the principal amount of the notes, plus accrued and unpaid interest. As a result of this redemption, the Company realized a \$99 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 November 14, 2012, the Company issued \$2.5 billion of senior unsecured notes in a public offering. The offering included \$1.25 billion aggregate principal amount of 3.0 percent notes due 2022 and \$1.25 billion aggregate principal amount of 4.375 percent notes due 2042.



Table of Contents

On March 8, 2012, the Company redeemed \$1.25 billion aggregate principal amount of 4.85 percent notes due August 15, 2012, at a price of 101.8 percent of the principal amount of the notes, plus accrued and unpaid interest. As a result of this redemption, the Company realized a \$24 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 2012, the Company issued \$281 million aggregate principal amount of InterNotes with varying maturities in 2017, 2019 and 2022, at various interest rates averaging 2.95 percent; and approximately \$367 million of long-term debt was entered into by consolidated variable interest entities.

During 2012, the Company redeemed \$37 million of pollution control/industrial revenue bonds that matured on January 1, 2012, repurchased \$105 million of pollution control/industrial revenue tax-exempt bonds that were subject to re-marketing; redeemed Euro 253 million of notes that matured on September 19, 2012 (\$317 million equivalent); and redeemed \$900 million of notes that matured on October 1, 2012.

## 2011 Activity

On November 14, 2011, the Company issued \$2.0 billion of debt securities in a public offering. The offering included \$1.25 billion aggregate principal amount of 4.125 percent notes due 2021 and \$750 million aggregate principal amount of 5.25 percent notes due 2041.

On March 22, 2011, the Company concluded cash tender offers for \$1.5 billion aggregate principal amount of certain notes issued by the Company. As a result of the tender offers, the Company redeemed \$1.5 billion of notes and recognized a \$472 million pretax loss on early extinguishment of debt, included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Corporate.

During 2011, the Company redeemed \$800 million of notes that matured on February 1, 2011; Euro 500 million of notes that matured on May 27, 2011 (\$707 million equivalent); \$250 million of floating rate notes that matured on August 8, 2011; and \$1,538 million of InterNotes, which resulted in a \$10 million pretax loss on early extinguishment of debt, included in "Sundry income (expense) - net" in the consolidated statements of income and reflected in Corporate.

During 2011, the Company issued \$436 million of InterNotes with varying maturities in 2016, 2018 and 2021, at various interest rates averaging 3.71 percent; and approximately \$1.2 billion of long-term debt was entered into by consolidated variable interest entities, including the refinancing of short-term notes payable.

## Available Credit Facilities

The following table summarizes the Company's credit facilities:

## Committed and Available Credit Facilities at December 31, 2013

In millions	Effective Date	Committed Credit	Credit Available	Maturity Date	Interest
Five Year Competitive Advance and Revolving Credit Facility	October 2011	\$ 5,000	\$5,000	October 2016	Floating rate
Bilateral Revolving Credit Facility	October 2012	170	170	October 2016	Floating rate
Bilateral Revolving Credit Facility	March 2013	100	100	March 2014	Floating rate
Bilateral Revolving Credit Facility	March 2013	300	300	October 2016	Floating rate
Term Loan Facility	March 2013	300	—	March 2016	Floating rate
Bilateral Revolving Credit Facility	April 2013	200	200	April 2016	Floating rate
Bilateral Revolving Credit Facility	October 2013	200	200	October 2016	Floating rate
Bilateral Revolving Credit Facility	October 2013	100	100	October 2016	Floating rate

Total Committed and Available Credit Facilities	\$ 6,370	\$ 6,070
---	----------	----------

On January 21, 2014, the Company entered into an additional \$100 million Bilateral Revolving Credit Facility agreement, which has a maturity date in October 2016 and provides for interest at floating rates, as defined in the agreement.

#### 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, or merge or consolidate with any other corporation, or sell

113

---

Table of Contents

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'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 October 18, 2011 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.

## NOTE 17 – 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 2013, Dow contributed \$865 million to its pension plans, including contributions to fund benefit payments for its non-qualified supplemental plans. Dow expects to contribute approximately \$800 million to its pension plans in 2014.

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			
	2013	2012	2011	2013	2012	2011	
Discount rate	4.54	% 3.88	% 4.93	% 3.88	% 4.93	% 5.38	%

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

Rate of increase in future compensation levels	4.15	% 3.96	% 4.14	% 3.96	% 4.14	% 4.16	%
Expected long-term rate of return on plan assets	—	—	—	7.47	% 7.60	% 7.86	%

Weighted-Average Assumptions for U.S. Pension Plans	Benefit Obligations at December 31			Net Periodic Costs for the Year			
	2013	2012	2011	2013	2012	2011	
Discount rate	4.92	% 4.02	% 4.98	% 4.02	% 4.98	% 5.51	%
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	% 7.83	% 8.18	%

Table of Contents

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. 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 fixed income investments at the measurement date. Future expected actuarially determined cash flows of Dow's major U.S. plans are matched against the Towers Watson RATE:Link yield curve (based on 60th to 90th percentile bond yields) to arrive at a single discount rate for each plan.

The accumulated benefit obligation for all defined benefit pension plans was \$23.8 billion at December 31, 2013 and \$25.3 billion at December 31, 2012.

Pension Plans with Accumulated Benefit Obligations in Excess  
of Plan Assets at December 31

In millions	2013	2012
Projected benefit obligations	\$22,565	\$24,659
Accumulated benefit obligations	\$21,554	\$23,422
Fair value of plan assets	\$16,247	\$15,458

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 \$231 million in 2013, \$186 million in 2012 and \$163 million in 2011.

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.

During the fourth quarter 2013, the Company started implementing an Employer Group Waiver Plan ("EGWP") for its Medicare-eligible, retiree medical plan participants, which became effective on January 1, 2014. As a result, 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. The 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 formation of the EGWP and the resulting change in assumption generated an actuarial gain of \$250 million at December 31, 2013, included in "Accumulated other comprehensive loss" in the consolidated balance sheets. The Company also recognized a reduction in the postretirement benefit obligation of \$250 million at December 31, 2013. The Company estimates net periodic benefit cost will decrease by approximately \$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 2013, Dow did not make any contributions to its other postretirement benefit plan trusts. The trusts did not hold assets at December 31, 2013. Dow does not expect to contribute assets to its other postretirement benefits plan trusts in 2014.

Table of Contents

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				
	2013	2012	2011	2013	2012	2011		
Discount rate	4.37	% 3.67	% 4.66	% 3.67	% 4.66	% 5.15	%	
Expected long-term rate of return on plan assets	—	—	—	—	% 1.00	% 3.60	%	
Initial health care cost trend rate	7.45	% 7.84	% 8.28	% 7.84	% 8.28	% 8.70	%	
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	2020	2019	2019	2020	2019	2019		

Increasing the assumed medical cost trend rate by one percentage point in each year would decrease the accumulated postretirement benefit obligation at December 31, 2013 by \$25 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, 2013 by \$29 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		
	2013	2012	2011	2013	2012	2011
Service cost	\$471	\$378	\$347	\$19	\$17	\$15
Interest cost	1,012	1,093	1,121	78	92	100
Expected return on plan assets	(1,248 )	(1,262 )	(1,305 )	—	(1 )	(6 )
Amortization of prior service cost (credit)	25	26	28	(4 )	(4 )	(1 )
Amortization of unrecognized loss	788	519	374	4	1	1
Curtailment/settlement/other (1) (2)	5	—	(4 )	—	9	—
Net periodic benefit cost	\$1,053	\$754	\$561	\$97	\$114	\$109

(1)Included \$9 million of curtailment costs recorded in 2012 related to the 4Q12 Restructuring plan (see Note 3).

(2)The 2013 impact primarily relates to settlements associated with the wind-up of a Canadian pension plan.

