

PRAXAIR INC  
Form 10-K  
February 24, 2016  
Table of Contents

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

---

FORM 10-K

---

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

For the fiscal year ended December 31, 2015

OR

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_  
Commission file number 1-11037

---

Praxair, Inc.

---

Praxair, Inc.

39 Old Ridgebury Road  
Danbury, Connecticut 06810-5113  
Tel. (203) 837-2000

State of incorporation: Delaware  
IRS identification number: 06-124 9050

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

Title of each class:

Registered on:

Common Stock (\$0.01 par value)

New York Stock Exchange

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

---

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. 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 is not contained herein, and will not be contained, to the best of 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 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

Edgar Filing: PRAXAIR INC - Form 10-K

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 the voting and non-voting common stock held by non-affiliates as of June 30, 2015, was approximately \$34 billion (based on the closing sale price of the stock on that date as reported on the New York Stock Exchange).

At January 31, 2016, 284,836,117 shares of common stock of Praxair, Inc. were outstanding.

Documents incorporated by reference:

Portions of the Proxy Statement of Praxair, Inc., for its 2016 Annual Meeting of Shareholders, are incorporated in Part III of this report.

---

Table of Contents

PRAXAIR, INC.  
 ANNUAL REPORT ON FORM 10-K  
 For the fiscal year ended December 31, 2015  
 TABLE OF CONTENTS

	Page
Part I	
Item 1: <u>Business</u>	<u>3</u>
Item 1A: <u>Risk Factors</u>	<u>6</u>
Item 1B: <u>Unresolved Staff Comments</u>	<u>10</u>
Item 2: <u>Properties</u>	<u>10</u>
Item 3: <u>Legal Proceedings</u>	<u>11</u>
Item 4: <u>Mine Safety Disclosures</u>	<u>11</u>
Part II	
Item 5: <u>Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	<u>12</u>
Item 6: <u>Selected Financial Data</u>	<u>14</u>
Item 7: <u>Management’s Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>16</u>
Item 7A: <u>Quantitative and Qualitative Disclosures About Market Risk</u>	<u>50</u>
Item 8: <u>Financial Statements and Supplementary Data</u>	<u>51</u>
Item 9: <u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>	<u>102</u>
Item 9A: <u>Controls and Procedures</u>	<u>102</u>
Item 9B: <u>Other Information</u>	<u>102</u>
Part III	
Item 10: <u>Directors, Executive Officers and Corporate Governance</u>	<u>103</u>
Item 11: <u>Executive Compensation</u>	<u>103</u>
Item 12: <u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	<u>103</u>
Item 13: <u>Certain Relationships and Related Transactions and Director Independence</u>	<u>104</u>
Item 14: <u>Principal Accounting Fees and Services</u>	<u>104</u>
Part IV	
Item 15: <u>Exhibits and Financial Statement Schedules</u>	<u>105</u>
<u>Signatures</u>	<u>106</u>
<u>Index to Exhibits</u>	<u>107</u>



Table of Contents

Praxair, Inc. and Subsidiaries

PART I

ITEM 1. BUSINESS

General

Praxair, Inc. (Praxair or the company) was founded in 1907 and became an independent publicly traded company in 1992. Praxair was the first company in the United States to produce oxygen from air using a cryogenic process and continues to be a major technological innovator in the industrial gases industry.

Praxair is the largest industrial gas supplier in North and South America, is growing in Asia, and has strong, well-established businesses in Europe. Praxair's primary products in its industrial gases business are atmospheric gases (oxygen, nitrogen, argon, rare gases) and process gases (carbon dioxide, helium, hydrogen, electronic gases, specialty gases, acetylene). The company also designs, engineers, and builds equipment that produces industrial gases primarily for internal use. The company's surface technologies segment, operated through Praxair Surface Technologies, Inc., supplies wear-resistant and high-temperature corrosion-resistant metallic and ceramic coatings and powders. Praxair's sales were \$10,776 million, \$12,273 million, and \$11,925 million for 2015, 2014, and 2013, respectively. In 2015, sales were negatively impacted by foreign currency translation versus 2014. Refer to Item 7, Management's Discussion and Analysis, for a discussion of consolidated sales and Note 18 to the consolidated financial statements for additional information related to Praxair's reportable segments.

Praxair serves a diverse group of industries including healthcare, petroleum refining, manufacturing, beverage carbonation, fiber-optics, steel making, aerospace, chemicals and water treatment. In 2015, 94% of sales were generated in four geographic segments (North America, Europe, South America and Asia) primarily from the sale of industrial gases, with the balance generated from the surface technologies segment. Praxair provides a competitive advantage to its customers by continuously developing new products and applications, which allow them to improve their productivity, energy efficiency and environmental performance.

Industrial Gases Products and Manufacturing Processes

Atmospheric gases are the highest volume products produced by Praxair. Using air as its raw material, Praxair produces oxygen, nitrogen and argon through several air separation processes of which cryogenic air separation is the most prevalent. As a pioneer in the industrial gases industry, Praxair is a leader in developing a wide range of proprietary and patented applications and supply systems technology. Praxair also led the development and commercialization of non-cryogenic air separation technologies for the production of industrial gases. These technologies open important new markets and optimize production capacity for the company by lowering the cost of supplying industrial gases. These technologies include proprietary vacuum pressure swing adsorption ("VPSA") and membrane separation to produce gaseous oxygen and nitrogen, respectively. Praxair also manufactures precious metal and ceramic sputtering targets used primarily in the production of semiconductors.

Process gases, including carbon dioxide, hydrogen, carbon monoxide, helium, specialty gases and acetylene are produced by methods other than air separation. Most carbon dioxide is purchased from by-product sources, including chemical plants, refineries and industrial processes and is recovered from carbon dioxide wells. Carbon dioxide is processed in Praxair's plants to produce commercial and food-grade carbon dioxide. Hydrogen and carbon monoxide are produced by either steam methane reforming of natural gas or by purifying by-product sources obtained from the chemical and petrochemical industries. Most of the helium sold by Praxair is sourced from certain helium-rich natural gas streams in the United States, with additional supplies being acquired from outside the United States. Acetylene can be produced from calcium carbide and water; Praxair purchases a significant percentage as a chemical by-product.

Industrial Gases Distribution

There are three basic distribution methods for industrial gases: (i) on-site or tonnage; (ii) merchant or bulk liquid; and (iii) packaged or cylinder gases. These distribution methods are often integrated, with products from all three supply modes coming from the same plant. The method of supply is generally determined by the lowest cost means of meeting the customer's needs, depending upon factors such as volume requirements, purity, pattern of usage, and the form in which the product is used (as a gas or as a cryogenic liquid). Additionally, Praxair provides a number of services, such as maintenance of equipment, which are ancillary to the process of supplying product to customers.

On-site. Customers that require the largest volumes of product (typically oxygen, nitrogen and hydrogen) and that have a relatively constant demand pattern are supplied by cryogenic and process gas on-site plants. Praxair constructs plants on or adjacent to these customers' sites and supplies the product directly to customers by pipeline. On-site product supply contracts generally are total requirement contracts with terms typically ranging from 10-20 years and containing

3

---

Table of Contents

minimum purchase requirements and price escalation provisions. Many of the cryogenic on-site plants also produce liquid products for the merchant market. Therefore, plants are typically not dedicated to a single customer. Advanced air separation processes allow on-site delivery to customers with smaller volume requirements. Customers using these systems usually enter into requirement contracts with terms typically ranging from 5-15 years.

**Merchant.** The merchant business is generally associated with distributable liquid oxygen, nitrogen, argon, carbon dioxide, hydrogen and helium. The deliveries generally are made from Praxair's plants by tanker trucks to storage containers at the customer's site which are owned and maintained by Praxair and leased to the customer. Due to distribution cost, merchant oxygen and nitrogen generally have a relatively small distribution radius from the plants at which they are produced. Merchant argon, hydrogen and helium can be shipped much longer distances. The customer agreements used in the merchant business are usually three-to seven-year requirement contracts.

**Packaged Gases.** Customers requiring small volumes are supplied products in metal containers called cylinders, under medium to high pressure. Packaged gases include atmospheric gases, carbon dioxide, hydrogen, helium, acetylene and related products. Praxair also produces and distributes in cylinders a wide range of specialty gases and mixtures.

Cylinders may be delivered to the customer's site or picked up by the customer at a packaging facility or retail store. Packaged gases are generally sold under one to three-year supply contracts and through purchase orders.

A substantial amount of the cylinder gases sold in the United States is distributed by independent distributors that buy merchant gases in liquid form and repackage the products in their facilities. Packaged gas distributors, including Praxair, also distribute hardgoods and welding equipment purchased from independent manufacturers. Over time, Praxair has acquired a number of independent industrial gases and welding products distributors at various locations in the United States and continues to sell merchant gases to other independent distributors. Between its own distribution business, joint ventures and sales to independent distributors, Praxair is represented in 48 states, the District of Columbia and Puerto Rico.

**Surface Technologies**

Praxair Surface Technologies is a leading worldwide supplier of coating services and thermal spray consumables to customers in the aircraft, energy, printing, primary metals, petrochemical, textile, and other industries. Its coatings are used to provide wear resistance, corrosion protection, thermal insulation, and many other surface-enhancing functions which serve to extend component life, enable optimal performance, and reduce operating costs. It also manufactures a complete line of electric arc, plasma and wire spray, and high-velocity oxy-fuel ("HVOF") equipment.

**Inventories –** Praxair carries inventories of merchant and cylinder gases, hardgoods and coatings materials to supply products to its customers on a reasonable delivery schedule. On-site plants and pipeline complexes have limited inventory. Inventory obsolescence is not material to Praxair's business.

**Customers –** Praxair is not dependent upon a single customer or a few customers.

**International –** Praxair is a global enterprise with approximately 56% of its 2015 sales outside of the United States. It conducts industrial gases business through consolidated companies in Argentina, Bahrain, Belgium, Bolivia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Denmark, Dominican Republic, France, Germany, Ghana, India, Italy, Japan, Mexico, the Netherlands, Norway, Paraguay, Peru, Portugal, Puerto Rico, Russia, South Korea, Spain, Sweden, Taiwan, Thailand, United Arab Emirates, the United Kingdom, and Uruguay. Societa Italiana Acetilene & Derivati S.p.A. ("S.I.A.D."), an Italian company accounted for as an equity company, also has established positions in Austria, Bosnia, Bulgaria, Croatia, the Czech Republic, Hungary, Romania, Russia, Serbia, Slovakia, Slovenia and Ukraine. Refrigeration and Oxygen Company Limited ("ROC"), a Middle Eastern company accounted for as an equity company, has operations in the United Arab Emirates, Kuwait and Qatar. Praxair's surface technologies segment has operations in Brazil, Canada, China, France, Germany, India, Italy, Japan, Singapore, South Korea and the United Kingdom.

Praxair's international business is subject to risks customarily encountered in foreign operations, including fluctuations in foreign currency exchange rates, import and export controls, and other economic, political and regulatory policies of local governments. Also, see Item 1A. "Risk Factors" and Item 7A. "Quantitative and Qualitative Disclosures About Market Risk."

**Seasonality –** Praxair's business is generally not subject to seasonal fluctuations to any significant extent.

Research and Development – Praxair’s research and development is directed toward developing new and improved methods for the production and distribution of industrial gases and the development of new markets and applications for these gases. This results in the development of new advanced air separation and hydrogen process technologies and the frequent introduction of new industrial gas applications. Research and development for industrial gases is principally conducted at Tonawanda, New York; Burr Ridge, Illinois; Shanghai, China; and Bangalore, India.



Table of Contents

Praxair conducts research and development for its surface technologies to improve the quality and durability of coatings and the use of specialty powders for new applications and industries. Surface technologies research is conducted at Indianapolis, Indiana.

Patents and Trademarks – Praxair owns or licenses a large number of United States and foreign patents that relate to a wide variety of products and processes. Praxair’s patents expire at various times over the next 20 years. While these patents and licenses are considered important to our individual businesses, Praxair does not consider its business as a whole to be materially dependent upon any one particular patent, or patent license, or family of patents. Praxair also owns a large number of valuable trademarks. Only the "Praxair" trademark is important to our business as a whole.

Raw Materials and Energy Costs – Energy is the single largest cost item in the production and distribution of industrial gases. Most of Praxair’s energy requirements are in the form of electricity, natural gas and diesel fuel for distribution. The supply of energy has not been a significant issue in the geographic areas where the company conducts business. However, energy availability and price is unpredictable and may pose unforeseen future risks.

For carbon dioxide, carbon monoxide, helium, hydrogen, specialty gases and surface technologies, raw materials are largely purchased from outside sources. Praxair has contracts or commitments for, or readily available sources of, most of these raw materials; however, their long-term availability and prices are subject to market conditions.

Competition – Praxair operates within a highly competitive environment. Some of its competitors are larger in size and capital base than Praxair. Competition is based on price, product quality, delivery, reliability, technology and service to customers.

Major competitors in the industrial gases industry both in the United States and worldwide include Air Products and Chemicals, Inc., Airgas Inc., L’ Air Liquide S.A., and Linde AG. Principal competitors for the surface technologies business are Chromalloy Gas Turbine Corporation, a subsidiary of Sequa Corporation, Bodycote, PLC, and OC Oerlikon Corp AG. There are other surface coating competitors that compete on a local geography basis.

Employees and Labor Relations – As of December 31, 2015, Praxair had 26,657 employees worldwide. Of this number, 9,959 are employed in the United States. Praxair has collective bargaining agreements with unions at numerous locations throughout the world, which expire at various dates. Praxair considers relations with its employees to be good.

Environment – Information required by this item is incorporated herein by reference to the section captioned “Management’s Discussion and Analysis – Environmental Matters” in Item 7 of this 10-K.

Available Information – The company makes its periodic and current reports available, free of charge, on or through its website, [www.praxair.com](http://www.praxair.com), as soon as practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission ("SEC"). Investors may also access from the company website other investor information such as press releases and presentations. Information on the company’s website is not incorporated by reference herein.

In addition, the public may read and copy any materials filed with the SEC at the SEC’s Public Reference Room located at 100 F Street NE, Washington, D.C. 20549. The public may also obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains a website, [www.sec.gov](http://www.sec.gov), that contains reports, proxy information statements and other information regarding issuers that file electronically.

Executive Officers – The following Executive Officers have been elected by the Board of Directors and serve at the pleasure of the Board. It is expected that the Board will elect officers annually following each annual meeting of shareholders.

Stephen F. Angel, 60, is Chief Executive Officer of Praxair, Inc. since January 1, 2007, and Chairman since May 1, 2007. Before becoming the Chief Executive Officer, Mr. Angel served as President and Chief Operating Officer from March to December 2006, and as Executive Vice President from 2001 to March 2006. Prior to joining Praxair in 2001, Mr. Angel spent 22 years in a variety of management positions with General Electric. Mr. Angel is a director of PPG Industries, Inc. where he serves on the Officers-Directors Compensation Committee, and is the Chairman of the Technology and Environment Committee. He is also a member of the executive committee of The Business Council, the U.S. - Brazil CEO Forum, a member of the Board of the U.S. - China Business Council, and is a former director of the American Chemistry Council.

Guillermo Bichara, 41, was appointed Vice President, General Counsel and Corporate Secretary of Praxair, Inc. effective January 1, 2015. Prior to this, from 2013-2014, he was Associate General Counsel and Assistant Secretary. From 2011-2013, Mr. Bichara served as Associate General Counsel with responsibility for Praxair Europe, Praxair Mexico and corporate transactions. He was Vice President and General Counsel of Praxair Asia from 2007-2011, and joined Praxair in

Table of Contents

2006 as director of legal affairs at Praxair Mexico. Prior to joining Praxair, Mr. Bichara served as corporate counsel at CEMEX, Mexico's global leader in the building materials industry, and was a foreign associate and counsel, respectively, at the law firms of Skadden, Arps, Slate, Meagher & Flom and White & Case.

Elizabeth T. Hirsch, 62, is Vice President and Controller of Praxair, Inc. since December 2010. Prior to becoming Controller, she served as Praxair's Director of Investor Relations since 2002 and as Vice President of Investor Relations since October 2010. She joined Praxair in 1995 as Director of Corporate Finance and later served as Assistant Treasurer. Previously, she had fifteen years of experience in corporate banking, primarily at Manufacturers Hanover Trust Company.

Karen L. Keegans, 50, was appointed Vice President and Chief Human Resources officer in 2014. Ms. Keegans joined Praxair in 2012 as vice president, HR, North America, from Monsanto where she had spent the previous six years. While at Monsanto, Ms. Keegans had increasing HR leadership roles, gaining global exposure across all business areas and was most recently VP, HR, Global Manufacturing.

Eduardo F. Menezes, 52, was promoted to Executive Vice President from Senior Vice President effective March 1, 2012. He oversees Praxair's businesses in Europe, Mexico, and South America, and Praxair's U.S. and global hydrogen operations. From 2010 to March 2011, he was a Vice President of Praxair with responsibility for the North American Industrial Gases business. From 2007 to 2010, he was President of Praxair Europe. He served as Managing Director of Praxair's business in Mexico from 2004 to 2007, as Vice President and General Manager for Praxair Distribution, Inc. from 2003 to 2004 and as Vice President, U.S. West Region, for North American Industrial Gases, from 2000 to 2003.

Anne K. Roby, age 51, was named Senior Vice President on January 1, 2014, responsible for Global Supply Systems, R&D, Global Market Development, Global Operations Excellence, Global Procurement, Sustainability and Safety, Health and Environment. From 2011-2013, she served as President of Praxair Asia, responsible for Praxair's industrial gases business in China, India, South Korea and Thailand as well as the electronics market globally. In 2010, Dr. Roby became President of Praxair Electronics, after having served as Vice President, Global Sales, for Praxair from 2009-2010. Prior to this, she was Vice President of the U.S. South Region from 2006-2009. Dr. Roby joined Praxair in 1991 as a development associate in the Company's R&D organization and was promoted to other positions of increasing responsibility.

Scott E. Telesz, 48, was promoted to Executive Vice President from Senior Vice President, effective March 1, 2012. He is responsible for Praxair's U.S. atmospheric gases businesses, and its business in Canada, Praxair Distribution, Praxair Surface Technologies, and Helium-Rare Gases. Before joining Praxair in 2010, he was a Vice President from 2007 to 2010 of SABIC Innovative Plastics, a major division of Riyadh-based Saudi Basic Industries Corporation, a global manufacturer of chemicals, fertilizers, plastics and metals. From 1998 to 2007, he held a variety of general management positions with General Electric, and from 1989 to 1998, Mr. Telesz held several positions, including Engagement Manager, in the United States and Australia, with McKinsey & Company.

Matthew J. White, 43, was appointed Senior Vice President and Chief Financial Officer effective January 1, 2014. Prior to this, Mr. White was President of Praxair Canada from 2011-2014. Mr. White joined Praxair in 2004 as finance director of Praxair's largest business unit, North American Industrial Gases. In 2008, he became Vice President and Controller of Praxair, then was named Vice President and Treasurer in 2010. Before joining Praxair, Mr. White was vice president, finance, at Fisher Scientific and before that he held various financial positions, including group controller, at GenTek, a manufacturing and performance chemicals company.

**ITEM 1A. RISK FACTORS**

Due to the size and geographic reach of the company's operations, a wide range of factors, many of which are outside of the company's control, could materially affect the company's future operations and financial performance.

Management believes the following risks may significantly impact the company:

General Economic Conditions – Weakening economic conditions in markets in which the company does business may adversely impact the company's financial results and/or cash flows.

Praxair serves a diverse group of industries across more than 50 countries, which generally leads to financial stability through various business cycles. However, a broad decline in general economic or business conditions in the industries served by its customers could adversely affect the demand for Praxair's products and impair the ability of

our customers to satisfy their obligations to the company, resulting in uncollected receivables and/or unanticipated contract terminations or project delays. In addition, many of the company's customers are in businesses that are cyclical in nature, such as the chemicals, electronics, metals and energy industries. Downturns in these industries may adversely impact the company during these cycles. Additionally, such conditions could impact the utilization of the company's manufacturing capacity

6

---

Table of Contents

which may require the company to recognize impairment losses on tangible assets such as property, plant and equipment as well as intangible assets such as goodwill, customer relationships or intellectual property.

Cost and Availability of Raw Materials and Energy – Increases in the cost of energy and raw materials and/or disruption in the supply of these materials could result in lost sales or reduced profitability.

Energy is the single largest cost item in the production and distribution of industrial gases. Most of Praxair's energy requirements are in the form of electricity, natural gas and diesel fuel for distribution. Praxair attempts to minimize the financial impact of variability in these costs through the management of customer contracts and reducing demand through operational productivity and energy efficiency. Large customer contracts typically have escalation and pass-through clauses to recover energy and feedstock costs. Such attempts may not successfully mitigate cost variability which could negatively impact its financial condition or results of operations. The supply of energy has not been a significant issue in the geographic areas where it conducts business. However, regional energy conditions are unpredictable and may pose future risk.

For carbon dioxide, carbon monoxide, helium, hydrogen, specialty gases and surface technologies, raw materials are largely purchased from outside sources. Where feasible, Praxair sources several of these gases, including carbon dioxide, hydrogen and calcium carbide, as chemical or industrial byproducts. In addition, Praxair has contracts or commitments for, or readily available sources of, most of these raw materials; however, their long-term availability and prices are subject to market conditions. A disruption in supply of such raw materials could impact the company's ability to meet contractual supply commitments.

International Events and Circumstances – The company's international operations are subject to the risks of doing business abroad and international events and circumstances may adversely impact its business, financial condition or results of operations.

Praxair has substantial international operations which are subject to risks including devaluations in currency exchange rates, transportation delays and interruptions, political and economic instability and disruptions, restrictions on the transfer of funds, the imposition of duties and tariffs, import and export controls, changes in governmental policies, labor unrest, possible nationalization and/or expropriation of assets, domestic and international tax laws and compliance with governmental regulations. These events could have an adverse effect on the international operations in the future by reducing the demand for its products, decreasing the prices at which it can sell its products, reducing the U.S. dollar value of revenue from international operations or otherwise having an adverse effect on its business.

Global Financial Markets Conditions – Macroeconomic factors may impact the company's ability to obtain financing or increase the cost of obtaining financing which may adversely impact the company's financial results and/or cash flows.

Volatility and disruption in the U.S. and global credit and equity markets, from time to time, could make it more difficult for Praxair to obtain financing for its operations and/or could increase the cost of obtaining financing. In addition, the company's borrowing costs can be affected by short and long-term debt ratings assigned by independent rating agencies which are based, in significant part, on the company's performance as measured by certain criteria such as interest coverage and leverage ratios. A decrease in these debt ratings could increase the cost of borrowing or make it more difficult to obtain financing. While the impact of volatility in the global credit markets cannot be predicted with certainty, the company believes that it has sufficient operating flexibility, cash reserves, and funding sources to maintain adequate amounts of liquidity to meet its business needs around the world.