## 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		
	2013	2012	2011	2013	2012	2011
Net (gain) loss	\$(2,343 )	\$3,135	\$2,009	\$(404 )	\$163	\$20
Amortization of prior service (cost) credit	(25 )	(26 )	(28 )	4	4	1
Amortization of unrecognized loss	(793 )	(519 )	(370 )	(4 )	(1 )	(1 )
Total recognized in other comprehensive (income) loss	\$(3,161 )	\$2,590	\$1,611	\$(404 )	\$166	\$20
Total recognized in net periodic benefit cost and other comprehensive (income) loss	\$(2,108 )	\$3,344	\$2,172	\$(307 )	\$280	\$129





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	
	2013	2012	2013	2012
Change in projected benefit obligations	\$26,840	\$22,763	\$2,210	\$2,088
Service cost	471	378	19	17
Interest cost	1,012	1,093	78	92
Plan participants' contributions	17	38	—	—
Actuarial changes in assumptions and experience	(2,029)	) 3,811	(401)	) 164
Acquisition/divestiture/other activity	—	(51)	) —	—
Benefits paid	(1,322)	) (1,347)	) (156)	) (164)
Currency impact	123	150	(8)	) 4
Termination benefits/curtailment cost/settlements (1)	(85)	) 5	—	9
Benefit obligations at end of year	\$25,027	\$26,840	\$1,742	\$2,210
Change in plan assets				
Fair value of plan assets at beginning of year	\$17,725	\$16,119	\$65	\$154
Actual return on plan assets	1,548	1,950	—	1
Currency impact	85	129	—	—
Employer contributions	865	903	—	(10)
Plan participants' contributions	17	38	—	—
Acquisition/divestiture/other activity	(91)	) (67)	) —	—
Benefits paid	(1,322)	) (1,347)	) (65)	) (80)
Fair value of plan assets at end of year	\$18,827	\$17,725	\$—	\$65
Funded status at end of year	\$(6,200)	) \$(9,115)	) \$(1,742)	) \$(2,145)
Net amounts recognized in the consolidated balance sheets at December 31:				
Noncurrent assets	\$139	\$92	\$—	\$—
Current liabilities	(66)	) (69)	) (157)	) (99)
Noncurrent liabilities	(6,273)	) (9,138)	) (1,585)	) (2,046)
Net amounts recognized in the consolidated balance sheets	\$(6,200)	) \$(9,115)	) \$(1,742)	) \$(2,145)
Pretax amounts recognized in AOCI at December 31:				
Net loss (gain)	\$7,815	\$10,951	\$(253)	) \$155
Prior service cost (credit)	103	128	(7)	) (11)
Pretax balance in AOCI at end of year	\$7,918	\$11,079	\$(260)	) \$144

(1) The 2013 impact primarily relates to settlements associated with the wind-up of a Canadian pension plan.

In 2014, an estimated net loss of \$507 million and prior service cost of \$23 million for the defined benefit pension plans will be amortized from AOCI to net periodic benefit cost. In 2014, an estimated net gain of \$14 million and prior service credit of \$2 million for other postretirement benefit plans will be amortized from AOCI 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, 2013

In millions	Defined Benefit Pension Plans	Other Postretirement Benefits
2014	\$1,263	\$160
2015	1,280	157
2016	1,305	152
2017	1,333	145
2018	1,378	141
2019 through 2023	7,401	636
Total	\$13,960	\$1,391

Table of Contents

## Plan Assets

Plan assets consist mainly 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, 2013, plan assets totaled \$18.8 billion and included no Company common stock. At December 31, 2012, plan assets totaled \$17.7 billion and included no Company common stock. In 2013, the Company received \$32 million from residual plan assets after the completion of a non-U.S. pension plan wind-up.

## 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	39	%
Fixed Income securities	38	%
Alternative investments	22	%
Other investments	1	%
Total	100	%

## 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 and through collateral support agreements.

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.



Table of Contents

The following tables summarize the bases used to measure the Company's pension plan assets at fair value for the years ended December 31, 2013 and 2012:

Basis of Fair Value Measurements of Pension Plan Assets at December 31, 2013	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	\$83	\$1,179	\$—	\$1,262
Equity securities:				
U.S. equity (1)	\$2,759	\$695	\$—	\$3,454
Non-U.S. equity – developed countries	2,014	1,122	2	3,138
Emerging markets	648	574	10	1,232
Convertible bonds	23	326	—	349
Equity derivatives	5	(27	) —	(22
Total equity securities	\$5,449	\$2,690	\$12	\$8,151
Fixed income securities:				
U.S. government and municipalities	\$—	\$1,154	\$—	\$1,154
U.S. agency and agency mortgage-backed securities	—	313	—	313
Corporate bonds – investment grade	—	1,397	—	1,397
Non-U.S. governments – developed countries	—	1,075	—	1,075
Non-U.S. corporate bonds – developed countries	—	838	2	840
Emerging market debt	—	106	—	106
Other asset-backed securities	—	113	15	128
High yield bonds	—	178	20	198
Other fixed income funds	—	243	200	443
Fixed income derivatives	(1	) (31	) —	(32
Total fixed income securities	\$(1	) \$5,386	\$237	\$5,622
Alternative investments:				
Real estate	\$30	\$33	\$1,338	\$1,401
Private equity	—	—	1,017	1,017
Absolute return	—	611	406	1,017
Total alternative investments	\$30	\$644	\$2,761	\$3,435
Other investments	\$—	\$317	\$40	\$357
Total pension plan assets at fair value	\$5,561	\$10,216	\$3,050	\$18,827

(1) Includes no Company common stock.

Table of Contents

Basis of Fair Value Measurements of Pension Plan Assets at December 31, 2012	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	\$20	\$599	\$—	\$619
Equity securities:				
U.S. equity (1)	\$2,143	\$318	\$—	\$2,461
Non-U.S. equity – developed countries	1,989	1,203	4	3,196
Emerging markets	728	487	9	1,224
Convertible bonds	—	243	—	243
Equity derivatives	3	19	—	22
Total equity securities	\$4,863	\$2,270	\$13	\$7,146
Fixed income securities:				
U.S. government and municipalities	\$—	\$1,464	\$2	\$1,466
U.S. agency and agency mortgage-backed securities	—	432	—	432
Corporate bonds – investment grade	—	1,626	—	1,626
Non-U.S. governments – developed countries	—	1,039	1	1,040
Non-U.S. corporate bonds – developed countries	—	802	1	803
Emerging market debt	—	72	—	72
Other asset-backed securities	—	122	15	137
High yield bonds	—	287	21	308
Other fixed income funds	—	228	218	446
Fixed income derivatives	1	119	—	120
Total fixed income securities	\$1	\$6,191	\$258	\$6,450
Alternative investments:				
Real estate	\$32	\$30	\$1,224	\$1,286
Private equity	—	—	991	991
Absolute return	—	527	300	827
Total alternative investments	\$32	\$557	\$2,515	\$3,104
Other investments	\$—	\$364	\$42	\$406
Total pension plan assets at fair value	\$4,916	\$9,981	\$2,828	\$17,725

(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/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.

120

---

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, 2012 and 2013:

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, 2012	\$16	\$100	\$2,328	\$42	\$2,486	
Actual return on plan assets:						
Relating to assets sold during 2012	(5	) 2	(59	) —	(62	)
Relating to assets held at Dec 31, 2012	(3	) 19	193	—	209	
Purchases, sales and settlements	7	141	(54	) —	94	
Transfers into (out of) Level 3, net	(2	) (4	) 99	—	93	
Foreign currency impact	—	—	8	—	8	
Balance at December 31, 2012	\$13	\$258	\$2,515	\$42	\$2,828	
Actual return on plan assets:						
Relating to assets sold during 2013	—	42	176	—	218	
Relating to assets held at Dec 31, 2013	—	(32	) 67	(1	) 34	
Purchases, sales and settlements	2	(27	) (5	) (1	) (31	)
Transfers (out of) Level 3, net	(3	) (2	) —	—	(5	)
Foreign currency impact	—	(2	) 8	—	6	
Balance at December 31, 2013	\$12	\$237	\$2,761	\$40	\$3,050	

The following table summarizes the bases used to measure the Company's other postretirement benefit plan assets at fair value for the year ended December 31, 2012:

Basis of Fair Value Measurements of Other Postretirement Benefit Plan Assets at December 31, 2012 In millions	Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Total
Cash and cash equivalents	\$—	\$7	\$7
Fixed income securities	—	58	58
Total assets at fair value	\$—	\$65	\$65



Table of Contents

## NOTE 18 – 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 \$490 million in 2013, \$476 million in 2012 and \$437 million in 2011. Future minimum rental payments under leases with remaining noncancelable terms in excess of one year are as follows:

## Minimum Lease Commitments at December 31, 2013

In millions

2014	\$249
2015	244
2016	218
2017	181
2018	151
2019 and thereafter	1,580
Total	\$2,623

## NOTE 19 – VARIABLE INTEREST ENTITIES

## Consolidated Variable Interest Entities

The Company holds a variable interest in eight joint ventures for which the Company is the primary beneficiary.

Three of the 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. In the third quarter of 2011, one of the joint ventures converted a note payable into cumulative perpetual preferred shares, which is included in "Noncontrolling interests" in the consolidated balance sheets and "Conversion of note payable to preferred shares of a subsidiary" in the consolidated statements of equity.

A fourth joint venture will construct, own and operate a membrane chlor-alkali facility to be located at the Company's Freeport, Texas integrated manufacturing complex. The Company's variable interests in this joint venture relate 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. The Company will provide the joint venture with operation and maintenance services, utilities and raw materials; market the joint venture's co-products; and convert the other partner's proportional purchase commitments into ethylene dichloride under a tolling arrangement. The joint venture is expected to begin operations in the first quarter of 2014.

The fifth 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 sixth joint venture is an ethylene storage joint venture located in Alberta, Canada. Previously accounted for as an equity method investment, the Company became the primary beneficiary upon execution of new storage cavern agreements in 2011. 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 seventh joint venture is a development-stage enterprise located in Brazil that will initially produce ethanol from sugarcane. The Company owned 100 percent of this entity until November 2011, when the Company sold a 50 percent interest to a third party. The Company's variable interests in this joint venture relate to an equity option between the partners, a parental guarantee related to debt financing and contractual arrangements limiting the partner's initial participation in the economics of certain assets and liabilities. On July 12, 2013, the partners amended governing documents of the joint venture, including terms of the

Table of Contents

equity option. These amendments do 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. The Company has classified a portion of the partner's equity investment as "Redeemable Noncontrolling Interest" in the consolidated balance sheets. The joint venture's ethanol mill is expected to process its first harvest of sugarcane in 2014. Original plans for the joint venture's expansion into downstream derivative products have been postponed. In third quarter of 2013, this joint venture entered into contractual arrangements with an entity that will construct and own a cogeneration facility. The joint venture holds variable interests in the entity as a 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 eighth joint venture manages the growth, harvest and conditioning of soybean seed and grain, corn and wheat in several midwestern states in the United States. On March 2, 2012, the Company acquired a 49 percent equity interest in this venture. The Company's variable interest in this joint venture relates to an equity option between the partners. Terms of the equity option require the Company to purchase the partner's equity investment at a fixed price, after a specified period of time if the partner elects to sell its equity investment. The joint venture provides seed production services to the Company.

The Company also holds a variable interest in an owner trust, for which the Company is the primary beneficiary. The owner trust leases an ethylene facility in The Netherlands to the Company, whereby substantially all of the rights and obligations of ownership are transferred to the Company. On February 1, 2013, the Company notified the owner trust of its intent to purchase the facility upon expiration of the lease in January 2014. The Company's variable interest in the owner trust relates to the fixed purchase price option. Prior to February 1, 2013, the Company's variable interest in the owner trust related to a residual value guarantee provided to the owner trust, which was valued at \$363 million at December 31, 2012. The facility was purchased on January 2, 2014 for \$406 million.

As the primary beneficiary of these variable interest entities ("VIEs"), the entities' assets, liabilities and results of operations are included in the Company's consolidated financial statements. The other equity holders' interests are reflected in "Net income (loss) attributable to noncontrolling interests" in the consolidated statements of income and "Noncontrolling interests" and "Redeemable Noncontrolling Interest" 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, 2013 and 2012:

Assets and Liabilities of Consolidated VIEs at December 31	2013	2012
In millions		
Cash and cash equivalents (1)	\$147	\$146
Other current assets	143	129
Property	2,646	2,554
Other noncurrent assets	105	139
Total assets (2)	\$3,041	\$2,968
Current liabilities (nonrecourse 2013: \$318; 2012: \$261)	\$664	\$261
Long-term debt (nonrecourse 2013: \$1,360; 2012: \$1,406)	1,392	1,752
Other noncurrent liabilities (nonrecourse 2013: \$69; 2012: \$99)	69	99
Total liabilities	\$2,125	\$2,112

(1) Included \$1 million at December 31, 2013 (\$2 million at December 31, 2012) specifically restricted for the construction of a manufacturing facility.

(2) All assets were restricted at December 31, 2013 and December 31, 2012.

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 \$105 million

(zero restricted) at December 31, 2013 (\$179 million, zero restricted, at December 31, 2012) and zero current liabilities (zero nonrecourse) at December 31, 2013 (less than \$1 million, less than \$1 million nonrecourse, at December 31, 2012).

Amounts presented in the consolidated balance sheets and the table above as restricted assets or nonrecourse obligations relating to consolidated VIEs at December 31, 2013 and 2012 are adjusted for intercompany eliminations, parental guarantees and residual value guarantees.

Table of Contents

## Nonconsolidated Variable Interest Entity

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 sold to the other joint venture partner; therefore, the entity is accounted for under the equity method of accounting. At December 31, 2013, the Company's investment in the joint venture was \$159 million (\$161 million at December 31, 2012), classified as "Investment in nonconsolidated affiliates" in the consolidated balance sheets, representing the Company's maximum exposure to loss.

## NOTE 20 – STOCK-BASED COMPENSATION

The Company grants stock-based compensation to employees and non-employee directors in the form of the Employee Stock Purchase Plan ("ESPP") and stock incentive plans, which include stock options, 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	2013	2012	2011	
Dividend yield	3.89	% 3.34	% 2.5	%
Expected volatility	29.93	% 38.39	% 34.61	%
Risk-free interest rate	1.08	% 0.95	% 1.71	%
Expected life of stock options granted during period (years)	7.8	7.6	7.4	
Life of Employee Stock Purchase Plan (months)	5	6	6	

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 dividend yield assumption for 2012 was based on a 10 percent/90 percent blend of the Company's current declared dividend as a percentage of the stock price on the grant date and a 10-year dividend yield average. The dividend yield assumption for 2011 was based on a 20 percent/80 percent blend. The expected volatility assumption was based on an equal weighting of the historical daily volatility and current implied volatility from exchange-traded options for the contractual term of the options. 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 (the "2012 ESPP") which was approved by stockholders at the Company's annual meeting on May 10, 2012. The 2012 ESPP supersedes the prior employee stock purchase plan. Under the 2013 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 each year at an amount equal to at least 85 percent of the fair market value of the common stock on a specific date or the average fair market value of the common stock over a period, in each case, specified by the plan administrator.

Table of Contents

Employee Stock Purchase Plan	2013	
Shares in thousands	Shares	Exercise Price
Outstanding at beginning of year	—	—
Granted	8,298	\$27.05
Exercised	(7,311	) \$27.05
Forfeited/Expired	(987	) \$27.05
Outstanding and exercisable at end of year	—	—

Additional Information about Employee Stock Purchase Plan	2013	2012	2011
In millions, except per share amounts			
Weighted-average fair value per share of purchase rights granted	\$7.20	\$8.32	\$11.39
Total compensation expense for ESPP	\$60	\$79	\$123
Related tax benefit	\$22	\$29	\$46
Total amount of cash received from the exercise of purchase rights	\$198	\$166	\$197
Total intrinsic value of purchase rights exercised (1)	\$68	\$41	\$98
Related tax benefit	\$25	\$15	\$36

(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"). The 2012 Plan was approved by stockholders at the Company's annual meeting on May 10, 2012 and became effective on that date. The 2012 Plan supersedes the Prior Plans. 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 over the 10-year duration of the Plan, subject to an aggregate limit and annual individual limits. The terms of the grants are fixed at the grant date. At December 31, 2013, there were 20,582,818 shares available for grant under the 2012 Plan.