Competitor Actions – The inability to effectively compete could adversely impact results of operations.

Praxair operates within a highly competitive environment worldwide. Competition is based on price, product quality, delivery, reliability, technology and service to customers. Competitors' behavior related to these areas could potentially have significant impacts on the company's financial results.

Governmental Regulations – The company is subject to a variety of United States and foreign government regulations. Changes in these regulations could have an adverse impact on the business, financial position and results of operations.

The company is subject to regulations in the following areas, among others:

- ¶ Environmental protection including climate change;
- ¶ Domestic and international tax laws and currency controls;
- ¶ Safety;

Securities laws (e.g., SEC and generally accepted accounting principles in the United States);  
Trade and import/ export restrictions;

7

---

Table of Contents

Antitrust matters;

Global anti-bribery laws, including the U.S. Foreign Corrupt Practices Act;

Healthcare regulations

Changes in these or other regulatory areas may impact the company's profitability, may require the company to spend additional resources to comply with the regulations, or may restrict the company's ability to compete effectively in the marketplace. Noncompliance with such laws and regulations could result in penalties or sanctions that could have an adverse impact on the company's financial results and/or reputation. Environmental protection is discussed further below.

Praxair is subject to various environmental and occupational health and safety laws and regulations, including those governing the discharge of pollutants into the air or water, the storage, handling and disposal of chemicals, hazardous substances and wastes, the remediation of contamination, the regulation of greenhouse gas emissions, and other potential climate change initiatives. Violations of these laws could result in substantial penalties, third party claims for property damage or personal injury, or sanctions. The company may also be subject to liability for the investigation and remediation of environmental contamination at properties that it owns or operates and at other properties where Praxair or its predecessors have operated or arranged for the disposal of hazardous wastes. Although management does not believe that any such liabilities will have a material adverse impact on its financial position and results of operations, management cannot provide assurance that such costs will not increase in the future or will not become material. See the section captioned "Management's Discussion and Analysis – Environmental Matters" in Item 7 of this Form 10-K.

Catastrophic Events – Catastrophic events could disrupt the operations of the company and/or its customers and suppliers and may have a significant adverse impact on the results of operations.

The occurrence of catastrophic events or natural disasters such as extreme weather, including hurricanes and floods; health epidemics; acts of war or terrorism; could disrupt or delay the company's ability to produce and distribute its products to customers and could potentially expose the company to third-party liability claims. In addition, such events could impact the company's customers and suppliers resulting in temporary or long-term outages and/or the limitation of supply of energy and other raw materials used in normal business operations. To mitigate these risks, Praxair evaluates the direct and indirect business risks; consults with vendors, insurance providers and industry experts; makes investments in suitably resilient design and technology, and conducts regular reviews of the business risks with management. Despite these steps, however, these situations are outside the company's control and may have a significant adverse impact on the company's financial results.

Retaining Qualified Personnel – The inability to attract and retain qualified personnel may adversely impact the company's business.

If Praxair fails to attract, hire and retain qualified personnel, the company may not be able to develop, market or sell its products or successfully manage its business. Praxair is dependent upon its highly skilled, experienced and efficient workforce to be successful. Much of Praxair's competitive advantage is based on the expertise and experience of its key personnel regarding its marketing, technology, manufacturing and distribution infrastructure, systems and products. The inability to attract and hire qualified individuals or the loss of key employees in very skilled areas could have a negative effect on the company's financial results.

Technological Advances – If the company fails to keep pace with technological advances in the industry or if new technology initiatives do not become commercially accepted, customers may not continue to buy the company's products and results of operations could be adversely affected.

Praxair's research and development is directed toward developing new and improved methods for the production and distribution of industrial gases and the development of new markets and applications for the use of these gases. This results in the frequent introduction of new industrial gas applications and the development of new advanced air separation process technologies. The company also conducts research and development for its surface technologies to improve the quality and durability of coatings and the use of specialty powders for new applications and industries. As a result of these efforts, the company develops new and proprietary technologies and employs necessary measures to protect such technologies within the global geographies in which the company operates. These technologies help

Praxair to create a competitive advantage and to provide a platform for the company to grow its business. If Praxair's research and development activities do not keep pace with competitors or if it does not create new technologies that benefit customers, future results of operations could be adversely affected.

Litigation and Governmental Investigations – The outcomes of litigation and governmental investigations may affect the company's financial results.



Table of Contents

Praxair is subject to various lawsuits and governmental investigations arising out of the normal course of business that may result in adverse outcomes. These actions are based upon alleged environmental, tax, antitrust and personal injury claims, among others. Adverse outcomes in some or all of the claims pending may result in significant monetary damages or injunctive relief that could adversely affect its ability to conduct business. While management currently believes that resolving all of these matters, individually or in the aggregate, will not have a material adverse impact on the company's financial position or liquidity, the litigation and other claims Praxair faces are subject to inherent uncertainties and management's view of these matters may change in the future. There exists the possibility of a material adverse impact on the company's results of operations for the period in which the effect of an unfavorable final outcome becomes probable and reasonably estimable.

**Tax Liabilities** – Potential tax liabilities could adversely impact the company's financial position and results of operations.

Praxair is subject to income and other taxes in both the United States and numerous foreign jurisdictions. The determination of the company's worldwide provision for income taxes and other tax liabilities requires judgment and is based on diverse legislative and regulatory structures that exist in the various jurisdictions where the company operates. Although management believes its estimates are reasonable, the ultimate tax outcome may differ from the amounts recorded in its financial statements and may materially affect the company's financial results for the period when such determination is made. See Notes 5 and 17 to the consolidated financial statements of this Form 10-K.

**Pension Liabilities** – Risks related to our pension benefit plans may adversely impact our results of operations and cash flows.

Pension benefits represent significant financial obligations that will be ultimately settled in the future with employees who meet eligibility requirements. Because of the uncertainties involved in estimating the timing and amount of future payments and asset returns, significant estimates are required to calculate pension expense and liabilities related to the company's plans. The company utilizes the services of independent actuaries, whose models are used to facilitate these calculations. Several key assumptions are used in the actuarial models to calculate pension expense and liability amounts recorded in the consolidated financial statements. In particular, significant changes in actual investment returns on pension assets, discount rates, or legislative or regulatory changes could impact future results of operations and required pension contributions. For information regarding the potential impacts regarding significant assumptions used to estimate pension expense, including discount rates and the expected long-term rates of return on plan assets. See "Critical Accounting Policies – Pension Benefits" included in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Item 7 of this Form 10-K.

**Operational Risks** – Operational risks may adversely impact the company's business or results of operations.

Praxair's operating results are dependent on the continued operation of its production facilities and its ability to meet customer contract requirements and other needs. Insufficient or excess capacity threatens the company's ability to generate competitive profit margins and may expose the company to liabilities related to contract commitments.

Operating results are also dependent on the company's ability to complete new construction projects on time, on budget and in accordance with performance requirements. Failure to do so may expose the business to loss of revenue, potential litigation and loss of business reputation.

Also inherent in the management of the company's production facilities and delivery systems, including storage, vehicle transportation and pipelines, are operational risks that require continuous training, oversight and control. Material operating failures at production, storage facilities or pipelines, including fire, toxic release and explosions, or the occurrence of vehicle transportation accidents could result in loss of life, damage to the environment, loss of production and/or extensive property damage, all of which may negatively impact the company's financial results.

**Information Technology Systems** – The Company may be subject to information technology system ("IT") failures, network disruptions and breaches in data security.

Praxair relies on IT systems and networks for business and operational activities, and also stores and processes sensitive business and proprietary information in these systems and networks. These systems are susceptible to outages due to fire, flood, power loss, telecommunications failures, viruses, break-ins and similar events, or breaches of security. Management has taken steps to address these risks and concerns by implementing advanced security technologies, internal controls, network and data center resiliency and recovery process. Despite these steps, however,

operational failures and breaches of security from increasingly sophisticated cyber threats could lead to the loss or disclosure of confidential information, result in regulatory actions and have a material adverse impact on Praxair's operations, reputation and financial results.

Acquisitions and Joint Ventures – The inability to effectively integrate acquisitions or collaborate with joint venture partners could adversely impact the company's financial position and results of operations.

## Table of Contents

Praxair has evaluated, and expects to continue to evaluate, a wide array of potential strategic acquisitions and joint ventures. Many of these transactions, if consummated, could be material to its financial condition and results of operations. In addition, the process of integrating an acquired company, business or group of assets may create unforeseen operating difficulties and expenditures. Although historically the company has been successful with its acquisition strategy and execution, the areas where the company may face risks include:

- The need to implement or remediate controls, procedures and policies appropriate for a larger public company at companies that prior to the acquisition lacked these controls, procedures and policies;
- Diversion of management time and focus from operating existing business to acquisition integration challenges;
- Cultural challenges associated with integrating employees from the acquired company into the existing organization;
- The need to integrate each company's accounting, management information, human resource and other administrative systems to permit effective management;
- Difficulty with the assimilation of acquired operations and products;
- Failure to achieve targeted synergies; and
- Inability to retain key employees and business relationships of acquired companies.

Foreign acquisitions and joint ventures involve unique risks in addition to those mentioned above, including those related to integration of operations across different cultures and languages, currency risks and the particular economic, political and regulatory risks associated with specific countries. Also, the anticipated benefit of the company's acquisitions may not materialize. Future acquisitions or dispositions could result in potentially dilutive issuances of equity securities, the incurrence of debt, contingent liabilities or amortization expenses, or impairments of goodwill, any of which could adversely impact the company's financial results.

### ITEM 1B. UNRESOLVED STAFF COMMENTS

Praxair has received no written SEC staff comments regarding any of its Exchange Act reports which remain unresolved.

### ITEM 2. PROPERTIES

Praxair's worldwide headquarters are located in leased office space in Danbury, Connecticut. Other principal administrative offices are owned in Tonawanda, New York, and leased in Rio de Janeiro, Brazil; Shanghai, China and Madrid, Spain.

Praxair designs, engineers, manufactures and operates facilities that produce and distribute industrial gases. These industrial gas production facilities and certain components are designed and/or manufactured at its facilities in Tonawanda, New York; Burr Ridge, Illinois; Rio de Janeiro, Brazil; Monterrey, Mexico; Shanghai, China; and Bangalore, India. Praxair's Italian equity affiliate, S.I.A.D., also has such capacity.

Due to the nature of Praxair's industrial gas products, it is generally uneconomical to transport them distances greater than a few hundred miles from the production facility. As a result, Praxair operates a significant number of production facilities spread globally throughout a number of geographic regions.

The following is a description of production facilities for Praxair by segment. No significant portion of these assets was leased at December 31, 2015. Generally, these facilities are fully utilized and are sufficient to meet our manufacturing needs.

#### North America

The North America segment operates production facilities in the U.S., Canada and Mexico, approximately 255 of which are cryogenic air separation plants, hydrogen plants and carbon dioxide plants. There are five major pipeline complexes in North America located in Northern Indiana, Houston, along the Gulf Coast of Texas, Detroit and Louisiana. Also located throughout North America are packaged gas facilities, specialty gas plants, helium plants and other smaller plant facilities.

Table of Contents

Europe

The Europe segment has production facilities primarily in Italy, Spain, Germany, the Benelux region, Scandinavia and Russia which include approximately 60 cryogenic air separation plants. There are three major pipeline complexes in Europe located in Northern Spain and the Rhine and Saar regions of Germany. These pipeline complexes are primarily supplied by cryogenic air separation plants. Also located throughout Europe are specialty gas plants, packaged gas facilities and other smaller plant facilities.

South America

The South America segment operates more than 45 cryogenic air separation plants, primarily located in Brazil. Many of these plants support a major pipeline complex in Southern Brazil. Also located throughout South America are carbon dioxide plants, packaged gas facilities and other smaller plant facilities.

Asia

The Asia segment has production facilities located primarily in China, Korea, India and Thailand, approximately 55 of which are cryogenic air separation plants. Also located throughout Asia are noncryogenic air separation, carbon dioxide, hydrogen, packaged gas and other production facilities.

Surface Technologies

The Surface Technologies segment provides coating services and manufactures coating equipment at approximately 45 sites. The majority of these sites are located in the United States and Europe, with smaller operations in Asia, Brazil, India and headquarters located in Indianapolis, Indiana.

ITEM 3. LEGAL PROCEEDINGS

Information required by this item is incorporated herein by reference to the section captioned "Notes to Consolidated Financial Statements – 17 Commitments and Contingencies" in Item 8 of this 10-K.

ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable

Table of Contents

## PART II

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

The principal market for the company's common stock (ticker symbol: PX) is the New York Stock Exchange ("NYSE"). At December 31, 2015 there were 12,589 shareholders of record.

NYSE quarterly stock price and dividend information

Market Price	Trading High	Trading Low	Close	Dividend Per Share
2015				
First Quarter	\$ 130.38	\$ 119.69	\$ 120.74	\$0.715
Second Quarter	\$ 124.99	\$ 117.19	\$ 119.55	\$0.715
Third Quarter	\$ 120.51	\$ 98.55	\$ 101.86	\$0.715
Fourth Quarter	\$ 118.58	\$ 99.59	\$ 102.40	\$0.715
2014				
First Quarter	\$ 135.24	\$ 121.22	\$ 130.97	\$0.65
Second Quarter	\$ 134.84	\$ 126.47	\$ 132.84	\$0.65
Third Quarter	\$ 134.06	\$ 126.58	\$ 129.00	\$0.65
Fourth Quarter	\$ 132.95	\$ 117.32	\$ 129.56	\$0.65

Praxair's annual dividend on its common stock for 2015 was \$2.86 per share. On January 26, 2016, Praxair's Board of Directors declared a dividend of \$0.75 per share for the first quarter of 2016, or \$3.00 per share annualized, which may be changed as Praxair's earnings and business prospects warrant. The declaration of dividends is a business decision made by the Board of Directors based on Praxair's earnings and financial condition and other factors the Board of Directors considers relevant.

Purchases of Equity Securities – Certain information regarding purchases made by or on behalf of the company or any affiliated purchaser (as defined in Rule 10b-18(a)(3) under the Securities Exchange Act of 1934, as amended) of its common stock during the three months ended December 31, 2015 is provided below:

Period	Total Number of Shares Purchased (Thousands)	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Program (1) (Thousands)	Approximate Dollar Value of Shares that May Yet be Purchased Under the Program (2) (Millions)
October 2015	1	\$99.76	1	\$ 1,840
November 2015	73	\$112.05	73	\$ 1,832
December 2015	115	\$109.05	115	\$ 1,819
Fourth Quarter 2015	189	\$110.16	189	\$ 1,819

On January 28, 2014, the Company's board of directors approved the repurchase of \$1.5 billion of its common (1) stock ("2014 program") which could take place from time to time on the open market (which could include the use of 10b5-1 trading plans) or through negotiated transactions, subject to market and business conditions.

As of December 31, 2015, the Company had purchased \$1,181 million of its common stock pursuant to the 2014 program, leaving an additional \$319 million remaining authorized under the 2014 program. The 2014 program does not have any stated expiration date. In addition, on July 28, 2015, the Company's board of directors approved (2) the repurchase of \$1.5 billion of its common stock ("2015 program") which could take place from time to time on the open market (which could include the use of 10b5-1 trade plans) or through negotiated transactions, subject to market and business conditions. The 2015 program does not have any stated expiration date. The 2015 program is in addition to the 2014 program.



Table of Contents

Peer Performance Table – The graph below compares the most recent five-year cumulative returns of Praxair’s common stock with those of the Standard & Poor’s 500 Index ("SPX") and the S5 Materials Index ("S5MATR") which covers 30 companies, including Praxair. The figures assume an initial investment of \$100 on December 31, 2010 and that all dividends have been reinvested.

	2010	2011	2012	2013	2014	2015
PX	\$100	\$114	\$120	\$145	\$148	\$120
SPX	\$100	\$102	\$118	\$156	\$178	\$180
S5MATR	\$100	\$90	\$104	\$130	\$140	\$128

Table of ContentsITEM 6. SELECTED FINANCIAL DATA  
FIVE-YEAR FINANCIAL SUMMARY

(Dollar amounts in millions, except per share data)

Year Ended December 31, From the Consolidated Statements of Income	2015(a)	2014(a)	2013(a)	2012(a)	2011(a)
Sales	\$10,776	\$12,273	\$11,925	\$11,224	\$11,252
Cost of sales, exclusive of depreciation and amortization	5,960	6,962	6,744	6,396	6,458
Selling, general and administrative	1,152	1,308	1,349	1,270	1,239
Depreciation and amortization	1,106	1,170	1,109	1,001	1,003
Research and development	93	96	98	98	90
Cost reduction program and other charges – net	172	138	32	65	1
Other income (expenses) – net	28	9	32	43	7
Operating profit	2,321	2,608	2,625	2,437	2,468
Interest expense – net	161	213	178	141	145
Income before income taxes and equity investments	2,160	2,395	2,447	2,296	2,323
Income taxes	612	691	649	586	641
Income before equity investments	1,548	1,704	1,798	1,710	1,682
Income from equity investments	43	42	38	34	40
Net income (including noncontrolling interests)	1,591	1,746	1,836	1,744	1,722
Noncontrolling interests	(44 )	(52 )	(81 )	(52 )	(50 )
Net income – Praxair, Inc.	\$1,547	\$1,694	\$1,755	\$1,692	\$1,672
Per Share Data – Praxair, Inc.					
Shareholders					
Basic earnings per share	\$5.39	\$5.79	\$5.94	\$5.67	\$5.53
Diluted earnings per share	\$5.35	\$5.73	\$5.87	\$5.61	\$5.45
Cash dividends per share	\$2.86	\$2.60	\$2.40	\$2.20	\$2.00
Weighted Average Shares Outstanding (000's)					
Basic shares outstanding	287,005	292,494	295,523	298,316	302,237
Diluted shares outstanding	289,055	295,608	298,965	301,845	306,722
Other Information and Ratios					
Total assets	\$18,319	\$19,769	\$20,223	\$18,062	\$16,333
Total debt	\$9,231	\$9,225	\$8,779	\$7,334	\$6,539
Cash flow from operations	\$2,682	\$2,868	\$2,917	\$2,752	\$2,455
Net cash used for investing activities	\$(1,303 )	\$(1,803 )	\$(3,237 )	\$(2,378 )	\$(2,005 )
Net cash used for financing activities	\$(1,297 )	\$(1,008 )	\$328	\$(303 )	\$(380 )
Adjusted EBITDA (b)	\$3,642	\$3,958	\$3,804	\$3,537	\$3,512
Capital expenditures	\$1,541	\$1,689	\$2,020	\$2,180	\$1,797
Acquisitions, net of cash acquired	\$82	\$206	\$1,323	\$280	\$294
After-tax return on capital (b)	12.6 %	12.7 %	12.8 %	13.9 %	14.8 %
Return on equity (b)	34.6 %	28.7 %	28.6 %	28.9 %	28.1 %
Debt-to-capital ratio (b)	64.9 %	59.5 %	54.2 %	51.8 %	51.7 %
Debt-to-adjusted EBITDA (b)	2.5	2.3	2.2	1.9	1.7
Shares outstanding (000's)	284,879	289,262	294,134	296,229	298,530



Edgar Filing: PRAXAIR INC - Form 10-K

Number of employees	26,657	27,780	27,560	26,539	26,184
---------------------	--------	--------	--------	--------	--------

---

Amounts for 2015 include: (i) a pre-tax charge of \$165 million (\$125 million after-tax, or \$0.43 per diluted share) (a) related to the cost reduction program and other charges; and (ii) a pre-tax charge of \$7 million (\$5 million after-tax, or \$0.02 per diluted share) related to a pension settlement.

Amounts for 2014 include: (i) a pre-tax charge of \$131 million (\$131 million after-tax, or \$0.45 per diluted share) related to the Venezuela currency devaluation, (ii) a pre-tax charge of \$7 million (\$5 million after-tax, or \$0.02 per diluted share) related to pension settlements; and (iii) a pre-tax charge of \$36 million (\$22 million after-tax, or \$0.07 per diluted share) related to a bond redemption.

Table of Contents

Amounts for 2013 include: (i) a pre-tax charge of \$23 million (\$23 million after-tax, or \$0.08 per diluted share) related to the Venezuela currency devaluation; (ii) a pre-tax charge of \$9 million (\$6 million after-tax, or \$0.02 per diluted share) related to pension settlements; (iii) an income tax benefit of \$40 million (\$24 million net of noncontrolling interests, or \$0.08 per diluted share) related to a realignment of the Italian legal structure; and (iv) a pre-tax charge of \$18 million (\$12 million after-tax, or \$0.04 per diluted share) related to a bond redemption.

Amounts for 2012 include: (i) a pre-tax charge of \$56 million, (\$38 million after-tax and non-controlling interests, or \$0.12 per diluted share) related to the 2012 cost reduction program; (ii) a pre-tax charge of \$9 million (\$6 million after-tax, or \$0.02 per diluted share) related to pension settlement; and (iii) an income tax benefit of \$55 million (\$0.18 per diluted share) related to a loss on a liquidated subsidiary as a result of the divestiture of the U.S. Homecare business.

Amounts for 2011 include: (i) a pre-tax net gain on acquisition of \$39 million (\$37 million after-tax, or \$0.12 per diluted share); and (ii) a pre-tax charge of \$40 million (\$31 million after-tax, or \$0.10 per diluted share) relating to the 2011 cost reduction program.

See Notes 2, 5 and 7 to the consolidated financial statements.

(b) Non-GAAP measures. See the “Non-GAAP Financial Measures” section in Item 7 for definitions and reconciliation to reported amounts.

Table of Contents

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

The following discussion of the company's financial condition and results of operations should be read together with its consolidated financial statements and notes to the consolidated financial statements included in Item 8 of this Form 10-K.

	Page
Business Overview	<u>16</u>
Executive Summary – Financial Results & Outlook	<u>17</u>
Consolidated Results and Other Information	<u>18</u>
Segment Discussion	<u>25</u>
Liquidity, Capital Resources and Other Financial Data	<u>35</u>
Contractual Obligations	<u>40</u>
Off-Balance Sheet Arrangements	<u>40</u>
Critical Accounting Policies	<u>40</u>
New Accounting Standards	<u>43</u>
Fair Value Measurements	<u>43</u>
Non-GAAP Financial Measures	<u>44</u>
Forward-Looking Statements	<u>49</u>

## BUSINESS OVERVIEW

Praxair is the largest industrial gases supplier in North and South America, has strong, well-established businesses in Europe and has a growing business in Asia. The Company's primary products in its industrial gases business are atmospheric gases (oxygen, nitrogen, argon, rare gases) and process gases (carbon dioxide, helium, hydrogen, electronic gases, specialty gases, acetylene). The company also designs, engineers, and builds equipment that produces industrial gases primarily for internal use. The company's surface technologies segment supplies wear-resistant and high-temperature corrosion-resistant metallic and ceramic coatings and powders. Praxair Surface Technologies supplies high-performance coatings that protect metal parts from wear, corrosion and high heat. Praxair's industrial gas operations are managed on a geographical basis and in 2015, 94% of sales were generated in four geographic segments (North America, Europe, South America, and Asia). The surface technologies segment generated the remaining 6% of sales.