**Stock Options**

The Company grants stock options to certain employees. Under the 1988 Award and Option Plan (the "1988 Plan"), a plan approved by stockholders, the Company granted options or shares of common stock to its employees subject to certain annual and individual limits. The terms of the grants are fixed at the grant date. At December 31, 2012, there were no shares available for grant under this plan. The 1988 Plan was superseded by the 2012 Plan on May 10, 2012.

Under the 1994 Non-Employee Directors' Stock Plan, the Company was previously allowed to grant up to 300,000 options to non-employee directors; however, no additional grants will be made under this plan. At December 31, 2013, there were 19,250 options outstanding under this plan.

Under the 2003 Non-Employee Directors' Stock Incentive Plan (the "2003 Plan"), the Company was previously allowed to grant up to 1.5 million shares (including options, restricted stock and deferred stock) to non-employee directors over the 10-year duration of the program. The 2003 Plan was superseded by the 2012 Plan on May 10, 2012. No additional grants will be made under the 2003 Plan. At December 31, 2013, there were 106,950 options outstanding under this plan.

Table of Contents

The following table provides stock option activity for 2013:

Stock Options	2013 1988 Plan		2012 Plan	
	Shares	Exercise Price (1)	Shares	Exercise Price (1)
Shares in thousands				
Outstanding at January 1, 2013	68,868	\$35.82	—	\$—
Granted	—	\$—	17,080	\$32.16
Exercised	(7,700	) \$25.13	—	\$—
Forfeited/Expired	(1,893	) \$42.15	(57	) \$32.16
Outstanding at December 31, 2013	59,275	\$37.01	17,023	\$32.16
Remaining contractual life in years		4.71		9.11
Aggregate intrinsic value in millions	\$476		\$208	
Exercisable at December 31, 2013	47,487	\$37.45	—	\$—
Remaining contractual life in years		3.98		—
Aggregate intrinsic value in millions	\$368		\$—	
(1) Weighted-average per share				

## Additional Information about Stock Options

In millions, except per share amounts	2013	2012	2011
Weighted-average fair value per share of options granted	\$6.99	\$9.38	\$10.64
Total compensation expense for stock option plans	\$101	\$106	\$88
Related tax benefit	\$37	\$39	\$33
Total amount of cash received from the exercise of options	\$188	\$137	\$147
Total intrinsic value of options exercised (1)	\$102	\$64	\$66
Related tax benefit	\$38	\$24	\$24

(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 \$72 million at December 31, 2013 is expected to be recognized over a weighted-average period of 0.89 years.

The exercise price of each stock option equals the market price of the Company's stock on the date of grant. Options vest from one to three years, and have a maximum term of 10 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 Company historically issued grants under the 1988 Plan; however beginning May 10, 2012, grants of deferred stock are made under the 2012 Plan. The following table shows changes in nonvested deferred stock:

Deferred Stock	2013 1988 Plan		2012 Plan	
	Shares	Grant Date Fair Value (1)	Shares	Grant Date Fair Value (1)
Nonvested at beginning of year	10,957	\$32.70	209	\$30.49
Granted	—	\$—	3,747	\$32.13
Vested	(4,162	) \$27.79	—	\$—
Canceled	(139	) \$36.60	(24	) \$33.11



Nonvested at end of year	6,656	\$ 35.76	3,932	\$ 32.05
(1) Weighted-average per share				

126

---

Table of Contents

Additional Information about Deferred Stock	2013	2012	2011
In millions, except per share amounts			
Weighted-average fair value per share of deferred stock granted	\$32.13	\$33.81	\$37.60
Total fair value of deferred stock vested and delivered (1)	\$137	\$252	\$123
Related tax benefit	\$51	\$93	\$46
Total compensation expense for deferred stock awards	\$104	\$129	\$124
Related tax benefit	\$39	\$48	\$46

(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 \$85 million at December 31, 2013 is expected to be recognized over a weighted-average period of 0.88 years. At December 31, 2013, approximately 71,903 deferred shares with a grant date weighted-average fair value per share of \$34.99 had previously vested, but were not issued. These shares are scheduled to be issued to employees within one to three years or upon retirement.

The Company historically granted performance deferred stock awards under the 1988 Plan. The 2012 Plan supersedes the 1988 Plan. Under both plans, the performance deferred stock awards vest when the Company attains specified performance targets 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. The following table shows the performance deferred stock awards granted:

Performance Deferred Stock Awards			Target	Grant Date
Shares in thousands			Shares	Fair Value (2)
Year	Plan	Performance Period	Granted (1)	
2013	2012 Plan	January 1, 2013 - December 31, 2015	1,321	\$32.16
2012	1988 Plan	January 1, 2012 – December 31, 2014	1,205	\$34.00
2011	1988 Plan	January 1, 2011 – December 31, 2013	1,109	\$38.07

(1) At the end of the performance period, the actual number of shares issued can range from zero to 250 percent of the target shares granted.

(2) Weighted-average per share

The following table shows changes in nonvested performance deferred stock:

Performance Deferred Stock	2013		2012 Plan	
	1988 Plan			
Shares in thousands	Target	Grant Date	Target	Grant Date
	Shares	Fair Value (2)	Shares	Fair Value (2)
	Granted (1)		Granted (1)	
Nonvested at beginning of year	2,254	\$35.92	—	\$—
Granted	—	\$—	1,321	\$32.16
Vested	(1,065)	) \$38.06	—	\$—
Canceled	(1	) \$37.57	(5	) \$32.16
Nonvested at end of year	1,188	\$34.00	1,316	\$32.16

(1) At the end of the performance period, the actual number of shares issued can range from zero to 250 percent of the target shares granted.

(2) Weighted-average per share

Additional Information about Performance Deferred Stock

In millions	2013	2012	2011
Total fair value of performance deferred stock vested and delivered (1)	\$14	\$68	\$77
Related tax benefit	\$5	\$25	\$28
Total compensation expense for performance deferred stock awards	\$62	\$21	\$36
Related tax benefit	\$23	\$8	\$13

(1) Includes the fair value of shares vested in prior years and delivered in the reporting year.

## Table of Contents

During 2013, the Company settled 0.2 million shares of performance deferred stock for \$6 million in cash. During 2012, the Company settled 1.0 million shares of performance deferred stock for \$34 million in cash. During 2011, the Company settled 1.2 million shares of performance of deferred stock for \$36 million in cash. Total unrecognized compensation cost related to performance deferred stock awards of \$22 million at December 31, 2013 is expected to be recognized over a weighted-average period of 0.89 years. At December 31, 2013, approximately 0.3 million performance deferred shares with a grant date weighted-average fair value of \$38.06 per share were vested, but not issued. These shares are scheduled to be issued in February 2014.

### 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. In 2013, 35,280 shares of restricted stock with a weighted-average fair value of \$34.46 per share were issued under this plan. The restricted stock issued under this plan cannot be sold, assigned, pledged or otherwise transferred by the non-employee director, until the director is no longer a member of the Board.

## NOTE 21 – 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, 2013.

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 and restricted stock. The number of new common stock shares issued to employees and non-employee directors under the Company's stock-based compensation programs was 18.3 million in 2013, 18.7 million in 2012 and 12.2 million in 2011.

### 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 \$2,563 million at December 31, 2013 and \$2,332 million at December 31, 2012.

#### 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 \$44 million at December 31, 2013 and \$51 million at December 31, 2012.

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 \$132 million in 2013, \$107 million in 2012 and \$102 million in 2011. At December 31, 2013, 14.8 million shares out of a total 37.4 million shares held by the ESOP had been allocated to participants' accounts; 1.2 million shares were released but unallocated; and 21.4 million shares, at a fair value of \$951 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. Purchases under this program began in May 2013. In addition, during 2011 the Company received shares from employee and non-employee directors to pay taxes owed to the Company as a result of the exercise of stock options or the delivery of deferred stock. The total number of treasury shares purchased by the Company was 8.2 million in 2013, zero in 2012 and 0.5 million in 2011.

The Company may issue shares for options exercised as well as for the release of deferred and restricted stock out of treasury stock or as new common stock shares. The number of treasury shares issued to employees and non-employee directors under the Company's option and purchase programs was zero in 2013, zero in 2012 and 5.6 million in 2011.

Subsequent Event

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. As a result, the authorized amount of the current ongoing share repurchase program has increased to \$4.5 billion. The Company expects the share repurchase program to be completed in 2014.