Praxair serves a diverse group of industries including healthcare, petroleum refining, manufacturing, beverage carbonation, fiber-optics, steel making, aerospace, chemicals and water treatment. The diversity of end-markets creates financial stability for Praxair in varied business cycles.

Praxair generates most of its revenues and earnings in the following 12 core geographies where the company has its strongest market positions and where distribution and production operations allow the company to deliver the highest level of service to its customers at the lowest cost.

North America	South America	Europe	Asia
United States	Brazil	Spain	China
Canada		Italy	India
Mexico		Germany/Benelux	Korea
		Scandinavia	Thailand

Praxair manufactures and distributes its products through networks of hundreds of production plants, pipeline complexes, distribution centers and delivery vehicles. Major pipeline complexes are located in the United States, Brazil, Spain and Germany. These networks are a competitive advantage, providing the foundation of reliable product supply to the company's customer base. The majority of Praxair's business is conducted through long-term contracts which provide stability in cash flow and the ability to pass through changes in energy and feedstock costs to customers. The company has growth opportunities in all major geographies and in diverse end-markets such as energy, chemicals, metals, healthcare, food and beverage, and aerospace.



Table of Contents

EXECUTIVE SUMMARY – FINANCIAL RESULTS & OUTLOOK

2015 Year in review

Praxair's results in 2015 were challenged by significant foreign currency headwinds due to a strengthening U.S. Dollar and slowing global growth. Despite the difficult macro-economic environment, the company delivered volume growth from new project start-ups in Asia, Europe and North America, which was more than offset by lower base business volumes, primarily in North and South America due to weaker industrial activity. In addition, higher overall pricing and acquisitions contributed to year-over-year growth. Strong cost control and productivity savings were instrumental in offsetting the impact of weaker volumes on earnings.

Sales of \$10,776 million were 12% below 2014 sales of \$12,273 million. Excluding negative currency impacts which reduced sales by 10%, and lower cost pass-through, sales were comparable with the prior year.

Reported operating profit of \$2,321 million was 11% below 2014. Adjusted operating profit of \$2,493 million was 9% below adjusted operating profit in 2014, and 1% above the prior year excluding negative currency translation. Higher pricing, productivity and cost reduction offset the impact of lower volumes. Adjusted operating profit margin was 23.1% compared 22.4% in the prior year.\*

Reported net income – Praxair, Inc. of \$1,547 million and diluted earnings per share of \$5.35 decreased from \$1,694 million and \$5.73, respectively, in 2014. Adjusted net income – Praxair, Inc. of \$1,677 million and adjusted diluted earnings per share of \$5.80 were 9% and 7% below 2014 adjusted amounts, respectively. Earnings per share fell less than net income due to lower shares outstanding as a result of net share repurchases during the year.\*

Cash flow from operations was a strong \$2,682 million, 25% of sales. Capital expenditures were \$1,541 million, primarily for investments in growth and density; dividends were \$819 million; and net common stock purchases were \$637 million.

2016 Outlook

Diluted earnings per share are forecasted to be in the range of \$5.30 to \$5.70. This guidance excludes the impact of a bond redemption expected to occur in the first quarter (see Note 11 to the consolidated financial statements).

Effective tax rate of approximately 28%.

Capital expenditures of approximately \$1.5 billion.

The company's core business is to build, own, and operate industrial gas plants in order to supply atmospheric and process gases to customers. As such, Praxair believes that its project backlog is one indicator of future sales growth. At December 31, 2015, Praxair's backlog of 18 large projects under construction was \$1.5 billion. This represents the total estimated capital cost of large plants under construction. North America represents about one-half of the backlog. The remaining backlog resides in Asia, Europe, and South America. These plants will supply customers in the energy, chemical, manufacturing, electronics and metals markets.

\* A reconciliation of the Adjusted amounts can be found in the "Non-GAAP Financial Measures" section in this MD&A. See Notes 2, 5 and 11 to the consolidated financial statements.

The above guidance should be read in conjunction with the section entitled "Forward-Looking Statements."

Praxair provides quarterly updates on operating results, material trends that may affect financial performance, and financial earnings guidance via earnings releases and investor teleconferences. These materials are available on the company's website, [www.praxair.com/investors](http://www.praxair.com/investors) but are not incorporated herein.

Table of Contents

## CONSOLIDATED RESULTS AND OTHER INFORMATION

The following table provides selected data for 2015, 2014, and 2013:

(Dollar amounts in millions, except per share data) Year Ended December 31, Reported Amounts:	2015	2014	2013	Variance		
				2015 vs. 2014	2014 vs. 2013	
Sales	\$10,776	\$12,273	\$11,925	(12	)% 3	%
Gross margin (a)	\$4,816	\$5,311	\$5,181	(9	)% 3	%
As a percent of sales	44.7	% 43.3	% 43.4	%		
Selling, general and administrative	\$1,152	\$1,308	\$1,349	(12	)% (3	)%
As a percent of sales	10.7	% 10.7	% 11.3	%		
Depreciation and amortization	\$1,106	\$1,170	\$1,109	(5	)% 6	%
Cost reduction program and other charges (b)	\$172	\$138	\$32			
Other income (expenses) – net	\$28	\$9	\$32			
Operating profit	\$2,321	\$2,608	\$2,625	(11	)% (1	)%
Operating margin	21.5	% 21.2	% 22.0	%		
Interest expense – net	\$161	\$213	\$178	(24	)% 20	%
Effective tax rate	28.3	% 28.9	% 26.5	%		
Income from equity investments	\$43	\$42	\$38	2	% 11	%
Noncontrolling interests	\$(44	) \$(52	) \$(81	) (15	)% (36	)%
Net income – Praxair, Inc.	\$1,547	\$1,694	\$1,755	(9	)% (3	)%
Diluted earnings per share	\$5.35	\$5.73	\$5.87	(7	)% (2	)%
Diluted shares outstanding	289,055	295,608	298,965	(2	)% (1	)%
Number of employees	26,657	27,780	27,560			
Adjusted Amounts (c):						
Operating profit	\$2,493	\$2,746	\$2,657	(9	)% 3	%
Operating margin	23.1	% 22.4	% 22.3	%		
Interest expense – net	\$161	\$177	\$160	(9	)% 11	%
Effective tax rate	28.0	% 27.5	% 28.0	%		
Noncontrolling interests	\$(45	) \$(52	) \$(65	)		
Net income – Praxair, Inc.	\$1,677	\$1,852	\$1,772	(9	)% 5	%
Diluted earnings per share	\$5.80	\$6.27	\$5.93	(7	)% 6	%

(a)Gross margin excludes depreciation and amortization expense.

(b)See Note 2 to the consolidated financial statements.

Adjusted amounts are non-GAAP measures. A reconciliation of reported amounts to adjusted amounts can be (c)found in the “Non-GAAP Financial Measures” section of this MD&A. See Notes 2, 5 and 7 to the consolidated financial statements.

Table of Contents

## Results of Operations

The following table provides a summary of changes in consolidated sales and adjusted operating profit:

	2015 vs. 2014		2014 vs. 2013	
	% Change		% Change	
	Sales	Operating Profit	Sales	Operating Profit
Factors Contributing to Changes				
Volume	(2 )%	(5 )%	3 %	1 %
Price	1 %	6 %	2 %	8 %
Cost pass-through	(2 )%	— %	— %	— %
Currency	(10 )%	(10 )%	(3 )%	(3 )%
Acquisitions/Divestitures	1 %	— %	1 %	1 %
Other	— %	— %	— %	(4 )%
Cost reduction program and other charges	— %	(2 )%	— %	(4 )%
Reported	(12 )%	(11 )%	3 %	(1 )%
Cost reduction program and other charges	— %	2 %	— %	4 %
Adjusted	(12 )%	(9 )%	3 %	3 %

The following tables provide consolidated sales by end-market and distribution method:

	% of Sales			% Change*	
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013
Sales by End-Markets					
Manufacturing	24 %	24 %	24 %	(4 )%	3 %
Metals	17 %	17 %	17 %	(2 )%	4 %
Energy	13 %	14 %	13 %	(2 )%	8 %
Chemicals	10 %	10 %	10 %	(3 )%	1 %
Electronics	8 %	7 %	8 %	5 %	— %
Healthcare	8 %	8 %	8 %	4 %	4 %
Food & Beverage	9 %	8 %	8 %	7 %	7 %
Aerospace	3 %	3 %	3 %	3 %	1 %
Other	8 %	9 %	9 %	(8 )%	10 %
	100 %	100 %	100 %	%	%

\* Excludes impact of currency, natural gas/precious metals cost pass-through and acquisitions/divestitures.

	% of Sales		
	2015	2014	2013
Sales by Distribution Method			
On-Site	29 %	29 %	27 %
Merchant	34 %	34 %	34 %
Packaged Gas	28 %	28 %	30 %
Other	9 %	9 %	9 %
	100 %	100 %	100 %





Table of Contents

## 2015 Compared With 2014

Sales decreased 12% to \$10,776 million in 2015 compared to \$12,273 million in 2014. The decrease is primarily due to negative currency translation impacts of 10% and lower cost pass-through which reduced sales by 2%. Excluding these impacts, sales were comparable to prior year. Lower overall volumes which decreased sales by 2%, primarily in North and South America, were offset by a 1% increase from higher pricing in most segments. Acquisitions increased sales by 1%.

Gross margin decreased \$495 million, or 9%, versus 2014 primarily due to lower sales. Gross margin as a percentage of sales improved to 44.7% in 2015 from 43.3% in 2014 primarily due to higher overall pricing and lower cost pass-through.

Selling, general and administrative ("SG&A") expenses decreased \$156 million or 12% in 2015 to \$1,152 million, or 10.7% of sales, versus \$1,308 million, or 10.7% of sales, for 2014. Currency impacts decreased SG&A by \$135 million and cost reduction actions in response to weak underlying business trends also reduced SG&A.

Depreciation and amortization expense decreased \$64 million versus 2014. This decrease was primarily due to currency effects which reduced depreciation and amortization expense by \$109 million. This was partially offset by higher depreciation expense primarily related to new project start-ups.

Other income (expenses) – net in 2015 was a \$28 million benefit versus a \$9 million benefit in 2014 (see Note 7 to the consolidated financial statements for a summary of major components). Other income in 2015 includes a \$28 million gain from the sale of a packaged gas business in the United States to an existing equity investment.

Reported operating profit of \$2,321 million in 2015 was \$287 million, or 11% lower than reported operating profit of \$2,608 million in 2014. 2015 included charges of \$165 million related to cost reduction actions and a \$7 million charge related to a pension settlement. 2014 included a \$131 million charge related to Venezuela currency devaluation and a \$7 million charge related to a pension settlement. Refer to note 2 of the consolidated financial statements for a further discussion of these items. Excluding the impact of these items, adjusted operating profit of \$2,493 million in 2015 was \$253 million, or 9% lower than adjusted operating profit of \$2,746 million in 2014. Higher pricing, productivity and cost control increased operating profit but was more than offset by the negative impacts of foreign currency translation and lower volumes. A discussion of operating profit by segment is included in the segment discussion that follows.

Reported interest expense – net in 2015 decreased \$52 million, versus 2014. 2014 included charges of \$36 million relating to the early redemption of notes (see note 11 to the consolidated financial statements). Excluding this charge, adjusted interest expense decreased \$16 million. Lower overall interest rates reduced interest expense by approximately \$32 million. This decrease was partially offset by higher debt levels and lower capitalized interest which increased interest expense by approximately \$11 million and \$5 million, respectively, versus 2014. The amount of interest capitalized decreased due to lower interest rates, lower construction in progress, and currency impacts. See Note 7 to the consolidated financial statements for further information relating to interest expense.

The effective tax rate ("ETR") for 2015 was 28.3% versus 28.9% in 2014. The adjusted effective tax rate was 28% in 2015 versus 27.5% in 2014. The increase in the ETR was primarily due to the impact of foreign tax differentials (see Note 5 to the consolidated financial statements).

Praxair's significant equity investments are in the United States, China, Italy, and the Middle East. Equity income increased \$1 million in 2015.

At December 31, 2015, reported noncontrolling interests consisted primarily of noncontrolling shareholders' investments in Asia (primarily in China and India), Europe (primarily in Italy and Scandinavia), and North America (primarily within the U.S. packaged gas business). Noncontrolling interest decreased \$8 million to \$44 million in 2015 from \$52 million in 2014. This decrease was due primarily to lower earnings in Italy, including a tax rate change, and China, and currency impacts.

Reported net income - Praxair, Inc. in 2015 was \$1,547 million, or \$147 million lower than net income - Praxair, Inc. of \$1,694 million in 2014. Adjusted net income – Praxair, Inc. of \$1,677 million in 2015 was \$175 million, or 9% lower than adjusted net income – Praxair, Inc. of \$1,852 million in 2014. Adjusted net income - Praxair, Inc. decreased primarily due to negative foreign currency translation impacts, partially offset by lower interest expense.

Reported diluted earnings per share ("EPS") of \$5.35 in 2015 decreased \$0.38 per diluted share, or 7% from \$5.73 in 2014. The decrease included a \$0.02 pension settlement charge and a \$0.43 charge related to the cost reduction actions. Adjusted diluted EPS of \$5.80 in 2015 decreased \$0.47 per diluted share, or 7%, from adjusted diluted EPS of \$6.27 in 2014. The decrease in adjusted diluted EPS was primarily due to lower adjusted net income – Praxair, Inc. due primarily to

20

---

Table of Contents

foreign currency translation impacts, partially offset by a 2% decrease in the number of diluted shares outstanding as a result of the company's net repurchases of common stock.

Other comprehensive loss for the year ended December 31, 2015 of \$1,458 million includes negative currency translation adjustments of \$1,514 million and a positive impact of \$56 million related to an improvement in the funded status of Praxair's retirement obligations. The negative translation adjustments reflect the impact of translating local currency foreign subsidiary financial statements to U.S. dollars and resulted from a strengthening U.S. dollar versus most foreign currencies. The negative currency translation adjustments included \$762 million in South America, \$346 million in North America, \$236 million in Asia, and \$94 million in Europe. The positive funded status - retirement obligations adjustment resulted primarily from the effect of higher discount rates somewhat offset by lower than expected actual return on assets. See the "Currency" section of the MD&A, and Notes 7 and 16 to the consolidated financial statements.

The number of employees at December 31, 2015 was 26,657, a decrease of 1,123 employees from December 31, 2014. This decrease primarily reflects the impact of cost reduction programs implemented during the current year.

## 2014 Compared With 2013

Sales increased 3% to \$12,273 million in 2014 compared to \$11,925 million in 2013. Organic sales grew 5% from higher pricing and volume growth primarily in North America and Asia due to new plant start-ups. Acquisitions, including NuCO<sub>2</sub>, several packaged gas distributors in the U.S. and the acquisition of Dominion Technology Gases Investment Limited in 2013, contributed 1% to overall sales growth. These increases were partially offset by negative currency translation impacts, resulting from the strengthening of the U.S. dollar against most currencies.

Gross margin increased \$130 million, or 3%, versus 2013 in line with the increase in sales.

Selling, general and administrative ("SG&A") expenses in 2014 were \$1,308 million, or 10.7% of sales, versus \$1,349 million, or 11.3% of sales, for 2013. Currency impacts decreased SG&A by \$36 million and other cost reductions, primarily lower pension and other post-retirement benefit expense, reduced SG&A by an additional \$24 million. These reductions were partially offset by an increase due to acquisitions.

Depreciation and amortization expense increased \$61 million versus 2013. This increase was primarily due to plant start-ups and asset additions, and approximately \$12 million related to acquisitions, partially offset by currency effects of \$27 million.

Other income (expenses) – net in 2014 was a \$9 million benefit versus a \$32 million benefit in 2013 (see Note 7 to the consolidated financial statements for a summary of major components). Partnership income of \$16 million improved \$9 million and relates primarily to a partnership joint venture in the United States, while gains from business and asset sales of \$36 million were \$7 million less than 2013 and was spread across all segments. Severance expense of \$22 million increased \$8 million from 2013, reflecting actions taken in response to current market conditions outside of the United States and included \$15 million in the fourth quarter. 2013 also included a \$10 million favorable litigation settlement in South America. Other components were not significant.

Reported operating profit of \$2,608 million in 2014 was \$17 million, or 1% lower than reported operating profit of \$2,625 million in 2013. 2014 included a \$131 million charge related to Venezuela currency devaluation and a \$7 million charge related to a pension settlement. The 2013 period included a \$23 million charge related to the Venezuela currency devaluation and \$9 million charge related to a pension settlement. Refer to note 2 of the consolidated financial statements for a further discussion of these items. Adjusted operating profit of \$2,746 million in 2014 was \$89 million, or 3% higher than adjusted operating profit of \$2,657 million in 2013. A discussion of operating profit by segment is included in the segment discussion that follows.

Reported interest expense – net in 2014 increased \$35 million, versus 2013. Both the 2014 and 2013 included charges of \$36 million and \$18 million, respectively, relating to the early redemption of notes (see note 7 to the consolidated financial statements). Excluding these charges, adjusted interest expense increased \$17 million. Higher debt levels and lower capitalized interest increased interest expense by approximately \$13 million and \$31 million, respectively, versus 2013. The amount of interest capitalized decreased due to lower interest rates, lower construction expenditures, and currency impacts. These increases were partially offset by the benefits of lower overall interest rates which

reduced interest expense by approximately \$23 million. See Note 7 to the consolidated financial statements for further information relating to interest expense.

The effective tax rate ("ETR") for 2014 was 28.9% versus 26.5% in 2013. The adjusted effective tax rate was 27.5% in 2014 versus 28.0% in 2013. The 0.5% decrease in the ETR was primarily due to increased foreign tax differentials (see Note 5 to the Consolidated financial statements).

## Table of Contents

Praxair's significant equity investments are in the United States, China, Italy, and the Middle East. Equity income increased \$4 million in 2014 related primarily to higher equity income in Europe versus 2013.

At December 31, 2014, reported noncontrolling interests consisted primarily of noncontrolling shareholders' investments in Asia (primarily in China and India), Europe (primarily in Italy and Scandinavia), and North America (primarily within the U.S. packaged gas business). Reported noncontrolling interest in 2014 decreased \$29 million from 2013. The decrease was primarily due to the minority shareholder's portion of the income tax benefit in Italy of \$16 million related to a legal realignment during 2013. Excluding the Italy realignment, adjusted noncontrolling interest in 2014 was \$52 million compared to \$65 million in 2013. This decrease was due primarily to the acquisition of the noncontrolling interest in a U.S. packaged gas business during the first quarter of 2014.

Reported net income - Praxair, Inc. in 2014 was \$1,694 million, or \$61 million lower than net income - Praxair, Inc. of \$1,755 million in 2013. Adjusted net income - Praxair, Inc. of \$1,852 million in 2014 was \$80 million, or 5% higher than adjusted net income - Praxair, Inc. of \$1,772 million in 2013. This increase was primarily due to higher adjusted operating profit.

Reported diluted earnings per share ("EPS") of \$5.73 in 2014 decreased \$0.14 per diluted share, or 2% from \$5.87 in 2013. Adjusted diluted EPS of \$6.27 in 2014 increased \$0.34 per diluted share, or 6%, from adjusted diluted EPS of \$5.93 in 2013. The increase in adjusted diluted EPS was primarily due to higher adjusted net income - Praxair, Inc. and a 1.1% decrease in the number of diluted shares outstanding as a result of the company's net repurchases of common stock during 2014.

Other comprehensive loss at December 31, 2014 of \$1,257 million includes negative currency translation adjustments of \$1,096 million, a negative adjustment of \$164 million related to the funded status of retirement obligations and a positive adjustment of \$3 million related to derivative instruments. The translation adjustments reflect the impact of translating local currency foreign subsidiary financial statements to U.S. dollars and resulted from currency movements, primarily \$369 million in Europe, \$331 million in South America, and \$238 million in North America. The negative pension funded status adjustment resulted primarily from after-tax actuarial losses from lower discount rates and the adoption of new mortality rate assumptions, both of which increased the pension benefit obligation ("PBO"). See the "Currency" section of the MD&A, and Notes 7 and 16 to the consolidated financial statements. The number of employees at December 31, 2014 was 27,780, reflecting an increase of 220 employees from December 31, 2013. This increase primarily reflects the impact of acquisitions during the current year.

### Related Party Transactions

The company's related parties are primarily unconsolidated equity affiliates. The company did not engage in any material transactions involving related parties that included terms or other aspects that differ from those which would be negotiated with independent parties.

### Environmental Matters

Praxair's principal operations relate to the production and distribution of atmospheric and other industrial gases, which historically have not had a significant impact on the environment. However, worldwide costs relating to environmental protection may continue to grow due to increasingly stringent laws and regulations, and Praxair's ongoing commitment to rigorous internal standards.

### Climate Change

Praxair operates in jurisdictions that have, or are developing, laws and/or regulations to reduce or mitigate the perceived adverse effects of greenhouse gas ("GHG") emissions and faces a highly uncertain regulatory environment in this area. For example, the U.S. Environmental Protection Agency ("EPA") has promulgated rules requiring reporting of GHG emissions, and Praxair and many of its suppliers and customers are subject to these rules. EPA has also promulgated regulations to restrict GHG emissions, including final rules regulating GHG emissions from light-duty vehicles and certain large manufacturing facilities, many of which are Praxair suppliers or customers. More recently, EPA promulgated carbon dioxide regulations for both new and existing power plants, which will require controls on GHG emissions from certain suppliers of power to Praxair's operations. In addition to these developments

in the United States, GHGs are regulated in the European Union under the Emissions Trading System, which has wide implications for our customers and may impact certain operations of Praxair in Europe. There are also requirements for mandatory reporting in Quebec, Canada, which apply to certain Praxair operations and will be used in developing cap-and-trade regulations on GHG emissions. These regulations, as well as similar regulations that have been proposed in Ontario, Canada, are expected to impact certain Praxair facilities in Canada. Climate change and energy efficiency laws and policies are also being widely introduced in

## Table of Contents

jurisdictions throughout Latin America, Mexico and parts of Asia. China has announced plans to launch a national carbon emissions trading system, though it does not appear the regulations will have a direct impact on GHG emissions from Praxair facilities. Among other impacts, such regulations are expected to raise the costs of energy, which is a significant cost for Praxair. Nevertheless, Praxair's customer contracts routinely provide rights to recover increased electricity, natural gas, and other costs that are incurred by the company as a result of Climate Change regulation.

Praxair anticipates continued growth in its hydrogen business, as hydrogen is essential to refineries that use it to remove sulfur from transportation fuels in order to meet ambient air quality standards in the United States. Hydrogen production plants and a large number of other manufacturing and electricity-generating plants have been identified under California law as a source of carbon dioxide emissions and these plants are subject to cap-and-trade regulations in that state. Praxair believes it will be able to mitigate the costs of these regulations through the terms of its product supply contracts. However, legislation that limits GHG emissions may impact growth by increasing operating costs and/or decreasing demand.

To manage business risks from current and potential GHG emission regulation, Praxair actively monitors current developments, evaluates the direct and indirect business risks, and takes appropriate actions. Among others, actions include: increasing relevant resources and training; consulting with vendors, insurance providers and industry experts; incorporating GHG provisions in commercial agreements; and conducting regular reviews of the business risks with management. Although there are considerable uncertainties, Praxair believes that the business risk from potential regulations can be effectively managed through its commercial contracts. Additionally, Praxair does not anticipate any material effects regarding its plant operations or business arising from potential physical risks of climate change.

Praxair continuously seeks opportunities to reduce its own energy use and GHG footprint through rigorous energy efficiency, investment in renewable energy, and purchasing hydrogen as a chemical byproduct where feasible. Praxair maintains a range of internal targets that drive reductions in its energy and GHG and are reported annually to Praxair's Board of Directors.

At the same time, Praxair may benefit from business opportunities arising from governmental regulation of GHG and other emissions; uncertain costs of energy and certain natural resources; the development of renewable energy alternatives; and new technologies that help extract natural gas, improve air quality, increase energy efficiency and mitigate the impacts of climate change. Praxair continues to develop new applications that can lower emissions, including GHG emissions, in Praxair's processes and help customers lower energy consumption and increase product throughput. Stricter regulation of water quality in emerging economies such as China provide a growing market for a number of gases, e.g., oxygen for wastewater treatment. Increase concern about drought in areas such as California may create a market for carbon dioxide for desalination. Renewable fuel standards in the European Union and U.S. create a market for second-generation biofuels which use of industrial gases such as oxygen, carbon dioxide, and hydrogen.

### Costs Relating to the Protection of the Environment

Environmental protection costs in 2015 included approximately \$13 million in capital expenditures and \$29 million of expenses. Praxair anticipates that future annual environmental protection expenditures will be similar to 2015, subject to any significant changes in existing laws and regulations. Based on historical results and current estimates, management does not believe that environmental expenditures will have a material adverse effect on the consolidated financial position, the consolidated results of operations or cash flows in any given year.

### Legal Proceedings

See Note 17 to the consolidated financial statements for information concerning legal proceedings.

Retirement Benefits

Pensions

The net periodic benefit cost for the U.S. and International pension plans was \$98 million in 2015, \$82 million in 2014 and \$119 million in 2013. Consolidated net periodic benefit cost included settlement charges of \$7 million, \$7 million and \$9 million in 2015, 2014 and 2013, respectively.

23

---



Table of Contents

The funded status (pension benefit obligation ("PBO") less the fair value of plan assets) for the U.S. plans was a deficit of \$483 million as December 31, 2015 versus a deficit of \$443 million at December 31, 2014. The increase in the deficit was primarily due to annual service and interest costs, partially offset by higher discount rates.

Global pension contributions were \$15 million in 2015, \$18 million in 2014 and \$52 million in 2013. At a minimum, Praxair contributes to its pension plans to comply with local regulatory requirements (e.g., ERISA in the United States). Discretionary contributions in excess of the local minimum requirements are made based on many factors, including long-term projections of the plans' funded status, the economic environment, potential risk of overfunding, pension insurance costs and alternative uses of the cash. Changes to these factors can impact the timing of discretionary contributions from year to year. Estimated required contributions for 2016 are currently expected to be in the range of \$10 million to \$15 million.

Praxair assumes an expected return on plan assets for 2016 in the United States of 8.00%, which is consistent with the long-term expected return on its investment portfolio.

Excluding the impact of any settlements, 2016 consolidated pension expense is expected to decrease by about \$42 million to approximately \$49 million. The decrease is primarily due to lower amortization of net actuarial losses as a result of an increase in discount rates and a change in the approach to measuring service and interest costs. Through 2015, Praxair measured service and interest costs utilizing a single weighted-average discount rate for each plan derived from the yield curve used to measure the respective plan obligations. For 2016, the Company elected to measure service and interest costs for significant plans by applying the specific spot rates along that yield curve to the plan's expected cash flows ("spot rate approach"). The Company believes the new spot rate approach provides a more precise measurement of service and interest costs by aligning the timing of the plans' expected cash flows to the corresponding spot rates on the yield curve. This change does not affect the measurement of the plans' obligations nor the funded status of the plans and is expected to reduce 2016 pension expense by about \$18 million.

Postretirement Benefits Other Than Pensions ("OPEB")

The net periodic benefit cost for OPEB plans was \$8 million in 2015, \$7 million in 2014 and \$11 million in 2013. The funded status deficit decreased \$20 million during 2015 primarily due to favorable plan experience.

In 2016, consolidated net periodic benefit costs for the OPEB plans is expected to be approximately \$6 million.

See the Critical Accounting Policies section and Note 16 to the consolidated financial statements for a more detailed discussion of the company's retirement benefits, including a description of the various retirement plans and the assumptions used in the calculation of net periodic benefit cost and funded status.

Insurance

Praxair purchases insurance to limit a variety of property and casualty risks, including those related to property, business interruption, third-party liability and workers' compensation. Currently, the company self-retains the first \$5 million per occurrence for workers' compensation, general and vehicle liability in the United States and retains \$2.5 million to \$5 million per occurrence at its various properties worldwide. To mitigate its aggregate loss potential above these retentions, the company purchases insurance coverage from highly rated insurance companies. The company does not currently operate or participate in any captive insurance companies or other non-traditional risk transfer alternatives.

At December 31, 2015 and 2014, the company had recorded a total of \$32 million and \$33 million, respectively, representing an estimate of the retained liability for the ultimate cost of claims incurred and unpaid as of the balance sheet dates. The estimated liability is established using statistical analysis and is based upon historical experience, actuarial assumptions and professional judgment. These estimates are subject to the effects of trends in loss severity and frequency and are subject to a significant degree of inherent variability. If actual claims differ from the company's estimates, they will be adjusted at that time and financial results could be impacted.

Praxair recognizes estimated insurance proceeds relating to damages at the time of loss only to the extent of incurred losses. Any insurance recoveries for business interruption and for property damages in excess of the net book value of the property are recognized only when realized or pending payments confirmed by its insurance companies.

Table of Contents

## SEGMENT DISCUSSION

The following summary of sales and operating profit by segment provides a basis for the discussion that follows (for additional information concerning Praxair's segments, see Note 18 to the consolidated financial statements). Praxair evaluates the performance of its reportable segments based on operating profit, excluding the items not indicative of ongoing business trends (See Note 2 to the consolidated financial statements).

(Dollar amounts in millions)

Year Ended December 31,	2015	2014	2013	Variance		
				2015 vs. 2014*	2014 vs. 2013	
<b>Sales</b>						
North America	\$5,865	\$6,436	\$6,164	(9)	)% 4	%
Europe	1,320	1,546	1,542	(15)	)% —	%
South America	1,431	1,993	2,042	(28)	)% (2)	)%
Asia	1,551	1,619	1,525	(4)	)% 6	%
Surface Technologies	609	679	652	(10)	)% 4	%
	\$10,776	\$12,273	\$11,925	(12)	)% 3	%
<b>Operating Profit</b>						
North America	\$1,558	\$1,580	\$1,538	(1)	)% 3	%
Europe	250	291	270	(14)	)% 8	%
South America	291	449	467	(35)	)% (4)	)%
Asia	289	303	271	(5)	)% 12	%
Surface Technologies	105	123	111	(15)	)% 11	%
Segment operating profit	2,493	2,746	2,657	(9)	)% 3	%
Cost reduction program and other charges	(172)	) (138)	) (32)	)		
Consolidated operating profit	\$2,321	\$2,608	\$2,625			

\* Sales variances were negatively impacted by foreign currency translation and by cost pass-through. Similarly, operating profit variances were negatively impacted by foreign currency translation. Refer to the following segment discussions for a quantification of these impacts and the "Currency" section of this MD&A for a summary of the significant currencies and exchange rates used to translate the foreign financial statements to U.S. dollars.

## North America

(Dollar amounts in millions)

Year Ended December 31,	2015	2014	2013	Variance		
				2015 vs. 2014	2014 vs. 2013	
Sales	\$5,865	\$6,436	\$6,164	(9)	)% 4	%
Cost of sales, exclusive of depreciation and amortization	3,028	3,514	3,301			
Gross margin	2,837	2,922	2,863			
Operating expenses	670	731	759			
Depreciation and amortization	609	611	566			
Operating profit	\$1,558	\$1,580	\$1,538	(1)	)% 3	%
Operating margin	26.6	% 24.5	% 25.0	%		

Table of Contents

	2015 vs. 2014				2014 vs. 2013			
	% Change				% Change			
	Sales	Operating Profit	Sales	Operating Profit	Sales	Operating Profit	Sales	Operating Profit
Factors Contributing to Changes								
Volume	(3	)% (4	)%	3	% 1	%		
Price	1	% 3	%	1	% 5	%		
Cost pass-through	(4	)% —	%	1	% —	%		
Currency	(3	)% (4	)%	(2	)% (2	)%		
Acquisitions/Divestitures	—	% —	%	1	% 1	%		
Other	—	% 4	%	—	% (2	)%		
	(9	)% (1	)%	4	% 3	%		

The following tables provide sales by end-market and distribution method:

	% of Sales			% Change*			
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013		
Sales by End-Markets							
Manufacturing	30	% 30	% 30	% (4	)% 3	%	
Metals	11	% 12	% 13	% (11	)% 1	%	
Energy	18	% 20	% 19	% —	% 9	%	
Chemicals	10	% 10	% 10	% (6	)% 3	%	
Electronics	5	% 4	% 5	% 15	% 7	%	
Healthcare	7	% 7	% 7	% 4	% 2	%	
Food & Beverage	9	% 8	% 8	% 6	% 4	%	
Aerospace	2	% 1	% 1	% 3	% (1	)%	
Other	8	% 8	% 7	% (4	)% 8	%	
	100	% 100	% 100	%			

\* Excludes impact of currency, natural gas/precious metals cost pass-through and acquisitions/divestitures.

	% of Sales						
	2015	2014	2013				
Sales by Distribution Method							
On-Site	28	% 30	% 28	%			
Merchant	38	% 36	% 36	%			
Packaged Gas	32	% 32	% 34	%			
Other	2	% 2	% 2	%			
	100	% 100	% 100	%			

The North America segment includes Praxair's industrial gases operations in the United States, Canada and Mexico. Sales for 2015 decreased \$571 million, or 9%, versus 2014. Excluding currency and cost pass-through impacts, organic sales were 2% below the prior year due to lower volumes partially offset by higher pricing. By end-market, sales growth to the electronics, healthcare and food and beverage industries was more than offset by declines in sales to the metals, manufacturing and chemicals industries. On-site volumes to metals customers were lower than the prior year which accounted for the decrease in on-site sales as a percent of total sales in 2015.

Operating profit in 2015 decreased \$22 million, or 1% from 2014. Currency translation impacts, primarily the devaluation of both the Mexican Peso and the Canadian Dollar against the U.S. Dollar, reduced operating profit by 4%. Operating profit grew 3% excluding currency translation impacts. Higher pricing, productivity and a \$28 million gain from the sale of a packaged gas business to an existing equity investment were partially offset by lower volumes. 2014 included



Table of Contents

a \$9 million benefit related to a change in accounting principle for LIFO inventories in the United States (see notes 1 and 7 to the consolidated financial statements).

Sales for 2014 increased \$272 million, or 4%, versus 2013. Underlying sales growth was 4% driven primarily by higher on-site volumes from new project start-ups for hydrogen supply to refinery customers in the United States, higher merchant volumes and higher pricing. Sales grew to the energy, chemicals, manufacturing, and food and beverage end-markets. Strong sales growth to the energy end-market was primarily due to hydrogen project start-ups. Acquisitions, primarily NuCO<sub>2</sub>, added 5% sales growth and contributed to the 3% increase of total sales represented by the food and beverage end-market in 2013. Higher cost pass-through, primarily higher natural gas prices passed through to hydrogen customers, increased sales by 1%. North American packaged gas sales were above prior year due to solid growth in the U.S. business. However, with the growth in on-site sales due to the start-up of new hydrogen projects and the growth in merchant sales due to the acquisition of NuCO<sub>2</sub>, packaged gas sales decreased as a percentage of total sales for the segment.

Operating profit for 2014 increased \$42 million, or 3% from 2013. Higher pricing, higher volumes from project start-ups and acquisitions contributed to the growth in operating profit. The increase was due to higher gross margin and lower operating expenses, partially offset by \$45 million increase in depreciation and amortization expense due to new project start-ups and acquisitions. Operating profit during 2014 included a \$9 million benefit related to a change in accounting principle for LIFO inventories in the United States (see notes 1 and 7 to the consolidated financial statements). Operating profit in 2013 included a \$23 million customer contract settlement.

## Europe

(Dollar amounts in millions)

Year Ended December 31,	2015	2014	2013	Variance			
				2015 vs. 2014	2014 vs. 2013		
Sales	\$1,320	\$1,546	\$1,542	(15)	)% —	%	
Cost of sales, exclusive of depreciation and amortization	749	868	881				
Gross margin	571	678	661				
Operating expenses	176	219	222				
Depreciation and amortization	145	168	169				
Operating profit	\$250	\$291	\$270	(14)	)% 8	%	
Operating margin	18.9	% 18.8	% 17.5	%			
		2015 vs. 2014			2014 vs. 2013		
		% Change			% Change		
		Sales	Operating Profit	Sales	Operating Profit		
Factors Contributing to Changes							
Volume		1	% 1	%	—	% 2	%
Price		1	% 3	%	1	% 5	%
Cost pass-through		—	% —	%	(1)	)% —	%
Currency		(17)	)% (17)	)%	(1)	)% —	%
Acquisitions/Divestitures		—	% —	%	1	% 3	%
Other		—	% (1)	)%	—	% (2)	)%
		(15)	)% (14)	)%	—	% 8	%

Table of Contents

The following tables provide sales by end-market and distribution method:

	% of Sales			% Change*		
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013	
Sales by End-Markets						
Manufacturing	22	% 22	% 22	% 4	% 4	%
Metals	17	% 16	% 16	% 9	% 3	%
Energy	6	% 7	% 6	% (17	)% (4	)%
Chemicals	14	% 15	% 16	% (2	)% (9	)%
Electronics	7	% 7	% 7	% 4	% (3	)%
Healthcare	11	% 11	% 11	% —	% (1	)%
Food & Beverage	10	% 9	% 9	% 8	% 5	%
Aerospace	1	% —	% 1	% 35	% (11	)%
Other	12	% 13	% 12	% (1	)% 2	%
	100	% 100	% 100	%		

\* Excludes impact of currency, natural gas/precious metals cost pass-through and acquisitions/divestitures.

	% of Sales			
	2015	2014	2013	
Sales by Distribution Method				
On-Site	20	% 19	% 20	%
Merchant	34	% 35	% 34	%
Packaged Gas	42	% 43	% 43	%
Other	4	% 3	% 3	%
	100	% 100	% 100	%

Praxair's European industrial gases business operates in Spain, Italy, Germany, Russia, the United Kingdom, Scandinavia and the Benelux region.

Sales in 2015 decreased \$226 million, or 15% from 2014 primarily due to unfavorable currency translation impacts. Excluding unfavorable currency impacts, sales increased 2% year-over-year due to higher volumes in Russia, Spain, Italy, and Germany and higher pricing. Volume growth was largely due to new on-site project start-ups in Russia which accounted for the increase in on-site sales as a percentage of total segment sales.

Operating profit of \$250 million decreased 14% from 2014 primarily due to unfavorable currency translation impacts. Excluding currency impacts, operating profit increased 3% as higher pricing and volumes were partially offset by higher costs.

Sales for 2014 increased \$4 million, versus 2013. Excluding unfavorable currency impacts and lower cost pass-through, sales increased 2% year-over-year. The increase came from higher pricing to merchant and packaged gas customers, and acquisitions primarily Dominion Technology Gases Investment Limited acquired in 2013.

Operating profit for 2014 of \$291 increased 8% from 2013 primarily driven by higher pricing, volumes and acquisitions. The strong operating leverage came from price attainment across the region coupled with strong productivity and cost initiatives. In addition, the acquisition of an industrial gas business in Italy and a divestiture in France contributed to the higher operating profit and margin.

Table of Contents

## South America

(Dollar amounts in millions)

Year Ended December 31,	2015	2014	2013	Variance			
				2015 vs. 2014	2014 vs. 2013		
Sales	\$1,431	\$1,993	\$2,042	(28	)% (2	)%	
Cost of sales, exclusive of depreciation and amortization	809	1,101	1,134				
Gross margin	622	892	908				
Operating expenses	196	266	260				
Depreciation and amortization	135	177	181				
Operating profit	\$291	\$449	\$467	(35	)% (4	)%	
Operating margin	20.3	% 22.5	% 22.9	%			
		2015 vs. 2014		2014 vs. 2013			
		% Change		% Change			
		Sales	Operating Profit	Sales	Operating Profit		
Factors Contributing to Changes							
Volume		(4	)% (10	)%	2	% (2	)%
Price		5	% 22	%	4	% 19	%
Cost pass-through		1	% —	%	1	% —	%
Currency		(30	)% (31	)%	(9	)% (10	)%
Acquisitions/Divestitures		—	% —	%	—	% —	%
Other		—	% (16	)%	—	% (11	)%
		(28	)% (35	)%	(2	)% (4	)%

The following tables provide sales by end-market and distribution method:

	% of Sales			% Change*		
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013	
Sales by End-Markets						
Manufacturing	21	% 21	% 21	% (3	)% 3	%
Metals	28	% 27	% 29	% 2	% 2	%
Energy	2	% 2	% 2	% 6	% 23	%
Chemicals	9	% 9	% 9	% 1	% 10	%
Electronics	—	% —	% —	% —	% —	%
Healthcare	18	% 18	% 17	% 7	% 9	%
Food & Beverage	13	% 13	% 12	% 6	% 16	%
Aerospace	—	% —	% —	% —	% —	%
Other	9	% 10	% 10	% (8	)% 2	%
	100	% 100	% 100	%		

\* Excludes impact of currency, natural gas/precious metals cost pass-through and acquisitions/divestitures.

Table of Contents

	% of Sales			
	2015	2014	2013	
Sales by Distribution Method				
On-Site	28	% 26	% 25	%
Merchant	41	% 43	% 43	%
Packaged Gas	29	% 29	% 30	%
Other	2	% 2	% 2	%
	100	% 100	% 100	%

Praxair's South American industrial gases operations are conducted by its subsidiary, White Martins Gases Industriais Ltda. ("White Martins"), the largest industrial gases company in Brazil. White Martins also manages Praxair's operations in Argentina, Bolivia, Chile, Colombia, Paraguay, Peru, and Uruguay.

Sales in 2015 decreased \$562 million, or 28%, versus 2014. Unfavorable currency translation impacts reduced sales by 30% primarily due to the significant devaluation of the Brazilian Real against the U.S. dollar. Excluding currency and cost pass-through impacts, sales grew 1% due to higher overall pricing. Higher pricing was largely offset by lower volumes primarily in Brazil due to slower industrial production.

Operating profit decreased \$158 million or 35% versus 2014. Excluding negative currency effects which reduced operating profit by 31%, operating profit decreased 4% as higher pricing and cost reduction actions were more than offset by lower volumes and inflationary cost increases.

Sales in 2014 decreased \$49 million, or 2%, versus 2013. Unfavorable currency translation impacts reduced sales by 9%. Organic sales grew 6% primarily due to higher pricing and modest volume growth. Sales growth came primarily from the food and beverage and healthcare end-markets.

Operating profit decreased \$18 million or 4% versus 2013. Excluding negative currency effects, operating profit increased 6% due to higher pricing partially offset by cost inflation primarily in Brazil, Argentina and Venezuela. The 2013 period included the impact of a \$10 million positive litigation settlement in Brazil.

Asia				Variance		
(Dollar amounts in millions)				2015 vs. 2014	2014 vs. 2013	
Year Ended December 31,	2015	2014	2013			
Sales	\$1,551	\$1,619	\$1,525	(4	)% 6	%
Cost of sales, exclusive of depreciation and amortization	977	1,041	1,005			
Gross margin	574	578	520			
Operating expenses	109	105	99			
Depreciation and amortization	176	170	150			
Operating profit	\$289	\$303	\$271	(5	)% 12	%
Operating margin	18.6	% 18.7	% 17.8	%		



Table of Contents

	2015 vs. 2014		2014 vs. 2013		
	% Change		% Change		
	Sales	Operating Profit	Sales	Operating Profit	
Factors Contributing to Changes					
Volume / Equipment	(1)	)% (4	)% 7	% 6	%
Price	—	% 1	% 1	% 5	%
Cost pass-through	(2)	)% —	% (1	)% —	%
Currency	(3)	)% (4	)% (1	)% (1	)%
Acquisitions / Divestitures	2	% 1	% —	% —	%
Other	—	% 1	% —	% 2	%
	(4)	)% (5	)% 6	% 12	%

The following tables provide sales by end-market and distribution method:

	% of Sales			% Change*		
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013	
Sales by End-Markets						
Manufacturing	9	% 10	% 11	% (10	)% (2	)%
Metals	29	% 28	% 27	% 3	% 13	%
Energy	3	% 3	% 2	% 9	% 57	%
Chemicals	13	% 12	% 13	% 5	% (2	)%
Electronics	32	% 31	% 34	% 1	% —	%
Healthcare	1	% 1	% 1	% (9	)% —	%
Food & Beverage	2	% 2	% 2	% 6	% 1	%
Aerospace	—	% —	% —	% —	% —	%
Other	11	% 13	% 10	% (21	)% 35	%
	100	% 100	% 100	%		

\* Excludes impact of currency, natural gas/precious metals cost pass-through and acquisitions/divestitures.

	% of Sales			
	2015	2014	2013	
Sales by Distribution Method				
On-Site	50	% 51	% 48	%
Merchant	30	% 29	% 29	%
Packaged Gas	13	% 12	% 11	%
Other	7	% 8	% 12	%
	100	% 100	% 100	%

The Asia segment includes Praxair's industrial gases operations in China, India, Korea and Thailand, with smaller operations in Taiwan and the Middle East.

Asia segment sales in 2015 decreased \$68 million, or 4%, as compared to the prior year. Currency and cost pass-through of precious metals prices used in electronic materials end-markets reduced sales by 5%. Excluding these impacts, sales grew 1% year-over-year primarily driven by the acquisition of an equity investment in 2014. Lower volumes were impacted by a sale of equipment in China in 2014, which was partially offset by an increase in volumes primarily from new project start ups in China, India, and Korea.