NOTE 22 – INCOME TAXESDomestic and Foreign Components of Income Before Income Taxes

In millions	2013 (1)	2012 (2)	2011
Domestic	\$3,979	\$(401)	) \$386
Foreign	2,825	2,066	3,215
Total	\$6,804	\$1,665	\$3,601

In 2013, the domestic component of "Income Before Income Taxes" included a gain of \$2.195 billion related to the (1) K-Dow arbitration and a \$451 million gain related to the sale of Dow's Polypropylene Licensing and Catalysts business.

(2) In 2012, the domestic component of "Income Before Income Taxes" was significantly impacted by the Company's 1Q12 and 4Q12 restructuring charges.

Provision for Income Taxes

2013	2012	2011
------	------	------

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

In millions	Current	Deferred	Total	Current	Deferred	Total	Current	Deferred	Total
Federal	\$805	\$278	\$1,083	\$241	\$(312)	\$(71)	\$36	\$(244)	\$(208)
State and local	42	(73)	(31)	9	(10)	(1)	12	(13)	(1)
Foreign	1,028	(92)	936	780	(143)	637	768	258	1,026
Total	\$1,875	\$113	\$1,988	\$1,030	\$(465)	\$565	\$816	\$1	\$817

Table of Contents

## Reconciliation to U.S. Statutory Rate

In millions	2013	2012	2011
Taxes at U.S. statutory rate	\$2,381	\$583	\$1,260
Equity earnings effect	(276)	(115)	(459)
Foreign income taxed at rates other than 35% (1)	(76)	(76)	(242)
U.S. tax effect of foreign earnings and dividends	102	13	218
Goodwill impairment losses	—	77	—
Discrete equity earnings (2)	—	48	—
Change in permanent reinvestment assertions	—	(236)	—
Change in valuation allowances	(197)	135	367
Unrecognized tax benefits	243	122	35
Federal tax accrual adjustments	29	4	8
Sale of a contract manufacturing subsidiary (3)	—	—	(231)
Joint venture reorganization	—	—	(95)
Gain from K-Dow arbitration (4)	(212)	—	—
Other – net	(6)	10	(44)
Total tax provision	\$1,988	\$565	\$817
Effective tax rate	29.2	% 33.9	% 22.7

(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) The Company recognized a tax benefit of \$231 million related to the sale of a contract manufacturing subsidiary, which was reduced by a \$95 million valuation allowance in 2011.

(4) 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 14 for further information.

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.

The tax rate for 2012 was negatively impacted by a change in the geographic mix of earnings, notably a decrease in earnings in Europe and an increase in earnings in the United States, as well as reductions in equity earnings. Equity earnings were further impacted by asset impairment and restructuring charges at Dow Corning. Additionally, the Company's impairment of Dow Formulated Systems goodwill and the impairment of the long-lived assets of Dow Kokam LLC received minimal tax relief. The tax rate was favorably impacted by a change in the permanent reinvestment assertions of certain affiliates in Europe and Asia Pacific; however, this was primarily offset by unfavorable adjustments to uncertain tax positions and valuation allowances. These factors resulted in an effective tax rate of 33.9 percent for 2012.

The tax rate for 2011 was positively impacted by a high level of equity earnings as a percentage of total earnings, earnings in foreign locations taxed at rates less than the U.S. statutory rate, the sale of a contract manufacturing subsidiary and the reorganization of a joint venture and was negatively impacted by a \$264 million valuation allowance recorded in the fourth quarter of 2011. The valuation allowance was recorded against the deferred tax assets of two Dow entities in Brazil. As a result of the global recession in 2008-2009, coupled with rapidly deteriorating isocyanate industry conditions and increasing local costs, these two entities were in a three-year cumulative pretax



operating loss position at December 31, 2011. While the Company expects to realize the tax loss carryforwards generated by these operating losses based on several factors - including forecasted margin expansion resulting from improving economic conditions, higher industry growth rates in Brazil, improving Dow operating rates, and a restructuring of legal entities to maximize the use of existing tax loss carryforwards - Dow was unable to overcome the negative evidence of recent cumulative operating losses; and at December 31, 2011, the Company could not assert it was more likely than not that it will realize its deferred tax assets in the two Brazilian entities. Accordingly, the Company established the valuation allowance against the deferred tax assets of these companies in the fourth quarter of 2011. If in the future, as a result of the Company's plans and expectations, one or both of these entities generates sufficient profitability such that the evaluation of the recoverability of the deferred tax assets changes, the valuation allowance could be reversed in whole or in part in a future period. These factors resulted in an effective tax rate of 22.7 percent for 2011.

Table of Contents

Deferred Tax Balances at December 31 In millions	2013		2012	
	Deferred Tax Assets (1)	Deferred Tax Liabilities	Deferred Tax Assets (1)	Deferred Tax Liabilities
Property	\$62	\$2,165	\$58	\$2,128
Tax loss and credit carryforwards	2,012	—	1,954	—
Postretirement benefit obligations	3,619	1,150	4,900	1,291
Other accruals and reserves	1,901	392	2,167	329
Intangibles	113	827	218	994
Inventory	217	197	240	179
Long-term debt	—	600	—	599
Investments	137	111	317	183
Other – net	1,143	794	1,168	642
Subtotal	\$9,204	\$6,236	\$11,022	\$6,345
Valuation allowances	(1,112)	) —	(1,399)	) —
Total	\$8,092	\$6,236	\$9,623	\$6,345

(1) Included in current deferred tax assets are prepaid tax assets totaling \$205 million in 2013 and \$218 million in 2012.

Gross operating loss carryforwards amounted to \$11,435 million at December 31, 2013 and \$10,436 million at December 31, 2012. At December 31, 2013, \$1,452 million of the operating loss carryforwards were subject to expiration in 2014 through 2018. The remaining operating loss carryforwards expire in years beyond 2018 or have an indefinite carryforward period. Tax credit carryforwards at December 31, 2013 amounted to \$124 million (\$226 million at December 31, 2012), net of uncertain tax positions, of which \$4 million is subject to expiration in 2014 through 2018. The remaining tax credit carryforwards expire in years beyond 2018 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 \$1,112 million at December 31, 2013 and \$1,399 million at December 31, 2012.

Undistributed earnings of foreign subsidiaries and related companies that are deemed to be permanently invested amounted to \$16,139 million at December 31, 2013, \$14,504 million at December 31, 2012 and \$12,741 million at December 31, 2011. It is not practicable to calculate the unrecognized deferred tax liability on undistributed earnings.

## Total Gross Unrecognized Tax Benefits

In millions	2013	2012	2011
Balance at January 1	\$409	\$339	\$319
Increases related to positions taken on items from prior years	385	66	5
Decreases related to positions taken on items from prior years	(137)	) (32)	) (11)
Increases related to positions taken in the current year	10	53	70
Settlement of uncertain tax positions with tax authorities	(393)	) (9)	) (21)
Decreases due to expiration of statutes of limitations	(8)	) (8)	) (23)
Balance at December 31	\$266	\$409	\$339

At December 31, 2013, the total amount of unrecognized tax benefits was \$266 million (\$409 million at December 31, 2012), of which \$257 million would impact the effective tax rate, if recognized (\$392 million at December 31, 2012).

Interest and penalties associated with uncertain tax positions, including the matters that resulted in the adjustment of uncertain tax positions, are recognized as components of the “Provision for income taxes,” and totaled a benefit of

\$71 million in 2013, a charge of \$92 million in 2012 and a charge of \$21 million in 2011. The Company's accrual for interest and penalties was \$81 million at December 31, 2013 and \$131 million at December 31, 2012.

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.