Asia segment operating profit for 2015 decreased \$14 million, or 5%, as compared to the prior year. Currency reduced operating profit by 4%. Excluding currency impacts, operating profit was 1% below the prior year. Lower

Table of Contents

volumes, including the impact of a sale of equipment in China in 2014, reduced operating profit by 4%. This more than offset the improvements from overall pricing, productivity actions and an acquisition. In the fourth quarter 2014, operating profit included a \$14 million gain related to the acquisition of an equity investment that did not recur during the current year.

Asia segment sales for 2014 increased \$94 million, or 6%, as compared to the prior year. Volume growth of 7% came from new project start-ups primarily in India and Korea and included the sale of an air separation plant to a joint venture in China. By end-market, the strongest sales growth came from energy and metals customers. Strong growth in on-site volumes due to new plant start-ups accounted for the increase in on-site sales as a percentage of total sales. Merchant volumes in India and China also showed solid growth versus the prior year. Cost pass-through decreased sales 1% and relates to the contractual pass through of precious metals and power costs fluctuations, with minimal impact on operating profit. Higher helium pricing increased sales by 1%.

Asia segment operating profit for 2014 increased \$32 million, or 12%, as compared to the prior year. Strong on-site volume growth contributed to a 6% increase in operating profit. Pricing increased operating profit by 5% primarily due to higher merchant and packaged gas pricing for helium sales. Depreciation and amortization expense increased \$20 million as compared to the prior year primarily due to new plant start-ups. In the fourth quarter 2014, operating profit included a \$14 million gain related to the acquisition of an equity investment. In the fourth quarter 2013, operating profit included a \$13 million gain related to a land sale in Korea.

## Surface Technologies

(Dollar amounts in millions)

Year Ended December 31,	2015	2014	2013	Variance			
				2015 vs. 2014	2014 vs. 2013		
Sales	\$609	\$679	\$652	(10)	)% 4	%	
Cost of sales, exclusive of depreciation and amortization	397	438	423				
Gross margin	212	241	229				
Operating expenses	66	75	75				
Depreciation and amortization	41	43	43				
Operating profit	\$105	\$123	\$111	(15)	)% 11	%	
Operating margin	17.2	% 18.1	% 17.0	%			
		2015 vs. 2014			2014 vs. 2013		
		% Change			% Change		
		Sales	Operating Profit		Sales	Operating Profit	
Factors Contributing to Changes							
Volume/Price		(3)	)% (13)	)%	1	% 6	%
Cost pass-through		—	% —	%	—	% —	%
Currency		(7)	)% (6)	)%	—	% —	%
Acquisitions/Divestitures		—	% —	%	—	% —	%
Other		—	% 4	%	3	% 5	%
		(10)	)% (15)	)%	4	% 11	%

Table of Contents

The following table provides sales by end-market:

	% of Sales			% Change*		
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013	
Sales by End-Markets						
Manufacturing	12	% 13	% 13	% (13	)% 1	%
Metals	8	% 8	% 8	% (3	)% 3	%
Energy	25	% 28	% 28	% (12	)% 2	%
Chemicals	2	% 2	% 2	% 6	% —	%
Electronics	1	% 1	% 1	% 13	% —	%
Healthcare	—	% —	% —	% —	% 1	%
Food & Beverage	4	% 3	% 3	% 48	% 3	%
Aerospace	37	% 34	% 34	% 3	% 3	%
Other	11	% 11	% 11	% (8	)% 9	%
	100	% 100	% 100	%		

\* Excludes impact of currency, precious metals cost pass-through, acquisitions/divestitures and business transfers.

Surface Technologies provides high-performance coatings and thermal-spray powders and equipment in the Americas, Europe, and Asia.

Sales decreased \$70 million, or 10% versus 2014 primarily due to negative currency impacts of 7%, including a weaker Euro, British pound and Japanese yen versus the U.S. dollar. In addition, lower volumes to the manufacturing and energy end-markets reduced sales by 3%.

Operating profit decreased \$18 million, or 15% versus 2014. Lower volumes decreased operating profit by 13%, and negative currency translation reduced operating profit by 6%. These impacts were partially offset by higher pricing, productivity gains and savings from cost reduction programs which increased operating profit by 4%.

Sales increased \$27 million, or 4% versus 2013 due to modest organic sales growth primarily to the metals and aerospace end-markets, and business transfers.

Operating profit increased \$12 million, or 11% versus 2013 primarily due to higher pricing and productivity gains which more than offset cost inflation.

In January 2016, Surface Technologies announced plans to expand its long-standing relationship with GE Aviation by entering into a definitive agreement to form a joint venture for the development, support, and application of specialized coatings. Under the agreement, Surface Technologies will expand the current scope of services provided to GE Aviation. It is expected that the joint venture will begin operations during the second quarter of 2016, once regulatory approvals are obtained.

Table of Contents

## Currency

The results of Praxair's non-U.S. operations are translated to the company's reporting currency, the U.S. dollar, from the functional currencies used in the countries in which the company operates. For most foreign operations, Praxair uses the local currency as its functional currency. There is inherent variability and unpredictability in the relationship of these functional currencies to the U.S. dollar and such currency movements may materially impact Praxair's results of operations in any given period.

To help understand the reported results, the following is a summary of the significant currencies underlying Praxair's consolidated results and the exchange rates used to translate the financial statements (rates of exchange expressed in units of local currency per U.S. dollar):

Currency	Percent of 2015 Consolidated Sales	Statements of Income Average Year Ended December 31,			Balance Sheets December 31,	
		2015	2014	2013	2015	2014
Euro	12	% 0.90	0.75	0.75	0.92	0.83
Brazilian real	11	% 3.28	2.35	2.15	3.90	2.66
Canadian dollar	7	% 1.28	1.10	1.03	1.38	1.16
Chinese yuan	6	% 6.28	6.16	6.16	6.49	6.21
Mexican peso	5	% 15.83	13.30	12.76	17.21	14.75
Korean won	4	% 1,130	1,053	1,094	1,175	1,094
Indian rupee	3	% 64.11	61.03	58.31	66.15	63.04
Argentine peso	1	% 9.22	8.10	5.45	13.04	8.55
Norwegian krone	1	% 8.05	6.28	5.87	8.84	7.45

Table of Contents

## LIQUIDITY, CAPITAL RESOURCES AND OTHER FINANCIAL DATA

(Millions of dollars)

Year Ended December 31,	2015	2014	2013	
Net Cash Provided by (Used for)				
Operating Activities				
Net Income (including noncontrolling interests)	\$1,591	\$1,746	\$1,836	
Non-cash charges (credits):				
Add: Cost reduction program and other charges, net of payments (a)	121	138	23	
Add: Depreciation and amortization	1,106	1,170	1,109	
Add: Deferred income taxes	99	55	101	
Add: Other non-cash charges	(49)	(65)	(18)	)
Net Income adjusted for non-cash charges	2,868	3,044	3,051	
Less: Pension contributions	(15)	(18)	(52)	)
Less: Working capital	(84)	(129)	(100)	)
Other	(87)	(29)	18	)
Net cash provided from operating activities	\$2,682	\$2,868	\$2,917	
Investing Activities				
Capital expenditures	\$(1,541)	\$(1,689)	\$(2,020)	)
Acquisitions, net of cash acquired	(82)	(206)	(1,323)	)
Divestitures and asset sales	320	92	106	
Total used for investing	\$(1,303)	\$(1,803)	\$(3,237)	)
Financing Activities				
Debt increases – net	\$168	\$589	\$1,461	
Purchases of common stock – net	(637)	(759)	(436)	)
Cash dividends – Praxair, Inc. shareholders	(819)	(759)	(708)	)
Excess tax benefit on stock based compensation	19	31	46	
Noncontrolling interest transactions and other	(28)	(110)	(35)	)
Total provided (used) for financing	\$(1,297)	\$(1,008)	\$328	)
Effect of exchange rate changes on cash	\$(61)	\$(69)	\$(27)	)
Cash and cash equivalents	\$147	\$126	\$138	
Other Financial Data (b)				
Debt-to-capital ratio	64.9	% 59.5	% 54.2	%
After-tax return on capital ("ROC")	12.6	% 12.7	% 12.8	%
Return on Praxair, Inc. shareholder's equity ("ROE")	34.6	% 28.7	% 28.6	%
Adjusted EBITDA	\$3,642	\$3,958	\$3,804	
Adjusted EBITDA Margin	33.8	% 32.2	% 31.9	%
Debt-to-Adjusted EBITDA	2.5	2.3	2.2	

(a) See Note 2 to the consolidated financial statements.

(b) Non-GAAP measures. See the "Non-GAAP Financial Measures" section for definitions and reconciliations to reported amounts.

Cash increased \$21 million in 2015 versus 2014. The primary sources of cash in 2015 were cash flows from operations of \$2,682 million, proceeds from divestitures and asset sales of \$320 million and debt increases net of repayments of \$168 million. The major uses of cash were capital expenditures of \$1,541 million, cash dividends to shareholders of \$819 million, and purchases of Praxair common stock net of issuances of \$637 million.



Table of Contents

Cash Flows From Operations

2015 compared with 2014

Cash flows from operations was \$2,682 million, or 25% of sales, a decrease of \$186 million from \$2,868 million, or 23% of sales in 2014. Cash flows provided from net income decreased \$155 million and decreased \$176 million after adjusting for the change in non-cash items included in net income. The decrease is primarily due to negative currency translation impacts. Cash used for working capital requirements decreased \$45 million versus 2014.

2014 compared with 2013

Cash flows from operations was \$2,868 million, or 23% of sales, a decrease of \$49 million from \$2,917 million in 2013. Cash flows provided from net income decreased \$90 million, but decreased \$7 million after adjusting for the change in non-cash items included in net income. Pension contributions decreased \$34 million versus 2013 while cash used for working capital requirements increased \$29 million versus 2013.

Table of Contents

Investing

2015 compared with 2014

Net cash used for investing activities of \$1,303 million decreased \$500 million versus 2014 due to lower capital expenditures, lower acquisitions, and higher proceeds from divestitures and asset sales.

Capital expenditures in 2015 were \$1,541 million, a decrease of \$148 million from 2014. Capital expenditures during 2015 related primarily to investments in new plant and production equipment for growth and density. Approximately 50% of the capital expenditures were in North America with the rest in Asia, Europe and South America.

Acquisition expenditures in 2015 were \$82 million, a decrease of \$124 million from 2014. Acquisitions in 2015 consisted primarily of packaged gases businesses in North and South America and an acquisition of a controlling interest of an equity investment in Asia (see Note 3 to the consolidated financial statements).

Divestitures and asset sales in 2015 totaled \$320 million, which was primarily comprised of \$235 million from the sale of fixed assets under construction to a customer in the North America energy market during the second quarter, and \$65 million from the sale of a packaged gas business to an existing equity investment in the fourth quarter.

On September 15, 2015, Praxair announced that it has signed an agreement to acquire Yara International ASA's (Yara) European carbon dioxide business. The proposed transaction also includes Praxair's acquisition of Yara's remaining 34% stake in Yara Praxair Holding AS, currently a 66% owned subsidiary in Scandinavia. Praxair's investment for both transactions is expected to be about \$325 million and will be paid in Norwegian Krone and Euros.

2014 compared with 2013

Net cash used for investing activities of \$1,803 million decreased \$1,434 million versus 2013 primarily due to lower acquisition, net of cash acquired and capital expenditures.

Acquisition expenditures in 2014 were \$206 million, a decrease of \$1,117 million from 2013. Acquisitions in 2014 consisted primarily of an industrial gases business in Italy, packaged gases businesses in North and South America and the controlling interest of an equity investment in China (see Note 3 to the consolidated financial statements).

Capital expenditures in 2014 were \$1,689 million, a decrease of \$331 million from 2013. Capital expenditures during 2014 related primarily to growth capital investments. Approximately half of the capital expenditures were in North America, about 20% in South America and the rest evenly between Asia and Europe.

Divestitures and asset sales in 2014 totaled \$92 million, which included the sale of Praxair's industrial gas business in France during the first quarter.



Table of Contents

Financing

Praxair's financing strategy is to secure long-term committed funding by issuing public notes and debentures and commercial paper backed by a long-term bank credit agreement. Praxair's international operations are funded through a combination of local borrowing and inter-company funding to minimize the total cost of funds and to manage and centralize currency exchange exposures. As deemed necessary, Praxair manages its exposure to interest-rate changes through the use of financial derivatives (see Note 12 to the consolidated financial statements and Item 7A.

Quantitative and Qualitative Disclosures About Market Risk).

Cash used by financing activities was \$1,297 million in 2015 compared to \$1,008 million in 2014. The primary financing uses of cash were for net purchases of common stock and cash dividends, while the primary source was net issuances of debt. Net purchases of common stock of \$637 million decreased \$122 million and cash dividends of \$819 million increased \$60 million from 2014 due to a 10% increase in dividends per share from \$2.60 to \$2.86. The noncontrolling interests and other payments was \$28 million vs \$110 million in 2014. The decrease is primarily related to the acquisition of the remaining noncontrolling interests in a U.S. packaged gas business during the first quarter 2014. The cash received from debt issuances-net of \$168 million was less than \$589 million in 2014 primarily due to lower requirements for investing activities.

The company believes that it has sufficient operating flexibility, cash reserves, and funding sources to maintain adequate amounts of liquidity to meet its business needs around the world. At December 31, 2015, the company's credit ratings as reported by Standard & Poor's and Moody's were A-1 and P-1 for short-term debt, respectively, and A and A2 for long-term debt, respectively. Additionally, the company plans to retain overseas its undistributed earnings of foreign subsidiaries to support foreign growth opportunities and reduce local debt.

Note 11 to the consolidated financial statements includes information with respect to the company's debt refinancing in 2015, current debt position, debt covenants and the available credit facility; and Note 12 includes information relating to derivative financial instruments. Praxair's credit facility is with major financial institutions and is non-cancellable until maturity. Therefore, the company believes the risk of the financial institutions being unable to make required loans under the credit facility, if requested, to be low. Praxair's major bank credit and long-term debt agreements contain standard covenants. The company was in compliance with these covenants at December 31, 2015 and expects to remain in compliance for the foreseeable future.

Praxair's total debt outstanding at December 31, 2015 was \$9,231 million, \$6 million higher than \$9,225 million at December 31, 2014. The December 31, 2015 debt balance includes \$8,999 million in public securities and \$232 million representing primarily worldwide bank borrowings. Praxair's global effective borrowing rate was approximately 2.3% for 2015.

In February 2015, Praxair issued \$150 million of floating rate notes that bear interest at the Federal funds effective

Table of Contents

rate plus 0.33% due 2017, \$400 million of 2.65% fixed rate notes due 2025 and \$200 million of 3.550% fixed rate notes due in 2042; and in September 2015, Praxair issued \$300 million of 2.25% notes due 2020 and \$450 million of 3.20% notes due 2026. The proceeds will be used for general corporate purposes, including the repayment of outstanding indebtedness.

In March 2015, Praxair repaid \$500 million of 4.625% notes that became due and subsequently repaid \$400 million of 3.25% notes upon maturity in September 2015 (see Note 11 to the consolidated financial statements).

On February 8, 2016, Praxair initiated the redemption of the \$325 million 5.20% Notes originally due in March of 2017. These Notes require a 20-day notification period prior to redemption. A pre-tax charge of approximately \$16 million is expected to be incurred in the first quarter of 2016.

On February 11, 2016, Praxair issued \$275 million of 3.20% fixed rate notes due 2026. In addition, on February 12, 2016, Praxair issued €550 million of 1.20% Euro-denominated notes due 2024 which the Company designated as a hedge of the net investment position in its European operations. The proceeds will be used for general corporate purposes, including the repayment of outstanding indebtedness.

Other Financial Data

Praxair's debt-to-capital ratio was 64.9% at December 31, 2015 versus 59.5% at December 31, 2014. The increase in debt-to-capital is due primarily to lower capital. The equity component of capital was reduced by a \$1,458 million loss in other comprehensive income, primarily from negative foreign currency translation impacts. Praxair's debt is largely denominated in U.S. dollars.

After-tax return on capital ("ROC") of 12.6% at December 31, 2015 was slightly below 12.7% for 2014, and 12.8% for 2013. The decrease in both years is primarily related to investments in capital projects and acquisitions.

Return on equity ("ROE") was 34.6% at December 31, 2015 versus 28.7% and 28.6% for 2014 and 2013, respectively. The increase is because negative currency movements impacted adjusted net income less than shareholders' equity.

Adjusted EBITDA decreased \$316 million to \$3,642 million in 2015 from \$3,958 million in 2014 while adjusted EBITDA margin increased to 33.8% in 2015 from 32.2% in 2014. The decrease in adjusted EBITDA is primarily due to lower adjusted net income adjusted for depreciation and amortization versus the prior year primarily due to negative currency impacts. Adjusted EBITDA increased \$154 million to \$3,958 million in 2014 from \$3,804 million in 2013, while adjusted EBITDA margin increased to 32.2% in 2014 from 31.9% in 2013. The increase in adjusted EBITDA is primarily due to the higher adjusted net income levels adjusted for depreciation and amortization from the start-up of new plants and other assets, and from acquisitions; partially offset by negative currency impacts.

Debt -to-Adjusted EBITDA increased in 2015 and 2014 primarily due to currency translation impacts. Adjusted EBITDA was reduced primarily due to the negative impact of currency translation due to the strengthening of the U.S. dollar versus most foreign currencies. Currency translation had significantly less impact on Debt, since Praxair's debt is primarily denominated in U.S. dollars.

See the "Non-GAAP Financial Measures" section for definitions and reconciliation of these non-GAAP measures to reported amounts.

Table of Contents**CONTRACTUAL OBLIGATIONS**

The following table sets forth Praxair's material contract obligations and other commercial commitments as of December 31, 2015:

(Millions of dollars)	Due or expiring by December 31,					Thereafter	Total
	2016	2017	2018	2019	2020		
Long-term debt obligations:							
Debt and capitalized lease maturities (Note 11)*	\$6	\$878	\$985	\$1,498	\$948	\$4,666	\$8,981
Contractual interest	222	206	192	168	140	762	1,690
Operating leases (Note 4)*	116	100	84	67	51	58	476
Retirement obligations	49	30	30	32	30	134	305
Unconditional purchase obligations (Note 17)*	507	450	415	362	282	1,992	4,008
Construction commitments (Note 17)*	1,090	250	2	—	—	—	1,342
<b>Total Contractual Obligations</b>	<b>\$1,990</b>	<b>\$1,914</b>	<b>\$1,708</b>	<b>\$2,127</b>	<b>\$1,451</b>	<b>\$7,612</b>	<b>\$16,802</b>

\* See Notes to the consolidated financial statements for additional information.

Contractual interest on long-term debt of \$1,690 million represents interest the company is contracted to pay on outstanding long-term debt, current portion of long-term debt and capital lease obligations, calculated on a basis consistent with planned debt maturities, excluding the interest impact of interest rate swaps. At December 31, 2015, Praxair had fixed-rate debt of \$8,300 million and floating-rate debt of \$931 million. The rate assumed for floating-rate debt was the rate in effect at December 31, 2015.

Retirement obligations of \$305 million include estimates of pension plan contributions and expected future benefit payments for unfunded pension and OPEB plans. Pension plan contributions are forecast for 2016 only. For purposes of the table, \$12 million of estimated required contributions have been included for 2016. Expected future unfunded pension and OPEB benefit payments are forecast only through 2025. Contribution and unfunded benefit payment estimates are based upon current valuation assumptions. Estimates of pension contributions after 2016 and unfunded benefit payments after 2025 are not included in the table because the timing of their resolution cannot be estimated. Retirement obligations are more fully described in Note 16 to the consolidated financial statements.

Liabilities for uncertain tax positions totaling \$68 million, including interest and penalties, are not included in the table because the timing of their resolution cannot be estimated. See Note 5 to the consolidated financial statements for disclosures surrounding uncertain income tax positions.

**OFF-BALANCE SHEET ARRANGEMENTS**

As discussed in Note 17 to the consolidated financial statements, at December 31, 2015, Praxair had entered into various guarantees and other arrangements, and had undrawn outstanding letters of credit from financial institutions. These arrangements were entered into in connection with normal business operations and they are not reasonably likely to have a material impact on Praxair's consolidated financial condition, results of operations, or liquidity.

**CRITICAL ACCOUNTING POLICIES**

The policies discussed below are considered by management to be critical to understanding Praxair's financial statements and accompanying notes prepared in accordance with accounting principles generally accepted in the United States ("U.S. GAAP"). Their application places significant importance on management's judgment as a result of the need to make estimates of matters that are inherently uncertain. Praxair's financial position, results of operations and cash flows could be materially affected if actual results differ from estimates made. These policies are determined by management and have been reviewed by Praxair's Audit Committee.

**Depreciable Lives of Property, Plant and Equipment**

Praxair's net property, plant and equipment at December 31, 2015 was \$10,998 million, representing 60% of the company's consolidated total assets. Depreciation expense for the year ended December 31, 2015 was \$1,059 million, or 13% of total operating costs. Management judgment is required in the determination of the estimated depreciable lives that are used to calculate the annual depreciation expense and accumulated depreciation.



Table of Contents

Property, plant and equipment are recorded at cost and depreciated over the assets' estimated useful lives on a straight-line basis for financial reporting purposes. The estimated useful life represents the projected period of time that the asset will be productively employed by the company and is determined by management based on many factors, including historical experience with similar assets, technological life cycles, geographic locations and contractual supply relationships with on-site customers. Circumstances and events relating to these assets, such as on-site contract modifications, are monitored to ensure that changes in asset lives or impairments (see "Asset Impairments") are identified and prospective depreciation expense or impairment expense is adjusted accordingly. Praxair's largest asset values relate to cryogenic air-separation production plants with depreciable lives of principally 15 years.

Based upon the assets as of December 31, 2015, if depreciable lives of machinery and equipment, on average, were increased or decreased by one year, annual depreciation expense would be decreased by approximately \$68 million or increased by approximately \$79 million, respectively.

**Pension Benefits**

Pension benefits represent financial obligations that will be ultimately settled in the future with employees who meet eligibility requirements. Because of the uncertainties involved in estimating the timing and amount of future payments, significant estimates are required to calculate pension expense and liabilities related to the company's plans. The company utilizes the services of several independent actuaries, whose models are used to facilitate these calculations.

Several key assumptions are used in actuarial models to calculate pension expense and liability amounts recorded in the financial statements. Management believes the three most significant variables in the models are the expected long-term rate of return on plan assets, the discount rate, and the expected rate of compensation increase. The actuarial models also use assumptions for various other factors, including employee turnover, retirement age, and mortality. Praxair management believes the assumptions used in the actuarial calculations are reasonable, reflect the company's experience and expectations for the future and are within accepted practices in each of the respective geographic locations in which it operates. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors.