Table of Contents

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	
	2013	2012
Argentina	2007	2006
Brazil	2009	2008
Canada	2009	2008
France	2011	2010
Germany	2006	2006
Italy	2008	2003
The Netherlands	2012	2012
Spain	2008	2008
Switzerland	2009	2009
United Kingdom	2011	2008
United States:		
Federal income tax	2004	2004
State and local income tax	2004	2004

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, 2013 may increase or decrease in the next twelve months by approximately \$80 million 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 \$105 million at December 31, 2013 and \$151 million at December 31, 2012. 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 23 – ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

The following table provides an analysis of the changes in accumulated other comprehensive income (loss) for the years ended December 31, 2013, 2012 and 2011:

## Accumulated Other Comprehensive Income (Loss)

In millions	2013	2012	2011
Unrealized Gains on Investments at beginning of year	\$147	\$78	\$111
Net change in unrealized gains (losses) (net of tax of \$25, \$29, \$(8))	55	84	(12 )
Reclassification to earnings - Net sales (net of tax of \$(20), \$(8), \$(15)) (1)	(42 )	(13 )	(25 )
Reclassification to earnings - Sundry income (expense) - net (net of tax of \$-, \$(1), \$(2)) (1)	—	(2 )	4 )
Balance at end of period	\$160	\$147	\$78
Cumulative Translation Adjustments at beginning of year	328	72	367
Translation adjustments (net of tax of \$(6), \$97, \$(26))	169	256	(262 )
Reclassification to earnings - Sundry income (expense) - net (2)	(21 )	—	(33 )
Balance at end of period	\$476	\$328	\$72
Pension and Other Postretirement Benefit Plans at beginning of year	(7,995 )	(6,134 )	(4,871 )
Prior service credit arising during period (net of tax of \$1, \$-, \$1) (3)	5	—	1
Net gain (loss) arising during period (net of tax of \$876, \$(1,037), \$(657)) (3)	1,984	(2,222 )	(1,524 )
Amortization of prior service cost included in net periodic pension costs (net of tax of \$6, \$7, \$8) (3)	15	15	19
Amortization of net loss included in net periodic pension costs (net of tax of \$266, \$174, \$130) (3)	531	346	241
Balance at end of period	\$(5,460 )	\$(7,995 )	\$(6,134 )
Accumulated Derivative Gain (Loss) at beginning of year	4	(12 )	(6 )
Net hedging results	10	(7 )	(1 )
Reclassification to earnings - Cost of sales (net of tax of \$(8), \$13, \$(4)) (1) (4)	(17 )	23	(5 )
Balance at end of period	\$(3 )	\$4	\$(12 )
Total accumulated other comprehensive loss	\$(4,827 )	\$(7,516 )	\$(5,996 )

(1) Tax amounts are included in "Provision for income taxes" in the consolidated statements of income.

(2) Reclassification resulted from transactions that qualified as a complete liquidation of an investment in a foreign entity.

(3) See Note 17 for additional information.

(4) Accumulated Derivative Gain (Loss) for 2012 and 2011 was presented in accordance with newly implemented ASU 2013-02.

## NOTE 24 – 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 six 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 the intersection of chemical, physical 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

## Table of Contents

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 2013, Dow had annual sales of more than \$57 billion and employed approximately 53,000 people worldwide. The Company's more than 6,000 products are manufactured at 201 sites in 36 countries across the globe. The Company conducts its worldwide operations through global businesses, which are reported in six operating segments: Electronic and Functional Materials, Coatings and Infrastructure Solutions, Agricultural Sciences, Performance Materials, Performance Plastics and Feedstocks and Energy.

### Electronic and Functional Materials

The Electronic and Functional Materials segment consists of two businesses – Dow Electronic Materials and Functional Materials – and includes a portion of the Company's share of the results of Dow Corning Corporation, a joint venture of the Company.

Dow Electronic Materials is a leading global supplier of enabling materials for applications such as consumer electronic devices, flat-panel displays and telecommunications. The business produces materials for chemical mechanical planarization ("CMP"); materials used in the production of electronic displays, including films and filters; metalorganic precursors for light-emitting diodes ("LEDs"); organic light-emitting diode ("OLED") materials; 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 includes Display Technologies, Growth Technologies, Interconnect Technologies and Semiconductor Technologies.

The Functional Materials portfolio of businesses creates performance-enhancing solutions that enable customers to differentiate their products in the global pharmaceutical, food, water, energy and home and personal care markets. This group also provides key materials for industrial uses around the world. Functional Materials includes Dow Consumer and Industrial Solutions, Dow Microbial Control and Dow Pharma and Food Solutions.

### Coatings and Infrastructure Solutions

Coatings and Infrastructure Solutions segment consists of the following businesses: Dow Building and Construction, Dow Coating Materials, Dow Water and Process Solutions, and Performance Monomers; and includes a portion of the Company's share of the results of Dow Corning Corporation, a joint venture of the Company. These businesses utilize advanced technology to deliver products ranging from low volatile organic compound ("VOC") coatings to building insulation and adhesives to water technologies.

### Agricultural Sciences

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

### Performance Materials

The Performance Materials segment consists of the following businesses: Amines; Chlorinated Organics; Dow Automotive Systems; Dow Formulated Systems; Dow Oil, Gas & Mining; Dow Plastics Additives; Epoxy; Oxygenated Solvents; Polyglycols, Surfactants & Fluids; Polyurethanes; and Propylene Oxide/Propylene Glycol. These businesses produce a wide variety of products with a broad range of applications – adhesives, aircraft and runway deicing fluids, automotive interiors and exteriors, carpeting, footwear, home furnishings, mattresses, personal care products, transportation, waterproofing membranes and wind turbines. The segment also includes the results of Map Ta Phut Olefins Company Limited and a portion of the results of Sadara Chemical Company, both joint ventures

of the Company.

Divestiture:

The Performance Materials segment included Dow Haltermann until it was fully divested at December 31, 2011.

134

---



## Table of Contents

### Performance Plastics

The Performance Plastics segment is a solutions-oriented portfolio comprised of Dow Elastomers, Dow Electrical and Telecommunications, and Dow Packaging and Specialty Plastics. These businesses serve high-growth, high-value sectors where Dow's world-class technology and rich innovation pipeline create new competitive advantages for customers and the entire value chain. These businesses also have complementary market reach, asset capabilities and technology platforms that provide immediate and long-term growth synergies. The Performance Plastics segment also includes the results of Univation Technologies, LLC, as well as a portion of the results of EQUATE Petrochemical Company K.S.C., The Kuwait Olefins Company K.S.C., The SCG-Dow Group and Sadara Chemical Company, all joint ventures of the Company.

### Divestitures:

On December 2, 2013, the Company sold its Polypropylene Licensing and Catalysts business to W. R. Grace & Co. On September 30, 2011, the Company sold its global Polypropylene business to Braskem SA. These businesses were reported in the Performance Plastics segment through the date of the divestiture. See Note 5 for additional information on these divestitures.

### Feedstocks and Energy

The Feedstocks and Energy segment includes the following businesses: Chlor-Alkali/Chlor-Vinyl; Energy; Ethylene Oxide/Ethylene Glycol ("EO/EG"); and Hydrocarbons. The Chlor-Alkali/Chlor-Vinyl business focuses on the production of chlorine for consumption by downstream Dow derivatives, as well as production, marketing and supply of ethylene dichloride, vinyl chloride monomer and caustic soda. These products are used for applications such as alumina production, pulp and paper manufacturing, soaps and detergents, and building and construction. The Energy business supplies power, steam and other utilities, principally for use in Dow's global operations. The EO/EG business is the world's largest producer of purified ethylene oxide, principally used in Dow's downstream performance derivatives. Dow is also a key supplier of ethylene glycol to MEGlobal, a 50:50 joint venture and world leader in the manufacture and marketing of merchant monoethylene glycol and diethylene glycol. Ethylene glycol is used in polyester fiber, polyethylene terephthalate for food and beverage container applications, polyester film, and aircraft and runway deicers. The Hydrocarbons business encompasses the procurement of natural gas liquids and crude oil-based raw materials, as well as the supply of monomers, principally for use in Dow's global operations. The business regularly sells its by-products and buys and sells products in order to balance regional production capabilities and derivative requirements. The business also sells products to certain Dow joint ventures. Also included in the Feedstocks and Energy segment are the results of MEGlobal and a portion of the results of EQUATE Petrochemical Company K.S.C., The Kuwait Olefins Company K.S.C., and The SCG-Dow Group, all joint ventures of the Company.

### Corporate

Corporate includes the results of insurance company operations; results of Ventures (which includes new business incubation platforms focused on identifying and pursuing new commercial opportunities); Venture Capital; gains and losses on sales of financial assets; stock-based compensation expense and severance costs; asbestos-related defense and resolution costs; foreign exchange results; non-business aligned technology licensing and catalyst activities; environmental operations; enterprise level mega project activities; and certain corporate overhead costs and cost recovery variances not allocated to the operating segments.

Table of Contents

Operating Segment Information	Electronic and Functional Materials	Coatings and Infra-structure Solutions	Ag Sciences	Perf Materials	Perf Plastics	Feed-stocks and Energy	Corp	Total
In millions								
2013								
Sales to external customers	\$4,591	\$ 7,132	\$ 7,137	\$13,415	\$14,645	\$ 9,854	\$306	\$57,080
Intersegment revenues (1)	—	—	—	97	—	40	(137 )	—
Equity in earnings (losses) of nonconsolidated affiliates	112	121	6	(64 )	359	539	(39 )	1,034
Restructuring charges (credits) (2)	—	(1 )	—	(15 )	(6 )	—	—	(22 )
EBITDA (3)	1,040	832	969	1,436	4,549	858	861	10,545
Total assets	11,067	11,438	7,058	9,850	10,920	5,772	13,396	69,501
Investment in nonconsolidated affiliates	579	1,140	88	100	1,289	224	1,081	4,501
Depreciation and amortization	425	466	189	666	707	128	100	2,681
Capital expenditures	139	181	319	159	332	1,172	—	2,302
2012								
Sales to external customers	\$4,481	\$ 6,898	\$ 6,382	\$13,608	\$14,479	\$ 10,695	\$243	\$56,786
Intersegment revenues (1)	—	—	—	107	—	43	(150 )	—
Equity in earnings (losses) of nonconsolidated affiliates	94	50	1	(92 )	134	452	(103 )	536
Goodwill impairment loss (4)	—	—	—	220	—	—	—	220
Restructuring charges (credits) (2)	65	53	—	378	26	7	814	1,343
EBITDA (3)	958	823	977	1,036	3,018	718	(1,939)	5,591
Total assets	11,448	11,630	6,367	11,073	11,193	5,276	12,618	69,605
Investment in nonconsolidated affiliates	462	1,041	86	167	1,264	128	973	4,121
Depreciation and amortization	420	476	176	703	673	141	109	2,698
Capital expenditures	268	269	316	287	264	1,163	47	2,614
2011								
Sales to external customers	\$4,599	\$ 7,200	\$ 5,655	\$14,647	\$16,257	\$ 11,302	\$325	\$59,985
Intersegment revenues (1)	—	—	—	91	—	23	(114 )	—
Equity in earnings (losses) of nonconsolidated affiliates	104	321	4	(31 )	303	561	(39 )	1,223
Acquisition-related integration expenses (5)	—	—	—	—	—	—	31	31
EBITDA (3)	1,084	1,167	913	1,748	3,440	940	(1,507)	7,785
Total assets	11,386	11,935	5,746	10,936	11,583	5,116	12,522	69,224
Investment in nonconsolidated affiliates	350	1,104	50	198	1,376	127	200	3,405
Depreciation and amortization	439	548	167	635	754	212	128	2,883
Capital expenditures	247	365	352	567	251	886	19	2,687

(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 3 for information regarding restructuring charges.

(3) A reconciliation of EBITDA to "Income Before Income Taxes" is provided below.

(4) See Note 9 for information regarding the goodwill impairment loss.

(5) See Note 4 for information regarding acquisition-related integration expenses.

Reconciliation of EBITDA to “Income Before Income Taxes” In millions	2013	2012	2011
EBITDA	\$10,545	\$5,591	\$7,785
- Depreciation and amortization	2,681	2,698	2,883
+ Interest income	41	41	40
- Interest expense and amortization of debt discount	1,101	1,269	1,341
Income Before Income Taxes	\$6,804	\$1,665	\$3,601

136

---

Table of Contents

The Company operates 201 manufacturing sites in 36 countries. The United States is home to 73 of these sites, representing 53 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	United States	Europe, Middle East and Africa	Rest of World	Total
In millions				
2013				
Sales to external customers	\$18,712	\$18,244	\$20,124	\$57,080
Long-lived assets	\$9,320	\$3,210	\$4,924	\$17,454
2012				
Sales to external customers	\$18,391	\$19,185	\$19,210	\$56,786
Long-lived assets	\$8,953	\$3,374	\$5,193	\$17,520
2011				
Sales to external customers	\$19,374	\$20,840	\$19,771	\$59,985
Long-lived assets	\$8,651	\$3,546	\$5,102	\$17,299

Table of ContentsThe Dow Chemical Company and Subsidiaries  
Selected Quarterly Financial DataIn millions, except per share amounts  
(Unaudited)

2013	1st	2nd	3rd	4th	Year	
Net sales	\$ 14,383	\$ 14,577	\$ 13,734	\$ 14,386	\$ 57,080	
Cost of sales	11,707	12,103	11,716	12,068	47,594	
Gross margin	2,676	2,474	2,018	2,318	9,486	
Restructuring charges (credits)	—	—	—	(22	) (22	)
Net income available for common stockholders	550	2,340	594	963	4,447	
Earnings per common share - basic (1)	0.46	1.96	0.50	0.80	3.72	
Earnings per common share - diluted (1) (2)	0.46	1.87	0.49	0.79	3.68	
Common stock dividends declared per share of common stock	0.32	0.32	0.32	0.32	1.28	
Market price range of common stock: (3)						
High	34.83	36.00	41.08	44.99	44.99	
Low	30.63	29.81	32.05	38.04	29.81	

In millions, except per share amounts  
(Unaudited)

2012	1st	2nd	3rd	4th	Year
Net sales	\$ 14,719	\$ 14,513	\$ 13,637	\$ 13,917	\$ 56,786
Cost of sales	12,285	12,200	11,368	11,939	47,792
Gross margin	2,434	2,313	2,269	1,978	8,994
Goodwill impairment loss	—	—	—	220	220
Restructuring charges	357	—	—	986	1,343
Net income (loss) available for common stockholders	412	649	497	(716	) 842
Earnings (loss) per common share - basic (1)	0.35	0.55	0.42	(0.61	) 0.71
Earnings (loss) per common share - diluted (1)	0.35	0.55	0.42	(0.61	) 0.70
Common stock dividends declared per share of common stock	0.25	0.32	0.32	0.32	1.21
Market price range of common stock: (3)					
High	36.00	36.08	32.48	32.95	36.08
Low	29.27	29.27	28.45	27.45	27.45

See Notes to the Consolidated Financial Statements.

(1) Due to an increase in the share count and the allocation of income to participating securities, the sum of the four quarters may not equal the earnings per share amount calculated for the year.

(2)

For the quarter ended June 30, 2013 and the year ended December 31, 2013, 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 13 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.

139

---

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, 2013, 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 (1992).

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 14, 2014



/s/ ANDREW N. LIVERIS

Andrew N. Liveris  
President, Chief Executive Officer and  
Chairman of the Board

/s/ WILLIAM H. WEIDEMAN

William H. Weideman  
Chief Financial Officer and  
Executive Vice President

/s/ RONALD C. EDMONDS

Ronald C. Edmonds  
Vice President and Controller

140

---

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, 2013, based on criteria established in Internal Control - Integrated Framework (1992) 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, 2013, based on the criteria established in Internal Control - Integrated Framework (1992) 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, 2013 and our report dated February 14, 2014 expressed an unqualified opinion on those financial statements and financial statement schedule.

/S/ DELOITTE & TOUCHE LLP

Deloitte & Touche LLP

Midland, Michigan

February 14, 2014



Table of Contents

The Dow Chemical Company and Subsidiaries  
PART II, Item 9B. Other Information.

OTHER INFORMATION

None.