The weighted-average expected long-term rates of return on pension plan assets were 8.00% for U.S. plans and 7.71% for international plans for the year ended December 31, 2015 (8.00% and 8.10%, respectively at December 31, 2014). These rates are determined annually by management based on a weighted average of current and historical market trends, historical and expected portfolio performance and the current and expected portfolio mix of investments. A 0.50% change in these expected long-term rates of return, with all other variables held constant, would change Praxair's pension expense by approximately \$10 million.

The company has consistently used a market-related value of assets rather than the fair value at the measurement date to determine annual pension expense. The market-related value recognizes investment gains or losses over a five-year period. As a result, changes in the fair value of assets from year to year are not immediately reflected in the company's annual pension expense. Instead, annual pension expense in future periods will be impacted as deferred investment gains or losses are recognized in the market-related value of assets over the five-year period. The consolidated market-related value of assets was \$2,002 million, or \$18 million higher than the fair value of assets of \$1,984 million at December 31, 2015. These net deferred investment losses of \$18 million will be recognized in the calculation of the market-related value of assets ratably over the next four years and will impact future pension expense. Future actual investment gains or losses will impact the market-related value of assets and, therefore, will impact future annual pension expense in a similar manner.

Discount rates are used to calculate the present value of plan liabilities and pension costs and are determined annually by management. The discount rates for the U.S. plans are established utilizing a cash flow matching model provided by the company's independent actuaries. The model includes a portfolio of corporate bonds graded Aa or better by at least half of the ratings agencies and matches the U.S. plan's projected cash flows to the calculated spot rates. The discount rates for the remaining international plans are based on market yields for high-quality fixed income investments representing the approximate duration of the pension liabilities on the measurement date. A 0.50% change in discount rates, with all other variables held constant, would decrease/increase Praxair's pension expense by

approximately \$14 million and would impact the PBO by approximately \$158 million. At the end of 2015, the Company changed the approach that it will use in 2016 to determine the service and interest cost components of pension and OPEB benefit expense for significant plans. See Note 16 to the consolidated financial statements for a summary of the discount rates used to calculate plan liabilities and costs, and the Retirement Benefits section of the Consolidated Results and Other Information section of this MD&A. for a discussion of 2016 costs.

The weighted-average expected rate of compensation increase was 3.25% for U.S. plans and 3.57% for international plans at December 31, 2015 (3.25% and 3.72%, respectively, at December 31, 2014). The estimated annual compensation increase is determined by management every year and is based on historical trends and market indices. A 0.50% change in

## Table of Contents

the expected rate of compensation increase, with all other variables held constant, would change Praxair's pension expense by approximately \$5 million and would impact the PBO by approximately \$27 million.

### Asset Impairments

#### Goodwill

At December 31, 2015, the company had goodwill of \$2,986 million, which represents the aggregate of the excess purchase price for acquired businesses over the fair value of the net assets acquired.

The company performs a goodwill impairment test annually in the second quarter or more frequently if events or circumstances indicate that an impairment loss may have been incurred, and no impairments were indicated. The company has continuously re-evaluated the likelihood of goodwill impairments in its reporting units subsequent to the second quarter test, and does not believe there is indication of impairment for any of its reporting units. At December 31, 2015, Praxair's enterprise value was approximately \$38 billion (outstanding shares multiplied by the year-end stock price plus debt, and without any control premium) while its total capital was approximately \$14 billion. The impairment test allows an entity to first assess qualitative factors to determine if it is more likely than not that the fair value of a reporting unit is less than carrying value. If it is determined that it is more likely than not that the fair value of a reporting unit is less than carrying value then the company will estimate and compare the fair value of its reporting units to their carrying value, including goodwill. Reporting units are determined based on one level below the operating segment level. Fair value is determined through the use of projected future cash flows, multiples of earnings and sales and other factors.

Such analysis requires the use of certain market assumptions and discount factors, which are subjective in nature. As applicable, estimated values can be affected by many factors beyond the company's control such as business and economic trends, government regulation, and technological changes. Management believes that the qualitative factors used to perform its annual goodwill impairment assessment are appropriate and reasonable. Although the 2015 qualitative assessment indicated that it is more likely than not that the fair value of each reporting unit substantially exceeded its carrying value, changes in circumstances or conditions affecting this analysis could have a significant impact on the fair value determination, which could then result in a material impairment charge to the company's results of operations.

See Note 9 to the consolidated financial statements for disclosures concerning the carrying value of goodwill by reportable segment.

### Property, Plant and Equipment

Property, plant and equipment is tested for impairment whenever events or changes in circumstances indicate that the carrying amount of an individual asset or asset group may not be recoverable. For purposes of this test, asset groups are determined based upon the lowest level for which there are identifiable cash flows. Based upon Praxair's business model, an asset group may be a single plant and related assets used to support on-site, merchant and packaged gas customers. Alternatively, the asset group may be a pipeline complex which includes multiple interdependent plants and related assets connected by pipelines within a geographic area used to support the same distribution methods.

### Income Taxes

At December 31, 2015, Praxair had deferred tax assets of \$916 million (net of valuation allowances of \$123 million), and deferred tax liabilities of \$1,942 million. At December 31, 2015, uncertain tax positions totaled \$68 million (see Notes 1 and 5 to the consolidated financial statements). Income tax expense was \$612 million for the year ended December 31, 2015, or about 28.3% of pre-tax income.

In the preparation of consolidated financial statements, Praxair estimates income taxes based on diverse legislative and regulatory structures that exist in various jurisdictions where the company conducts business. Deferred income tax assets and liabilities represent tax benefits or obligations that arise from temporary differences due to differing treatment of certain items for accounting and income tax purposes. Praxair evaluates deferred tax assets each period to ensure that estimated future taxable income will be sufficient in character (e.g. capital gain versus ordinary income treatment), amount and timing to result in their recovery. A valuation allowance is established when management determines that it is more likely than not that a deferred tax asset will not be realized to reduce the assets to their

realizable value. Considerable judgments are required in establishing deferred tax valuation allowances and in assessing exposures related to tax matters. As events and circumstances change, related reserves and valuation allowances are adjusted to income at that time. Praxair's tax returns are subject to audit and local taxing authorities could challenge the company's tax positions. The company's practice is to review tax filing positions by jurisdiction and to record provisions for uncertain income tax



Table of Contents

positions, including interest and penalties when applicable. Praxair believes it records and/or discloses such potential tax liabilities as appropriate and has reasonably estimated its income tax liabilities and recoverable tax assets. If new information becomes available, adjustments are charged or credited against income at that time. Management does not anticipate that such adjustments would have a material adverse effect on the company's consolidated financial position or liquidity; however, it is possible that the final outcomes could have a material impact on the company's reported results of operations.

At December 31, 2015, a provision has not been made for additional U.S. federal or foreign taxes on approximately \$11 billion of undistributed earnings of foreign subsidiaries because Praxair intends to reinvest these funds indefinitely to support foreign growth opportunities. It is not practicable to estimate the unrecognized deferred income tax liability on these undistributed earnings. These earnings could become subject to additional tax if they are remitted as dividends, loaned to Praxair in the U.S., or upon sale of the subsidiary's stock.

**Contingencies**

The company accrues liabilities for non-income tax contingencies when management believes that a loss is probable and the amounts can be reasonably estimated, while contingent gains are recognized only when realized. If new information becomes available or losses are sustained in excess of recorded amounts, adjustments are charged against income at that time. Management does not anticipate that in the aggregate such losses would have a material adverse effect on the company's consolidated financial position or liquidity; however, it is possible that the final outcomes could have a material impact on the company's reported results of operations.

Praxair is subject to various claims, legal proceedings and government investigations that arise from time to time in the ordinary course of business. These actions are based upon alleged environmental, tax, antitrust and personal injury claims, among others (see Note 17 to the consolidated financial statements). Such contingencies are significant and the accounting requires considerable management judgments in analyzing each matter to assess the likely outcome and the need for establishing appropriate liabilities and providing adequate disclosures. Praxair believes it records and/or discloses such contingencies as appropriate and has reasonably estimated its liabilities.

**NEW ACCOUNTING STANDARDS**

See Note 1 to the consolidated financial statements for information concerning new accounting standards and the impact of the implementation of these standards on the company's financial statements.

**FAIR VALUE MEASUREMENTS**

Praxair does not expect changes in the aggregate fair value of its financial assets and liabilities to have a material impact on the consolidated financial statements. See Note 13 to the consolidated financial statements.

Table of Contents

## NON-GAAP FINANCIAL MEASURES

The company presents the following non-GAAP financial measures in the discussion of financial condition, results of operations and liquidity throughout the MD&A. These measures are intended to supplement investors' understanding of the company's financial information by providing information which investors, financial analysts and management use to help evaluate the company's financial leverage, return on capital employed and operating performance. Special items which the company does not believe to be indicative of on-going business performance are excluded from these calculations so that investors can better evaluate and analyze historical and future business trends on a consistent basis. Definitions of these non-GAAP measures may not be comparable to similar definitions used by other companies and are not a substitute for similar GAAP measures.

The following are the non-GAAP measures presented in the Selected Financial Data (Item 6) or this MD&A:

(Dollar amounts in millions, except for per share data)

Year ended December 31,	2015	2014	2013	2012	2011	
Performance Measures:						
After-tax return on capital ("ROC")	12.6	% 12.7	% 12.8	% 13.9	% 14.8	%
Return on equity ("ROE")	34.6	% 28.7	% 28.6	% 28.9	% 28.1	%
Debt-to-capital	64.9	% 59.5	% 54.2	% 51.8	% 51.7	%
Debt-to-adjusted EBITDA	2.5	2.3	2.2	1.9	1.7	
Adjusted Amounts:						
Operating profit	\$2,493	\$2,746	\$2,657	\$2,502	\$2,469	
Operating margin	23.1	% 22.4	% 22.3	% 22.3	% 21.9	%
EBITDA	\$3,642	\$3,958	\$3,804	\$3,537	\$3,512	
EBITDA margin	33.8	% 32.2	% 31.9	% 31.5	% 31.2	%
Interest expense - net	\$161	\$177	\$160	\$141	\$145	
Effective tax rate	28.0	% 27.5	% 28.0	% 28.0	% 27.8	%
Noncontrolling interests	\$(45 )	\$(52 )	\$(65 )	\$(54 )	\$(51 )	)
Net income – Praxair, Inc.	\$1,677	\$1,852	\$1,772	\$1,681	\$1,666	
Diluted earnings per share	\$5.80	\$6.27	\$5.93	\$5.57	\$5.43	

Table of Contents

## After-tax Return on Capital ("ROC")

After-tax return on capital is a measure used by investors, financial analysts and management to evaluate the return on capital employed in the business. ROC measures the after-tax operating profit that the company was able to generate with the investments made by all parties in the business (debt, noncontrolling interests and Praxair, Inc. shareholders' equity).

(Dollar amounts in millions)

Year Ended December 31,	2015	2014	2013	2012	2011	
Adjusted operating profit (see below)	\$2,493	\$2,746	\$2,657	\$2,502	\$2,469	
Less: adjusted income taxes (see below)	(653 )	(707 )	(698 )	(660 )	(647 )	
Less: tax benefit on adjusted interest expense (a)	(45 )	(50 )	(44 )	(39 )	(41 )	
Add: income from equity investments	43	42	38	34	40	
Net operating profit after-tax ("NOPAT")	\$1,838	\$2,031	\$1,953	\$1,837	\$1,821	
Beginning capital	\$15,285	\$15,951	\$13,850	\$12,466	\$11,644	
First quarter ending capital	\$14,806	\$16,285	\$15,312	\$13,223	\$12,268	
Second quarter ending capital	\$14,696	\$16,459	\$15,514	\$12,994	\$12,789	
Third quarter ending capital	\$14,157	\$16,052	\$15,725	\$13,592	\$12,282	
Year-end ending capital	\$13,990	\$15,285	\$15,951	\$13,850	\$12,466	
Five-quarter average capital	\$14,587	\$16,007	\$15,270	\$13,225	\$12,290	
After-tax return on capital	12.6	% 12.7	% 12.8	% 13.9	% 14.8	%

(a) Tax benefit on adjusted interest expense is computed using the effective rate adjusted for non-recurring income tax benefits and charges. The effective tax rates used for all periods was 28%.

## Return on Praxair, Inc. Shareholders' Equity ("ROE")

Return on Praxair, Inc. shareholders' equity is a measure used by investors, financial analysts and management to evaluate operating performance from a Praxair shareholder perspective. ROE measures the net income attributable to Praxair, Inc. that the company was able to generate with the money shareholders have invested.

(Dollar amounts in millions)

Year Ended December 31,	2015	2014	2013	2012	2011	
Adjusted net income – Praxair, Inc. (see below)	\$1,677	\$1,852	\$1,772	\$1,681	\$1,666	
Beginning Praxair, Inc. shareholders' equity	\$5,623	\$6,609	\$6,064	\$5,488	\$5,792	
First quarter ending Praxair, Inc. shareholders' equity	\$5,018	\$6,600	\$6,169	\$5,940	\$6,165	
Second quarter ending Praxair, Inc. shareholders' equity	\$4,964	\$6,911	\$5,928	\$5,615	\$6,400	
Third quarter ending Praxair, Inc. shareholders' equity	\$4,264	\$6,552	\$6,210	\$6,015	\$5,753	
Year-End ending Praxair, Inc. shareholders' equity	\$4,389	\$5,623	\$6,609	\$6,064	\$5,488	
Five-quarter average Praxair, Inc. shareholders' equity	\$4,852	\$6,459	\$6,196	\$5,824	\$5,920	
Return on Praxair, Inc. Shareholders' Equity	34.6	% 28.7	% 28.6	% 28.9	% 28.1	%



Table of Contents

## Debt-to-Capital Ratio

The debt-to-capital ratio is a measure used by investors, financial analysts and management to provide a measure of financial leverage and insights into how the company is financing its operations.

(Dollar amounts in millions)

Year Ended December 31,	2015	2014	2013	2012	2011
Total debt	\$9,231	\$9,225	\$8,779	\$7,334	\$6,539
Less: cash and cash equivalents	(147 )	(126 )	(138 )	(157 )	(90 )
Net debt	9,084	9,099	8,641	7,177	6,449
Equity and redeemable noncontrolling interests					
Redeemable noncontrolling interests	113	176	307	252	220
Praxair, Inc. shareholders' equity	4,389	5,623	6,609	6,064	5,488
Noncontrolling interests	404	387	394	357	309
Total equity and redeemable noncontrolling interests	4,906	6,186	7,310	6,673	6,017
Total capital	\$13,990	\$15,285	\$15,951	\$13,850	\$12,466
Debt-to-capital ratio	64.9 %	59.5 %	54.2 %	51.8 %	51.7 %
Adjusted EBITDA, Adjusted EBITDA Margin and Debt-to-Adjusted EBITDA Ratio					
(Dollar amounts in millions)					
Year Ended December 31,	2015	2014	2013	2012	2011
Adjusted net income - Praxair, Inc. (see below)	\$1,677	\$1,852	\$1,772	\$1,681	\$1,666
Add: adjusted noncontrolling interests (see below)	45	52	65	54	51
Add: adjusted interest expense - net	161	177	160	141	145
Add: adjusted income taxes (see below)	653	707	698	660	647
Add: depreciation and amortization	1,106	1,170	1,109	1,001	1,003
Adjusted EBITDA	\$3,642	\$3,958	\$3,804	\$3,537	\$3,512
Reported Sales	\$10,776	\$12,273	\$11,925	\$11,224	\$11,252
Adjusted EBITDA Margin	33.8 %	32.2 %	31.9 %	31.5 %	31.2 %
Beginning Praxair, Inc. net debt	\$9,099	\$8,641	\$7,177	\$6,449	\$5,498
First quarter ending Praxair, Inc. net debt	\$9,243	\$9,092	\$8,531	\$6,724	\$5,731
Second quarter ending Praxair, Inc. net debt	\$9,177	\$8,959	\$8,970	\$6,868	\$6,019
Third quarter ending Praxair, Inc. net debt	\$9,344	\$8,922	\$8,860	\$7,003	\$6,161
Year-End ending Praxair, Inc. net debt	\$9,084	\$9,099	\$8,641	\$7,177	\$6,449
Five-quarter average Praxair, Inc. net debt	\$9,189	\$8,943	\$8,436	\$6,844	\$5,972
Debt-to- adjusted EBITDA ratio	2.5	2.3	2.2	1.9	1.7

## Adjusted Amounts

2015 amounts are adjusted for the impact of the cost reduction program and other charges and pension settlements. 2014 amounts are adjusted for the impact of the Venezuela currency devaluation, a pension settlement and a bond redemption. 2013 amounts are adjusted for the impact of Venezuela currency devaluation, a pension settlement, an income tax benefit related to the realignment of Praxair's Italian legal structure and a bond redemption. 2012 amounts are adjusted for the impact of the cost reduction program, a pension settlement and an income tax benefit related to U.S. homecare divestiture. 2011 amounts are adjusted for the impact of a net gain on acquisition and the cost reduction program. The company does not believe these items are indicative of on-going business performance and, accordingly, their impacts are



Table of Contents

excluded from the reported amounts so that investors can better evaluate and analyze historical and future business trends on a consistent basis.

(Dollar amounts in millions, except per share data)

Year Ended December 31,	2015	2014	2013	2012	2011			
<b>Adjusted Operating Profit and Margin</b>								
Reported operating profit	\$2,321	\$2,608	\$2,625	\$2,437	\$2,468			
Add: Pension settlement charge	7	7	9	9	—			
Add: Venezuela currency devaluation	—	131	23	—	—			
Add: Cost reduction program	165	—	—	56	40			
Less: Net gain on acquisition	—	—	—	—	(39	)		
Total adjustments	172	138	32	65	1			
Adjusted operating profit	\$2,493	\$2,746	\$2,657	\$2,502	\$2,469			
Reported percent change	(11	)%	(1	)%	8	% (1	)% 19	%
Adjusted percent change	(9	)%	3	% 6	% 1	% 14	%	
Reported sales	\$10,776	\$12,273	\$11,925	\$11,224	\$11,252			
Reported operating margin	21.5	% 21.2	% 22.0	% 21.7	% 21.9	%		
Adjusted operating margin	23.1	% 22.4	% 22.3	% 22.3	% 21.9	%		
<b>Adjusted Interest Expense - Net</b>								
Reported interest expense	161	213	178	141	145			
Less: Bond redemption	—	(36	)	(18	)	—		
Adjusted interest expense - net	\$161	\$177	\$160	\$141	\$145			
<b>Adjusted Income Taxes and Effective Tax Rate</b>								
Reported income taxes	\$612	\$691	\$649	\$586	\$641			
Add: Bond redemption	—	14	6	—	—			
Add: Income tax benefits	—	—	40	55	—			
Add: Pension settlement charge	2	2	3	3	—			
Add: Cost reduction program	39	—	—	16	9			
Less: Net gain on acquisition	—	—	—	—	(3	)		
Total adjustments	41	16	49	74	6			
Adjusted income taxes	\$653	\$707	\$698	\$660	\$647			
Reported income before income taxes and equity investments	\$2,160	\$2,395	\$2,447	\$2,296	\$2,323			
Add: Bond redemption	—	36	18	—	—			
Add: Pension settlement charge	7	7	9	9	—			
Add: Venezuela currency devaluation	—	131	23	—	—			
Add: Cost reduction program	165	—	—	56	40			
Less: Net gain on acquisition	—	—	—	—	(39	)		
Total adjustments	172	174	50	65	1			
Adjusted income before income taxes and equity investments	\$2,332	\$2,569	\$2,497	\$2,361	\$2,324			
Adjusted effective tax rate	28.0	% 27.5	% 28.0	% 28.0	% 27.8	%		
<b>Adjusted Noncontrolling Interests</b>								
Reported noncontrolling interests	\$44	\$52	\$81	\$52	\$50			
Less: Income tax benefits	—	—	(16	)	—	—		

Edgar Filing: PRAXAIR INC - Form 10-K

Add: Cost reduction program	1	—	—	2	—
Add: Net gain on acquisition	—	—	—	—	1
Total adjustments	1	—	(16	) 2	1
Adjusted noncontrolling interests	\$45	\$52	\$65	\$54	\$51

47

---



Table of Contents

(Dollar amounts in millions, except per share data)

	2015	2014	2013	2012	2011			
Year Ended December 31, Adjusted Net Income – Praxair, Inc.								
Reported net income – Praxair, Inc.	\$1,547	\$1,694	\$1,755	\$1,692	\$1,672			
Add: Bond redemption	—	22	12	—	—			
Less: Income tax benefits	—	—	(24	) (55	) —			
Add: Pension settlement charge	5	5	6	6	—			
Add: Venezuela currency devaluation	—	131	23	—	—			
Add: Cost reduction program	125	—	—	38	31			
Less: Net gain on acquisition	—	—	—	—	(37	)		
Total adjustments	130	158	17	(11	) (6	)		
Adjusted net income – Praxair, Inc.	\$1,677	\$1,852	\$1,772	\$1,681	\$1,666			
Reported percent change	(9	)%	(3	)%	4	% 1	% 40	%
Adjusted percent change	(9	)%	5	% 5	% 1	% 13	%	

(Dollar amounts in millions, except per share data)

	2015	2014	2013	2012	2011			
Year Ended December 31, Adjusted Diluted Earnings Per Share								
Reported diluted earnings per share	\$5.35	\$5.73	\$5.87	\$5.61	\$5.45			
Add: Bond redemption	—	0.07	0.04	—	—			
Less: Income tax benefits	—	—	(0.08	) (0.18	) —			
Add: Pension settlement charge	0.02	0.02	0.02	0.02	—			
Add: Venezuela currency devaluation	—	0.45	0.08	—	—			
Add: Cost reduction program	0.43	—	—	0.12	0.10			
Less: Net gain on acquisition	—	—	—	—	(0.12	)		
Total adjustments	0.45	0.54	0.06	(0.04	) (0.02	)		
Adjusted diluted earnings per share	\$5.80	\$6.27	\$5.93	\$5.57	\$5.43			
Reported percent change	(7	)%	(2	)%	5	% 3	% 42	%
Adjusted percent change	(7	)%	6	% 6	% 3	% 15	%	

## 2016 Diluted Earnings Per Share Outlook

	Low	High		
	End	End		
2016 diluted EPS outlook	\$5.30	\$5.70		
2015 adjusted diluted EPS (see above)	\$5.80	\$5.80		
Percentage change	(9	)%	(2	)%

Table of Contents

**FORWARD-LOOKING STATEMENTS**

This document contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on management’s reasonable expectations and assumptions as of the date the statements are made but involve risks and uncertainties. These risks and uncertainties include, without limitation: the performance of stock markets generally; developments in worldwide and national economies and other international events and circumstances; changes in foreign currencies and in interest rates; the cost and availability of electric power, natural gas and other raw materials; the ability to achieve price increases to offset cost increases; catastrophic events including natural disasters, epidemics and acts of war and terrorism; the ability to attract, hire, and retain qualified personnel; the impact of changes in financial accounting standards; the impact of changes in pension plan liabilities; the impact of tax, environmental, healthcare and other legislation and government regulation in jurisdictions in which the company operates; the cost and outcomes of investigations, litigation and regulatory proceedings; continued timely development and market acceptance of new products and applications; the impact of competitive products and pricing; future financial and operating performance of major customers and industries served; the impact of information technology system failures, network disruptions and breaches in data security; and the effectiveness and speed of integrating new acquisitions into the business. These risks and uncertainties may cause actual future results or circumstances to differ materially from the projections or estimates contained in the forward-looking statements. Additionally, financial projections or estimates exclude the impact of special items which the company believes are not indicative of ongoing business performance. The company assumes no obligation to update or provide revisions to any forward-looking statement in response to changing circumstances. The above listed risks and uncertainties are further described in Item 1A (Risk Factors) in this report which should be reviewed carefully. Please consider the company’s forward-looking statements in light of those risks.