142

---

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 15, 2014, 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 15, 2014, 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 15, 2014, 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 15, 2014, 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 15, 2014, 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 15, 2014, 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 15, 2014, 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 2013 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
10(a)(ii)	An Amendment to The Dow Chemical Company Executives' Supplemental Retirement Plan, effective as of July 19, 2013.
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 at Beginning of Year	Charged to Costs and Expenses	Charged to Other Accounts	Deductions from Reserves	Balance at End of Year
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
2012					
RESERVES DEDUCTED FROM ASSETS TO WHICH THEY APPLY:					
For doubtful receivables	\$121	\$81	\$11	(1) \$92	(2) \$121
Other investments and noncurrent receivables	\$458	\$25	\$—	\$16	\$467
Deferred tax assets	\$1,152	\$335	\$—	\$88	\$1,399
2011					
RESERVES DEDUCTED FROM ASSETS TO WHICH THEY APPLY:					
For doubtful receivables	\$128	\$16	\$2	(1) \$25	(2) \$121
Other investments and noncurrent receivables	\$518	\$88	\$—	\$148	\$458
Deferred tax assets	\$682	\$477	\$—	\$7	\$1,152

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 11 and 15 to the Consolidated Financial Statements for further information.

(2)	2013	2012	2011
Deductions represent:			
Notes and accounts receivable written off	\$28	\$62	\$18
Reclassification of reserve for cash discounts and returns to accounts receivable	—	21	—
Credits to profit and loss	7	1	3
Sale of trade accounts receivable (see Note 15 to the Consolidated Financial Statements)	1	3	—
Miscellaneous other	2	5	4
	\$38	\$92	\$25

Table of Contents

The 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 13, 2014

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. A. ALLEMANG A. A. Allemang, Director	By /S/ A. N. LIVERIS A. N. Liveris, Director, President, Chief Executive Officer and Chairman of the Board
Date February 13, 2014	Date February 13, 2014

By /S/ A. BANGA A. Banga, Director	By /S/ P. POLMAN P. Polman, Director
Date February 13, 2014	Date February 13, 2014

By /S/ J. K. BARTON J. K. Barton, Director	By /S/ D. H. REILLEY D. H. Reilley, Director
Date February 13, 2014	Date February 13, 2014

By /S/ J. A. BELL J. A. Bell, Director	By /S/ J. M. RINGLER J. M. Ringler, Director
Date February 13, 2014	Date February 13, 2014

By /S/ R. C. EDMONDS R. C. Edmonds, Vice President and Controller	By /S/ R. G. SHAW R. G. Shaw, Director
Date February 13, 2014	Date February 13, 2014

By /S/ J. M. FETTIG J. M. Fettig, Lead Director	By /S/ W. H. WEIDEMAN W. H. Weideman, Chief Financial Officer and Executive Vice President
Date February 13, 2014	Date February 13, 2014





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: ACRY SOL, ADSORBSIA, AFFINITY, AMBERJET, AMBERLYST, AQUASET, AVANSE, DOW, DOWEX, EDI, ELITE, EVOQUE, FILMTEC, FORMASHIELD, FROTH-PAK, GREAT STUFF, HARVISTA, NORDEL, OPTIPORE, PRIMAL, RHOPLEX, RIPELOCK, SILVADUR, STYROFOAM, TAMOL, TEQUATIC, UNIPOL, WALOCEL, XENERGY

The following trademarks or service marks of Dow AgroSciences LLC and certain affiliated companies of Dow AgroSciences LLC appear in this report: BROADWAY, BRODBECK, CLINCHER, DAIRYLAND SEED, DITHANE, ENLIST, FENCER, GARLON, HYLAND, ISOCLAST, LONTREL, LORSBAN, MILESTONE, MYCOGEN, N-SERVE, NEXERA, PFISTER, PHYTOGEN, PRAIRIE BRAND SEEDS, PRIMUS, RADIANT, REFUGE ADVANCED, SENTRICON, STARANE, SURESTART, TELONE, TORDON, TRACER, TRIUMPH

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

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.

The Restated Certificate of Incorporation of The Dow Chemical Company as filed with the Secretary of  
3(i) 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.

Certificate of Designations for the Cumulative Convertible Perpetual Preferred Stock, Series A, as originally  
3(i)(a) 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.

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.

4 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  
Company, 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.

Table of Contents

The Dow Chemical Company and Subsidiaries  
Exhibit Index

EXHIBIT NO. DESCRIPTION

10(a) The Dow Chemical Company Executives' Supplemental Retirement Plan, as amended, restated and effective as 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.

10(a)(i) An Amendment to The Dow Chemical Company Executives' Supplemental Retirement Plan, effective as of 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.

10(a)(ii) An Amendment to The Dow Chemical Company Executives' Supplemental Retirement Plan, effective as of July 19, 2013.

10(c) 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) 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(d) Rohm and Haas Company Non-Qualified Retirement Plan, as amended and restated effective as of January 1, 2009, incorporated by reference to Exhibit 10.1 to The Dow Chemical Company Current Report on Form 8-K filed on February 17, 2011.

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.

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) The Dow Chemical Company 1994 Non-Employee Directors' Stock Plan, incorporated by reference to Exhibit 10(i) to The Dow Chemical Company Quarterly Report on Form 10-Q for the quarter ended March 31, 2009.

10(k) A written description of the 1998 Non-Employee Director's Stock Incentive Plan, incorporated by reference to the definitive Proxy Statement for the Annual Meeting of Stockholders of The Dow Chemical Company held on May 14, 1998.

A written description of compensation for Directors of The Dow Chemical Company, incorporated by reference 10(l) to the definitive Proxy Statement for the Annual Meeting of Stockholders of The Dow Chemical Company to be held on May 15, 2014.

Table of Contents

The Dow Chemical Company and Subsidiaries  
Exhibit Index

EXHIBIT NO. DESCRIPTION

A written description of the manner in which compensation is set for the Executive Officers of The Dow  
10(m)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 15, 2014.

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  
10(o)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 15, 2014.

The Dow Chemical Company Elective Deferral Plan (for deferrals made through December 31, 2004), as  
10(p)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.

An Amendment to The Dow Chemical Company Elective Deferral Plan (for deferrals made through  
10(p)(i)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.

The Rohm and Haas Company Non-Qualified Savings Plan (for deferrals made through December 31, 2004),  
10(q)amended and restated effective as of January 1, 2010, incorporated by reference to Exhibit 10.2 to The Dow  
Chemical Company Current Report on Form 8-K filed on February 18, 2010.

The Rohm and Haas Company Non-Qualified Savings Plan (for deferrals made after January 1, 2005), amended  
10(r)and restated effective as of January 1, 2010, incorporated by reference to Exhibit 10.3 to The Dow Chemical  
Company Current Report on Form 8-K filed on February 18, 2010.

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  
10(s)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.

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  
10(t)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.

Amended and Restated 2003 Non-Employee Directors' Stock Incentive Plan, adopted by the Board of Directors  
10(u)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.

10(v)Non-Qualified Stock Option Agreement Pursuant to The Dow Chemical Company 1994 Non-Employee  
Directors' Stock Plan, incorporated by reference to Exhibit 10.1 to The Dow Chemical Company Current Report

on Form 8-K filed on September 3, 2004.

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(ff) Purchase and Sale Agreement dated as of September 30, 2005 between Catalysts, Adsorbents and Process Systems, Inc. and Honeywell Specialty Materials LLC, incorporated by reference to Exhibit 10(ff) to The Dow Chemical Company Quarterly Report on Form 10-Q for the quarter ended September 30, 2005.

10(hh) Employment agreement dated June 18, 2005, between William F. Banholzer and The Dow Chemical Company, incorporated by reference to the Current Report on Form 8-K filed on March 16, 2006.

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.

Investment Agreement, dated as of October 27, 2008, between The Dow Chemical Company and The Kuwait  
10(o)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.

151

---

Table of Contents

The Dow Chemical Company and Subsidiaries  
Exhibit Index

EXHIBIT NO. DESCRIPTION

10(ww) The 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 10.7 to The Dow Chemical Company Current Report on Form 8-K filed on February 18, 2010.

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.

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.

152

---

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.

99.3 Guarantee relating to the 5.60% Notes of Rohm and Haas Company, incorporated by reference to Exhibit 99.4 to The Dow Chemical Company Current Report on Form 8-K filed on April 1, 2009.

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.DEFBRL Taxonomy Extension Definition Linkbase Document.

101.LABXBRL Taxonomy Extension Label Linkbase Document.

101.PREXBRL Taxonomy Extension Presentation Linkbase Document.

153