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

Praxair is exposed to market risks relating to fluctuations in interest rates and currency exchange rates. The objective of financial risk management at Praxair is to minimize the negative impact of interest rate and foreign exchange rate fluctuations on the company's earnings, cash flows and equity.

To manage these risks, Praxair uses various derivative financial instruments, including interest-rate swaps, treasury rate locks, currency swaps, forward contracts, currency options and commodity contracts. Praxair only uses commonly traded and non-leveraged instruments. These contracts are entered into primarily with major banking institutions thereby minimizing the risk of credit loss. Also, see Notes 1 and 12 to the consolidated financial statements for a more complete description of Praxair's accounting policies and use of such instruments.

The following discussion presents the sensitivity of the market value, earnings and cash flows of Praxair's financial instruments to hypothetical changes in interest and exchange rates assuming these changes occurred at December 31, 2015. The range of changes chosen for these discussions reflects Praxair's view of changes which are reasonably possible over a one-year period. Market values represent the present values of projected future cash flows based on interest rate and exchange rate assumptions.

**Interest Rate and Debt Sensitivity Analysis**

At December 31, 2015, Praxair had debt totaling \$9,231 million (\$9,225 million at December 31, 2014). At December 31, 2015, there was one interest rate swap agreement outstanding with a notional amount of \$475 million that converts fixed-rate interest to variable-rate interest on the \$475 million 1.25% notes that mature in 2018. When considered appropriate, interest-rate swaps are entered into as hedges of underlying financial instruments to effectively change the characteristics of the interest rate without actually changing the underlying financial instrument. For fixed-rate instruments, interest-rate changes affect the fair market value but do not impact earnings or cash flows. Conversely, for floating-rate instruments, interest-rate changes generally do not affect the fair market value but impact future earnings and cash flows, assuming other factors are held constant.

At December 31, 2015, Praxair had fixed-rate debt of \$8,300 million and floating-rate debt of \$931 million, representing 90% and 10%, respectively, of total debt. At December 31, 2014, Praxair had fixed-rate debt of \$7,594 million and floating-rate debt of \$1,631 million, representing 82% and 18%, respectively, of total debt. Holding other variables constant (such as foreign exchange rates, swaps and debt levels), a one-percentage-point decrease in interest rates would increase the unrealized fair market value of the fixed-rate debt by approximately \$506 million (\$440 million in 2014). At December 31, 2015 and 2014, the after-tax earnings and cash flows impact for the subsequent year resulting from a one-percentage-point increase in interest rates would be approximately \$6 million and \$11 million, respectively, holding other variables constant.

**Exchange Rate Sensitivity Analysis**

Praxair's exchange-rate exposures result primarily from its investments and ongoing operations in South America (primarily Brazil, Argentina and Colombia), Europe (primarily Germany, Italy, Russia, Scandinavia and Spain), Canada, Mexico, Asia (primarily China, India, Korea and Thailand) and other business transactions such as the procurement of equipment from foreign sources. From time to time, Praxair utilizes foreign exchange forward contracts to hedge these exposures. At December 31, 2015, Praxair had \$2,548 million notional amount (\$2,427 million at December 31, 2014) of foreign exchange contracts all of which were to hedge recorded balance sheet exposures. See Note 12 to the consolidated financial statements.

Holding other variables constant, if there were a 10% adverse change in foreign-currency exchange rates for the portfolio, the fair market value of foreign-currency contracts outstanding at December 31, 2015 and 2014 would decrease by approximately \$123 million and \$86 million, respectively, which would be largely offset by an offsetting gain or loss on the foreign-currency fluctuation of the underlying exposure being hedged.

Table of ContentsITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA  
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

	Page
<u>Management's Statement of Responsibility for Financial Statements</u>	<u>52</u>
<u>Management's Report on Internal Control Over Financial Reporting</u>	<u>52</u>
<u>Report of Independent Registered Public Accounting Firm</u>	<u>53</u>
Audited Consolidated Financial Statements	
<u>Consolidated Statements of Income for the Years Ended December 31, 2015, 2014 and 2013</u>	<u>54</u>
<u>Consolidated Statements of Comprehensive Income for the Years Ended December 31, 2015, 2014 and 2013</u>	<u>55</u>
<u>Consolidated Balance Sheets as of December 31, 2015 and 2014</u>	<u>56</u>
<u>Consolidated Statements of Cash Flows for the Years Ended December 31, 2015, 2014 and 2013</u>	<u>57</u>
<u>Consolidated Statements of Equity for the Years Ended December 31, 2015, 2014 and 2013</u>	<u>58</u>
Notes to Consolidated Financial Statements	
<u>Note 1. Summary of Significant Accounting Policies</u>	<u>60</u>
<u>Note 2. Cost Reduction Program and Other Charges</u>	<u>63</u>
<u>Note 3. Acquisitions</u>	<u>66</u>
<u>Note 4. Leases</u>	<u>67</u>
<u>Note 5. Income Taxes</u>	<u>67</u>
<u>Note 6. Earnings Per Share – Praxair, Inc. Shareholders</u>	<u>71</u>
<u>Note 7. Supplemental Information</u>	<u>72</u>
<u>Note 8. Property, Plant and Equipment – Net</u>	<u>75</u>
<u>Note 9. Goodwill</u>	<u>76</u>
<u>Note 10. Other Intangible Assets</u>	<u>77</u>
<u>Note 11. Debt</u>	<u>79</u>
<u>Note 12. Financial Instruments</u>	<u>81</u>
<u>Note 13. Fair Value Disclosures</u>	<u>84</u>
<u>Note 14. Equity and Redeemable Noncontrolling Interests</u>	<u>85</u>
<u>Note 15. Share-Based Compensation</u>	<u>86</u>
<u>Note 16. Retirement Programs</u>	<u>88</u>
<u>Note 17. Commitments and Contingencies</u>	<u>95</u>
<u>Note 18. Segment Information</u>	<u>98</u>
<u>Note 19. Quarterly Data (Unaudited)</u>	<u>100</u>

Table of Contents**MANAGEMENT'S STATEMENT OF RESPONSIBILITY FOR FINANCIAL STATEMENTS**

Praxair's consolidated financial statements are prepared by management, which is responsible for their fairness, integrity and objectivity. The accompanying financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America applied on a consistent basis, except for accounting changes as disclosed, and include amounts that are estimates and judgments. All historical financial information in this annual report is consistent with the accompanying financial statements.

Praxair maintains accounting systems, including internal accounting controls, monitored by a staff of internal auditors, that are designed to provide reasonable assurance of the reliability of financial records and the protection of assets. The concept of reasonable assurance is based on recognition that the cost of a system should not exceed the related benefits. The effectiveness of those systems depends primarily upon the careful selection of financial and other managers, clear delegation of authority and assignment of accountability, inculcation of high business ethics and conflict-of-interest standards, policies and procedures for coordinating the management of corporate resources, and the leadership and commitment of top management. In compliance with Section 404 of the Sarbanes-Oxley Act of 2002, Praxair assessed its internal control over financial reporting and issued a report (see below).

PricewaterhouseCoopers LLP, an independent registered public accounting firm, has completed an integrated audit of Praxair's 2015, 2014 and 2013 consolidated financial statements and of its internal control over financial reporting as of December 31, 2015 in accordance with the standards of the Public Company Accounting Oversight Board (United States) as stated in their report.

The Audit Committee of the Board of Directors, which consists solely of non-employee directors, is responsible for overseeing the functioning of the accounting system and related controls and the preparation of annual financial statements. The Audit Committee periodically meets with management, internal auditors and the independent accountants to review and evaluate their accounting, auditing and financial reporting activities and responsibilities, including management's assessment of internal control over financial reporting. The independent registered public accounting firm and internal auditors have full and free access to the Audit Committee and meet with the committee, with and without management present.

**MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING**

Praxair's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of management, including the company's principal executive officer and principal financial officer, the company conducted an evaluation of the effectiveness of its internal control over financial reporting based on the framework in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (often referred to as COSO). Based on this evaluation, management concluded that the company's internal control over financial reporting was effective as of December 31, 2015.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, has issued their opinion on the company's internal control over financial reporting as of December 31, 2015 as stated in their report.

/s/ STEPHEN F. ANGEL

Stephen F. Angel  
Chairman, President and  
Chief Executive Officer

/s/ MATTHEW J. WHITE

Matthew J. White  
Senior Vice President and  
Chief Financial Officer

/s/ ELIZABETH T. HIRSCH

Elizabeth T. Hirsch  
Vice President and Controller

Danbury, Connecticut  
February 24, 2016

Table of Contents

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To The Board of Directors and Shareholders of Praxair, Inc.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, comprehensive income, equity and cash flows present fairly, in all material respects, the financial position of Praxair and its subsidiaries at December 31, 2015 and 2014, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2015 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, 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 opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated 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 audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed 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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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 its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP  
Stamford, Connecticut  
February 24, 2016

Table of Contents

CONSOLIDATED STATEMENTS OF INCOME  
PRAXAIR, INC. AND SUBSIDIARIES

(Dollar amounts in millions, except per share data)

Year Ended December 31,	2015	2014	2013
Sales	\$10,776	\$12,273	\$11,925
Cost of sales, exclusive of depreciation and amortization	5,960	6,962	6,744
Selling, general and administrative	1,152	1,308	1,349
Depreciation and amortization	1,106	1,170	1,109
Research and development	93	96	98
Cost reduction program and other charges	172	138	32
Other income (expenses) – net	28	9	32
Operating Profit	2,321	2,608	2,625
Interest expense – net	161	213	178
Income Before Income Taxes and Equity Investments	2,160	2,395	2,447
Income taxes	612	691	649
Income Before Equity Investments	1,548	1,704	1,798
Income from equity investments	43	42	38
Net Income (Including Noncontrolling Interests)	1,591	1,746	1,836
Less: noncontrolling interests	(44	) (52	) (81
Net Income – Praxair, Inc.	\$1,547	\$1,694	\$1,755
Per Share Data – Praxair, Inc. Shareholders			
Basic earnings per share	\$5.39	\$5.79	\$5.94
Diluted earnings per share	\$5.35	\$5.73	\$5.87
Weighted Average Shares Outstanding (000's):			
Basic shares outstanding	287,005	292,494	295,523
Diluted shares outstanding	289,055	295,608	298,965

The accompanying Notes on pages 60 to 101 are an integral part of these financial statements.

Table of Contents

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME  
 PRAXAIR, INC. AND SUBSIDIARIES  
 (Dollar amounts in millions)

Year Ended December 31,	2015	2014	2013
NET INCOME (INCLUDING NONCONTROLLING INTERESTS)	\$1,591	\$1,746	\$1,836
OTHER COMPREHENSIVE INCOME (LOSS)			
Translation adjustments:			
Foreign currency translation adjustments	(1,517	) (1,087	) (474
Reclassifications to net income	—	(5	) —
Income Taxes	3	(4	) 27
Translation adjustments	(1,514	) (1,096	) (447
Funded status - retirement obligations (Note 16):			
Retirement program remeasurements	(11	) (318	) 408
Reclassifications to net income	84	59	95
Income taxes	(17	) 95	(180
Funded status - retirement obligations	56	(164	) 323
Derivative instruments (Note 12):			
Current year unrealized gain (loss)	1	4	1
Reclassifications to net income	(1	) —	—
Income taxes	—	(1	) —
Derivative instruments	—	3	1
TOTAL OTHER COMPREHENSIVE LOSS	(1,458	) (1,257	) (123
COMPREHENSIVE INCOME (INCLUDING NONCONTROLLING INTERESTS)	133	489	1,713
Less: noncontrolling interests	3	1	(76
COMPREHENSIVE INCOME - PRAXAIR, INC.	\$136	\$490	\$1,637

The accompanying Notes on pages 60 to 101 are an integral part of these financial statements.



Table of Contents

## CONSOLIDATED BALANCE SHEETS

## PRAXAIR, INC. AND SUBSIDIARIES

(Dollar amounts in millions)

December 31,	2015	2014
Assets		
Cash and cash equivalents	\$147	\$126
Accounts receivable – net	1,601	1,796
Inventories	531	551
Prepaid and other current assets	347	366
Total Current Assets	2,626	2,839
Property, plant and equipment – net	10,998	11,997
Equity investments	665	693
Goodwill	2,986	3,121
Other intangible assets – net	568	603
Other long-term assets	476	516
Total Assets	\$18,319	\$19,769
Liabilities and Equity		
Accounts payable	\$791	\$864
Short-term debt	250	587
Current portion of long-term debt	6	2
Accrued taxes	144	119
Other current liabilities	702	918
Total Current Liabilities	1,893	2,490
Long-term debt	8,975	8,636
Other long-term liabilities	1,155	1,176
Deferred credits	1,390	1,281
Total Liabilities	13,413	13,583
Commitments and contingencies (Note 17)		
Redeemable noncontrolling interests	113	176
Praxair, Inc. Shareholders' Equity:		
Common stock \$0.01 par value, authorized – 800,000,000 shares, issued 2015 and 2014 – 383,230,625 shares	4	4
Additional paid-in capital	4,005	3,994
Retained earnings	12,229	11,461
Accumulated other comprehensive income (loss)	(4,596	) (3,185
Less: Treasury stock, at cost (2015 – 98,351,546 shares and 2014 – 93,969,017 shares)	(7,253	) (6,651
Total Praxair, Inc. Shareholders' Equity	4,389	5,623
Noncontrolling interests	404	387
Total Equity	4,793	6,010
Total Liabilities and Equity	\$18,319	\$19,769

The accompanying Notes on pages 60 to 101 are an integral part of these financial statements.

Table of Contents

## CONSOLIDATED STATEMENTS OF CASH FLOWS

## PRAXAIR, INC. AND SUBSIDIARIES

(Millions of dollars)

Year Ended December 31,	2015	2014	2013
Increase (Decrease) in Cash and Cash Equivalents			
Operations			
Net income – Praxair, Inc.	\$1,547	\$1,694	\$1,755
Noncontrolling interests	44	52	81
Net income (including noncontrolling interests)	\$1,591	\$1,746	\$1,836
Adjustments to reconcile net income to net cash provided by operating activities:			
Cost reduction program and other charges, net of payments	121	138	23
Depreciation and amortization	1,106	1,170	1,109
Deferred income taxes	99	55	101
Share-based compensation	30	51	70
Non-cash charges and other	(79)	) (116	) (88
Working capital			
Accounts receivable	1	(80	) (84
Inventory	(23	) (42	) (54
Prepaid and other current assets	(22	) (20	) (69
Payables and accruals	(40	) 13	107
Pension contributions	(15	) (18	) (52
Long-term assets, liabilities and other	(87	) (29	) 18
Net cash provided by operating activities	2,682	2,868	2,917
Investing			
Capital expenditures	(1,541	) (1,689	) (2,020
Acquisitions, net of cash acquired	(82	) (206	) (1,323
Divestitures and asset sales	320	92	106
Net cash used for investing activities	(1,303	) (1,803	) (3,237
Financing			
Short-term debt borrowings (repayments) – net	(329	) (193	) 149
Long-term debt borrowings	1,497	1,546	2,659
Long-term debt repayments	(1,000	) (764	) (1,347
Issuances of common stock	88	103	154
Purchases of common stock	(725	) (862	) (590
Cash dividends – Praxair, Inc. shareholders	(819	) (759	) (708
Excess tax benefit on stock based compensation	19	31	46
Noncontrolling interest transactions and other	(28	) (110	) (35
Net cash provided (used ) for financing activities	(1,297	) (1,008	) 328
Effect of exchange rate changes on cash and cash equivalents	(61	) (69	) (27
Change in cash and cash equivalents	21	(12	) (19
Cash and cash equivalents, beginning-of-period	126	138	157
Cash and cash equivalents, end-of-period	\$147	\$126	\$138
Supplemental Data			
Income taxes paid	\$420	\$606	\$532
Interest paid, net of capitalized interest (Note 7)	\$174	\$210	\$184

The accompanying Notes on pages 60 to 101 are an integral part of these financial statements.



Table of Contents

## CONSOLIDATED STATEMENTS OF EQUITY

## PRAXAIR, INC. AND SUBSIDIARIES

(Dollar amounts in millions, except per share data, shares in thousands)

Activity	Praxair, Inc. Shareholders' Equity									
	Common Stock Shares	Amount	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss) (Note 7)	Treasury Stock Shares	Amounts	Praxair, Inc. Shareholder Equity	Noncontrol Interests	Total Equity
Balance, December 31, 2012	383,073	\$ 4	\$ 3,889	\$ 9,534	\$ (1,852 )	86,844	\$(5,511)	\$ 6,064	\$ 357	\$ 6,421
Net Income				1,755				1,755	57	1,812
Other comprehensive income (loss)					(129 )			(129 )	6	(123 )
Noncontrolling interests: Dividends and other capital reductions									(41 )	(41 )
Additions (Reductions)									15	15
Redemption value adjustments (Note 14)				(53 )				(53 )		(53 )
Dividends to Praxair, Inc. common stock (\$2.40 per share)				(708 )				(708 )		(708 )
Issuances of common stock: For the dividend reinvestment and stock purchase plan	47		5			(14 )	2	7		7
For employee savings and incentive plans	111		(41 )			(2,767 )	180	139		139
Purchases of common stock						5,034	(583 )	(583 )		(583 )
Tax benefit from stock options			47					47		47
Share-based compensation			70					70		70
Balance, December 31, 2013	383,231	\$ 4	\$ 3,970	\$ 10,528	\$ (1,981 )	89,097	\$(5,912)	\$ 6,609	\$ 394	\$ 7,003

Edgar Filing: PRAXAIR INC - Form 10-K

Net Income	1,694	1,694	40	1,734
Other comprehensive income (loss)	(1,204 )	(1,204 )	(29 )	(1,233 )
Noncontrolling interests:				
Dividends and other capital reductions			(28 )	(28 )
Purchases of noncontrolling interests	(24 )	(24 )	2	(22 )
Additions (Reductions)			8	8
Redemption value adjustments (Note 14)	(2 )	(2 )		(2 )
Dividends to Praxair, Inc. common stock (\$2.60 per share)	(759 )	(759 )		(759 )

58

---

Table of Contents

Activity	Praxair, Inc. Shareholders' Equity				Accumulated Other Comprehensive Income (Loss) (Note 7)	Treasury Stock		Praxair, Inc. Shareholder Equity	Noncontrol Interests	Total Equity
	Common Stock  Shares	Additional Paid-in Capital  Amount	Retained Earnings  Capital	Retained Earnings		Shares	Amounts			
Issuances of common stock: For the dividend reinvestment and stock purchase plan					(56 )	7	7			7
For employee savings and incentive plans		(36 )			(1,830 )	122	86			86
Purchases of common stock					6,758	(868 )	(868 )			(868 )
Tax benefit from stock options		33					33			33
Share-based compensation		51					51			51
Balance, December 31, 2014	383,231	\$ 4 \$ 3,994	\$ 11,461	\$ (3,185 )	93,969	\$ (6,651)	\$ 5,623	\$ 387		\$ 6,010
Net Income			1,547				1,547	34		1,581
Other comprehensive loss				(1,411 )			(1,411 )	(30 )		(1,441 )
Noncontrolling interests: Dividends and other capital reductions								(16 )		(16 )
Additions (Reductions)								29		29
Redemption value adjustments (Note 14)			40				40			40
Dividends to Praxair, Inc. common stock (\$2.86 per share)			(819 )				(819 )			(819 )
Issuances of common stock: For the dividend reinvestment and stock purchase plan					(64 )	7	7			7

Edgar Filing: PRAXAIR INC - Form 10-K

For employee savings and incentive plans	(38 )					(1,562 )	110	72		72
Purchases of common stock						6,009	(719 )	(719 )		(719 )
Tax benefit from stock options	19							19		19
Share-based compensation	30							30		30
Balance, December 31, 2015	383,231	\$ 4	\$ 4,005	\$ 12,229	\$ (4,596 )	98,352	\$ (7,253)	\$ 4,389	\$ 404	\$ 4,793

The accompanying Notes on pages 60 to 101 are an integral part of these financial statements

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

PRAXAIR, INC. AND SUBSIDIARIES

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Operations – Praxair, Inc. and its subsidiaries ("Praxair" or "the company") comprise one of the largest industrial gases companies worldwide, and the largest in North and South America. Praxair produces, sells and distributes atmospheric, process and specialty gases, and high-performance surface coatings to a diverse group of industries including aerospace, chemicals, food and beverage, electronics, energy, healthcare, manufacturing, and metals.

Principles of Consolidation – The consolidated financial statements were prepared in conformity with accounting principles generally accepted in the United States of America (" U.S. GAAP") and include the accounts of all significant subsidiaries where control exists and, in limited situations, variable-interest entities where the company is the primary beneficiary. Intercompany transactions and balances are eliminated in consolidation and any significant related-party transactions have been disclosed.

Equity investments generally consist of 20% to 50% owned operations where the company exercises significant influence, but does not have control. Equity income from equity investments in corporations is reported on an after-tax basis. Pre-tax income from equity investments that are partnerships or limited-liability corporations ("LLC") is included in other income (expenses) – net with related taxes included in Income taxes. Equity investments are reviewed for impairment whenever events or circumstances reflect that an impairment loss may have incurred. Operations less than 20% owned, where the company does not exercise significant influence, are generally carried at cost.

Changes in ownership interest that result either in consolidation or deconsolidation of an investment are recorded at fair value through earnings, including the retained ownership interest, while changes that do not result in either consolidation or deconsolidation of a subsidiary are treated as equity transactions.

Use of Estimates – The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and 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. While actual results could differ, management believes such estimates to be reasonable.

Revenue Recognition – Product sales represent approximately 88% of consolidated sales while all other sources of revenue are approximately 12% in the aggregate and primarily relate to rental revenue. Revenue is recognized when a firm sales agreement exists, collectability of a fixed or determinable sales price is reasonably assured, and when title and risks of ownership transfer to the customer for product sales or, in the case of other revenues when obligations are satisfied or services are performed. Sales returns and allowances are not a normal practice in the industry and are not significant.

A small portion of the company's revenues relate to long-term construction contracts and are generally recognized using the percentage-of-completion method. Under this method, revenues from sales of major equipment, such as large air-separation facilities, are recognized based primarily on cost incurred to date compared with total estimated cost. Changes to total estimated cost and anticipated losses, if any, are recognized in the period determined.

For contracts that contain multiple products and/or services, amounts assigned to each component are based on its objectively determined fair value, such as the sales price for the component when it is sold separately or competitor prices for similar components.

Certain of the company's facilities that are built to provide product to a specific customer are required to be accounted for as leases. The associated revenue streams are classified as rental revenue and are not significant.

Amounts billed for shipping and handling fees are recorded as sales, generally on FOB destination terms, and costs incurred for shipping and handling are recorded as cost of sales.

Amounts billed for sales and use taxes, value-added taxes, and certain excise and other specific transactional taxes imposed on revenue producing transactions are presented on a net basis and are not included in sales in the consolidated statement of income.

Cash Equivalents – Cash equivalents are considered to be highly liquid securities with original maturities of three months or less.



Inventories – Inventories are stated at the lower of cost or market. Cost is determined using the average-cost method. Effective July 1, 2014, the Company changed its method of accounting for all remaining U.S. operations that were using the last-in, first-out (“LIFO”) method to the average-cost method. See Note 7.

Table of Contents

Property, Plant and Equipment – Net – Property, plant and equipment are carried at cost, net of accumulated depreciation. The company capitalizes interest as part of the cost of constructing major facilities (see Note 7). Depreciation is calculated on the straight-line method based on the estimated useful lives of the assets, which range from 3 years to 40 years (see Note 8). Praxair uses accelerated depreciation methods for tax purposes where appropriate. Maintenance of property, plant and equipment is generally expensed as incurred.

The company performs a test for impairment whenever events or changes in circumstances indicate that the carrying amount of an individual asset or asset group may not be recoverable. Should projected undiscounted future cash flows be less than the carrying amount of the asset or asset group, an impairment charge reducing the carrying amount to fair value is required. Fair value is determined based on the most appropriate valuation technique, including discounted cash flows.

Asset-Retirement Obligations – An asset-retirement obligation is recognized in the period in which sufficient information exists to determine the fair value of the liability with a corresponding increase to the carrying amount of the related property, plant and equipment which is then depreciated over its useful life. The liability is initially measured at discounted fair value and then accretion expense is recorded in each subsequent period. The company's asset-retirement obligations are primarily associated with its on-site long-term supply arrangements where the company has built a facility on land leased from the customer and is obligated to remove the facility at the end of the contract term. The company's asset-retirement obligations are not material to its consolidated financial statements.

Foreign Currency Translation – For most foreign operations, the local currency is the functional currency and translation gains and losses are reported as part of the accumulated other comprehensive income (loss) component of equity as a cumulative translation adjustment (see Note 7).

Financial Instruments – Praxair enters into various derivative financial instruments to manage its exposure to fluctuating interest and currency exchange rates and energy costs. Such instruments primarily include interest-rate swap and treasury rate lock agreements; currency-swap agreements; forward contracts; currency options; and commodity-swap agreements. These instruments are not entered into for trading purposes. Praxair only uses commonly traded and non-leveraged instruments.

There are three types of derivatives the company enters into: (i) those relating to fair-value exposures, (ii) those relating to cash-flow exposures, and (iii) those relating to foreign currency net investment exposures. Fair-value exposures relate to recognized assets or liabilities, and firm commitments; cash-flow exposures relate to the variability of future cash flows associated with recognized assets or liabilities, or forecasted transactions; and net investment exposures relate to the impact of foreign currency exchange rate changes on the carrying value of net assets denominated in foreign currencies.

When a derivative is executed and hedge accounting is appropriate, it is designated as either a fair-value hedge, cash-flow hedge, or a net investment hedge. Currently, Praxair designates all interest-rate and treasury rate locks as hedges for accounting purposes; however, currency contracts are generally not designated as hedges for accounting purposes unless they are related to forecasted transactions. Whether designated as hedges for accounting purposes or not, all derivatives are linked to an appropriate underlying exposure. On an ongoing basis, the company assesses the hedge effectiveness of all derivatives designated as hedges for accounting purposes to determine if they continue to be highly effective in offsetting changes in fair values or cash flows of the underlying hedged items. If it is determined that the hedge is not highly effective, then hedge accounting will be discontinued prospectively.

Changes in the fair value of derivatives designated as fair-value hedges are recognized in earnings as an offset to the change in the fair values of the underlying exposures being hedged. The changes in fair value of derivatives that are designated as cash-flow hedges are deferred in accumulated other comprehensive income (loss) and are reclassified to earnings as the underlying hedged transaction affects earnings. Any ineffectiveness is recognized in earnings immediately. Hedges of net investments in foreign subsidiaries are recognized in the cumulative translation adjustment component of accumulated other comprehensive income (loss) on the consolidated balance sheets to offset translation gains and losses associated with the hedged net investment. Derivatives that are entered into for risk-management purposes and are not designated as hedges (primarily related to anticipated net income and currency derivatives other than for firm commitments) are recorded at their fair market values and recognized in current earnings.

See Note 12 for additional information relating to financial instruments.

Goodwill – Acquisitions are accounted for using the acquisition method which requires allocation of the purchase price to assets acquired and liabilities assumed based on estimated fair values. Any excess of the purchase price over the fair value of the assets and liabilities acquired is recorded as goodwill. Allocations of the purchase price are based on preliminary estimates and assumptions at the date of acquisition and are subject to revision based on final information received, including appraisals and other analyses which support underlying estimates.

## Table of Contents

The company performs a goodwill impairment test annually in the second quarter or more frequently if events or circumstances indicate that an impairment loss may have been incurred. The applicable guidance allows an entity to first assess qualitative factors to determine if it is more likely than not that the fair value of a reporting unit is less than carrying value. If it is determined that it is more likely than not that the fair value of a reporting unit is less than carrying value then the company will estimate and compare the fair value of its reporting units to their carrying value, including goodwill. Reporting units are determined based on one level below the operating segment level. As applicable, fair value is determined through the use of projected future cash flows, multiples of earnings and sales and other factors. Such analysis requires the use of certain market assumptions and discount factors, which are subjective in nature.

See Note 9 for additional information relating to goodwill.

Other Intangible Assets – Customer and license/use agreements, non-compete agreements and patents and other intangibles are amortized over the estimated period of benefit. The determination of the estimated period of benefit will be dependent upon the use and underlying characteristics of the intangible asset. Praxair evaluates the recoverability of its intangible assets subject to amortization when facts and circumstances indicate that the carrying value of the asset may not be recoverable. If the carrying value is not recoverable, impairment is measured as the amount by which the carrying value exceeds its estimated fair value. Fair value is generally estimated based on either appraised value or other valuation techniques.

See Note 10 for additional information relating to other intangible assets.

Income Taxes – Deferred income taxes are recorded for the temporary differences between the financial statement and tax bases of assets and liabilities using currently enacted tax rates. Valuation allowances are established against deferred tax assets whenever circumstances indicate that it is more likely than not that such assets will not be realized in future periods.

Under the guidance for accounting for uncertainty in income taxes, the company can recognize the benefit of an income tax position only if it is more likely than not (greater than 50%) that the tax position will be sustained upon tax examination, based solely on the technical merits of the tax position. Otherwise, no benefit can be recognized. The tax benefits recognized are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. Additionally, the company accrues interest and related penalties, if applicable, on all tax exposures for which reserves have been established consistent with jurisdictional tax laws. Interest and penalties are classified as income tax expense in the financial statements.

See Note 5 for additional information relating to income taxes.

Retirement Benefits – Most Praxair employees participate in a form of defined benefit or contribution retirement plan, and additionally certain employees are eligible to participate in various post-employment health care and life insurance benefit plans. The cost of contribution plans is recognized in the year earned while the cost of other plans is recognized over the employees' expected service period to the company, all in accordance with the applicable accounting standards. The funded status of the plans is recorded as an asset or liability in the consolidated balance sheets. Funding of retirement benefits varies and is in accordance with local laws and practices.

See Note 16 for additional information relating to retirement programs.

Share-based Compensation– The company has granted share-based awards which consist of stock options, restricted stock and performance-based stock. Share-based compensation expense is generally recognized on a straight-line basis over the stated vesting period. For stock awards granted to full-retirement-eligible employees, compensation expense is recognized over the period from the grant date to the date retirement eligibility is achieved. For performance-based awards, compensation expense is recognized only if it is probable that the performance condition will be achieved.

See Note 15 for additional disclosures relating to share-based compensation.

### Recently Issued Accounting Standards

#### Accounting Standards Implemented in 2015

The following standards were effective for Praxair in 2015 and their adoption did not have a significant impact on the consolidated financial statements:

**Reporting Discontinued Operations** - In April 2014, the FASB issued updated guidance on the reporting and disclosures of discontinued operations. The new guidance requires that the disposal of a component of an entity be

reported as discontinued operations only if the action represents a strategic shift that will have a major effect on an entity's operations and financial results, and would require expanded disclosures. The adoption of this guidance did not have a significant impact on the consolidated financial statements.

Table of Contents

**Business Combinations - Simplifying the Accounting for Measurement-Period Adjustments** - In September 2015, the FASB issued updated guidance on the accounting for purchase accounting adjustments determined during the measurement period (i.e. up to one year after the acquisition). The new guidance requires an acquirer to recognize such adjustments in the reporting period in which the adjustment amounts are determined. Previously, such adjustments were required to be recorded on a retrospective basis. Praxair elected to early adopt this guidance beginning in the third quarter 2015 on a prospective basis. The adoption of this guidance did not have a significant impact on the consolidated financial statements.

**Presentation of Debt Issuance Costs** - In April 2015, the FASB issued updated guidance on the presentation of debt issuance costs. The new guidance requires debt issuance costs to be classified as debt rather than deferred charges within the consolidated financial statements. Praxair has elected to early adopt this guidance beginning in the fourth quarter 2015 on a retrospective basis. The adoption of this guidance did not have a significant impact on the consolidated financial statements.

**Accounting Standards to Be Implemented**

**Revenue Recognition** - In May 2014, the FASB issued updated guidance on the reporting and disclosure of revenue. The new guidance requires the evaluation of contracts with customers to determine the recognition of revenue when or as the entity satisfies a performance obligation, and would require expanded disclosures. Subsequently, the FASB has issued amendments to certain aspects of the guidance including the effective date. This guidance is required to be effective beginning in the first quarter 2018 (with early adoption beginning in 2017 optional) and includes several transition options. Praxair is in the early stages of reviewing the new guidance and will provide updates on the expected impact to Praxair in future filings, as determined.

**Accounting for Share-based Compensation** - In June 2014, the FASB issued updated guidance on the accounting for share-based payments when the terms of an award provide that a performance target could be achieved after the requisite service period. Praxair does not expect this requirement to have a significant impact on the consolidated financial statements. This guidance will be effective for Praxair beginning in the first quarter 2016.

**Simplifying the Measurement of Inventory** - In July 2015, the FASB issued updated guidance on the measurement of inventory. The new guidance requires that inventory be measured at the lower of cost or net realizable value. Currently inventory is measured at the lower of cost or market. This new guidance will be effective for Praxair beginning in the first quarter 2017 on a prospective basis, with early adoption optional. Praxair does not expect this requirement to have a material impact.

**Balance Sheet Classification of Deferred Taxes** - In November 2015, the FASB issued updated guidance on the balance sheet classification of deferred taxes. Currently deferred income tax liabilities and assets are required to be separated and classified as current or non-current in a classified balance sheet. The amendments in this update require that deferred tax liabilities and assets be classified as non-current in a classified balance sheet. This new guidance will be effective for Praxair beginning in the first quarter 2017, with early adoption optional. The new guidance may be applied either prospectively or retrospectively. Praxair does not expect this requirement to have a material impact.

**Reclassifications** – Certain prior years' amounts have been reclassified to conform to the current year's presentation.

**NOTE 2. COST REDUCTION PROGRAM AND OTHER CHARGES****2015 Charges****Cost Reduction Program and Other Charges**

In the second quarter of 2015, Praxair recorded pre-tax charges totaling \$146 million (\$112 million after-tax and noncontrolling interests or \$0.39 per diluted share) and in the third quarter recorded pre-tax charges totaling \$19 million (\$13 million after-tax or \$0.04 per diluted share). The charges related primarily to severance and other costs associated with a cost reduction program, which was initiated in response to lower volumes resulting from economic slowdown in emerging markets and energy related end-markets.



Table of Contents

Following is a summary of the pre-tax charges by reportable segment.

(millions of dollars)	Severance costs	Other Charges	Total
North America	\$14	\$20	\$34
Europe	11	9	20
South America	18	49	67
Asia	11	14	25
Surface Technologies	9	10	19
Total	\$63	\$102	\$165

The severance costs of \$63 million are for the elimination of 1,544 positions. A majority of the actions were completed in 2015.

The other charges of \$102 million are primarily related to the consolidation of operations and the exit of other operations due to current economic conditions, primarily in Brazil. Amounts related to asset write-downs are net of expected sale proceeds, which are not significant. Following is a summary:

- i. The North America charges of \$20 million relate primarily to the decision to consolidate certain manufacturing and distribution locations for efficiencies and cost reduction.
- ii. The Europe charges of \$9 million are primarily for the restructuring of operations in Russia and energy-related businesses in Northern Europe.
- iii. The South America charges of \$49 million include costs primarily associated with a decision to exit a non-core business and other operations in South America.
- iv. The Asia charges of \$14 million include costs primarily related to an asset disposal in China.
- v. The Surface Technologies charges of \$10 million relate to the realignment of sales and manufacturing operations in Europe and the United States for efficiencies and cost reduction.

Additionally, for the year ended December 31, 2015 income taxes include a \$10 million increase in valuation allowances relating to U.S. foreign tax credit carryforwards, reflecting the impact of current economic conditions.

**Cash Requirements**

The total cash requirements of the cost reduction program and other charges are estimated to be approximately \$94 million, of which \$44 million was paid through December 31, 2015.

**Reconciliation**

The following table summarizes the activities related to the company's cost reduction and other charges during 2015:

(millions of dollars)	Severance costs	Other Charges	Total
Cost reduction program and other charges - Q2/Q3 2015	\$63	\$102	\$165
Less: Cash payments	(31)	(13)	(44)
Less: Non-cash asset write-offs	—	(68)	(68)
Foreign currency translation	(2)	(1)	(3)
Balance, December 31, 2015	\$30	\$20	\$50

**Pension Settlement Charge**

In 2014 a number of senior managers retired. These retirees are covered by the U.S. supplemental pension plan which provides for a lump sum benefit payment option. Under certain circumstances, such lump sum payments must be accounted for as a settlement of the related pension obligation, but only when paid. Accordingly, when the cash payments were made in



## Table of Contents

the third quarter of 2015, Praxair recorded a pension settlement charge related to net unrecognized actuarial losses of \$7 million (\$5 million after-tax or \$0.02 per diluted share).

### 2014 Charges

#### Venezuela Currency Devaluation

In recent years, exchange control and other regulations in Venezuela have restricted the Company's operations in Venezuela. During 2014, the Venezuelan government introduced a new exchange control market-based mechanism (referred to as "SICAD II") which allowed companies to apply for the conversion of VEF to the U.S. dollar. At December 31, 2014 the SICAD II rate was 50 VEF per U.S. Dollar versus the official rate of 6.3 (a devaluation of about 88%). After considerable analysis, Praxair concluded at that time that the SICAD II rate more accurately reflects the economic reality of its business in Venezuela versus the official exchange rate. There continues to be a lack of exchangeability between the Venezuelan bolivar fuerte ("VEF") and the U.S. dollar.

As a result, effective December 31, 2014 Praxair changed the exchange rate used to translate the monetary assets and liabilities of its Venezuelan subsidiary to the SICAD II rate of 50 VEF per U.S. Dollar. Also, the Company evaluated the carrying value of its non-monetary assets for impairment and lower of cost or market adjustments considering the new SICAD II rate. As a result, Praxair recorded a pre-tax charge of \$131 million (\$131 million after-tax, or \$0.45 per diluted share) in the Company's consolidated statement of income for the year ended December 31, 2014. This charge includes \$68 million related to translation of monetary assets and liabilities to the SICAD II rate and \$63 million related primarily to long-lived asset impairments. As a result, Praxair's net asset position in Venezuela at December 31, 2014 was immaterial.

#### Pension Settlement Charge

During the fourth quarter of 2014, Praxair offered certain former employees who participate in either of the two U.S. qualified defined benefit pension plans, the option to receive a one-time lump sum benefit payment of their vested pension benefits under the plans rather than receiving lifetime annuity payments of these benefits. As a result, a pension settlement of the related pension obligation was triggered for one of the U.S. qualified defined benefit pension plans due to the acceptance rate of the lump sum payment option. Accordingly, Praxair recorded a pension settlement charge of \$7 million (\$5 million after-tax, or \$0.02 per diluted share) in the fourth quarter of 2014 (refer to Note 16).

### 2013 Charges

#### Venezuela Currency Devaluation

On February 8, 2013, Venezuela announced a devaluation of the Venezuelan Bolivar from 4.30 to 6.30 (a 32% devaluation), effective on February 13, 2013. In the first quarter 2013 Praxair recorded a \$23 million pre-tax charge (\$23 million after-tax or \$0.08 per diluted share) due primarily to the remeasurement of the local Venezuelan balance sheet to reflect the new official 6.30 exchange rate.

#### Pension Settlement Charge

In 2012, a number of senior managers retired. These retirees are covered by the U.S. supplemental pension plan which provides for a lump sum benefit payment option. Under certain circumstances, such lump sum payments must be accounted for as a settlement of the related pension obligation, but only when paid. Accordingly, Praxair recorded a settlement charge related to net unrecognized actuarial losses of \$9 million (\$6 million after-tax or \$0.02 per diluted share) in the third quarter of 2013, when the cash payments were made to the retirees (refer to Note 16).

Classification in the consolidated financial statements

The pre-tax charges for each year are shown within operating profit in a separate line item on the consolidated statement of income. In the consolidated balance sheets, asset write-offs are recorded as a reduction to the carrying value of the related assets and unpaid amounts are recorded primarily as short-term liabilities (see Note 7 - Supplemental Information). On the consolidated statement of cash flows, the pre-tax impact of these charges, net of cash payments, is shown as an adjustment to reconcile net income to net cash provided by operating activities. In Note 18 - Segment Information, Praxair excluded these charges from its management definition of segment operating profit; a reconciliation of segments operating profit to consolidated operating profit is shown within the operating profit table.

Table of Contents

## NOTE 3. ACQUISITIONS

The results of operations of these businesses have been included in Praxair's consolidated statements of income since their respective dates of acquisition. Proforma financial statements for the following acquisitions have not been provided as the acquisitions are not material individually or in the aggregate.

## 2015 Acquisitions

During the year-ended December 31, 2015 Praxair had acquisitions totaling \$82 million, primarily acquisitions of packaged gases businesses in North and South America and an acquisition of a controlling interest of an equity investment in Asia. These transactions resulted in goodwill and other intangible assets of \$56 million and \$26 million, respectively (see Note 9 and Note 10). In each case, the allocation of the purchase price is based on preliminary estimates and assumptions, and are subject to revision based on final information received, including appraisals and other analyses that support the underlying estimates. Adjustments, if any, are not expected to be material.

## 2014 Acquisitions

During the year-ended December 31, 2014 Praxair had acquisitions totaling \$206 million. These acquisitions consisted primarily of an industrial gases business in Italy, packaged gas businesses in North and South America and an acquisition of a controlling interest of an equity investment in Asia. These transactions resulted in goodwill and other intangible assets of \$86 million and \$66 million, respectively (see Note 9 and Note 10).

## 2013 Acquisitions

NuCO<sub>2</sub>

On March 1, 2013 Praxair acquired 100% of NuCO<sub>2</sub> Inc. ("NuCO<sub>2</sub>") for \$1,095 million. NuCO<sub>2</sub> is the leading national provider of beverage carbonation solutions in the United States to the restaurant and hospitality industries with 162,000 customer locations and 900 employees, and with 2012 sales of approximately \$230 million. The NuCO<sub>2</sub> micro-bulk beverage carbonation solution is the service model of choice for quick service restaurants and convenience stores offering fountain beverages and represents an extension of Praxair's core industrial gas business.

The acquisition of NuCO<sub>2</sub> was accounted for as a business combination. Following the acquisition date, 100% of NuCO<sub>2</sub>'s results were consolidated in the North America business segment. Praxair's 2013 consolidated income statement includes sales of \$208 million related to NuCO<sub>2</sub>. Pro forma results for 2013 have not been included as the impact of the acquisition is not material to the consolidated statements of income.

The following table summarizes the fair value of identifiable assets acquired and liabilities assumed in the acquisition of NuCO<sub>2</sub> as of the acquisition date. Purchase accounting has been finalized and adjustments made subsequent to the acquisition date were not material.

(Millions of dollars)	March 1, 2013
Trade receivables, net	\$17
Property, plant and equipment	199
Intangible assets	374
Deferred income taxes	(85 )
Other assets and (liabilities)	(28 )
Goodwill	618
Purchase price	\$1,095

The identifiable intangible assets primarily consist of customer relationships that will be amortized over their estimated useful life of 25 years. The deferred income taxes relate primarily to property, plant and equipment, intangibles and operating loss carryforwards. The goodwill resulting from the acquisition is attributable to (i) expected growth from market penetration into the quick service restaurants, convenience stores and themed restaurant chains in the United States and select international markets as we leverage Praxair's customer and distribution networks worldwide, and (ii) cost synergies related to the procurement of raw materials, distribution-related expenses and

administrative costs as Praxair integrates and rationalizes administration tasks and leverages its purchasing scale. The goodwill is not expected to be deductible for income tax purposes.

Table of Contents

## Other Acquisitions

On May 29, 2013 Praxair acquired Dominion Technology Gases Investment Limited (“Dominion”), a leading global supplier of diving, welding, industrial, laboratory and calibration gases and associated equipment to the offshore oil and gas industry based in Aberdeen, Scotland. Dominion provides products and services to the expanding global offshore oil and gas market.

On June 3, 2013 Praxair acquired Volgograd Oxygen Factory (“VOF”), the largest independent industrial gas business in southern Russia, expanding Praxair's production and distribution capabilities in the Volgograd region. Additionally, during 2013, Praxair acquired several smaller independent packaged gas distributors in the United States, an industrial gas business in Italy and a customer contract with operating assets in China.

The aggregate purchase price for these acquisitions was \$228 million and resulted in the recognition of \$194 million of intangible assets, including \$101 million of goodwill and \$93 million of other intangible assets, which will be amortized over their estimated useful life.

## NOTE 4. LEASES

In the normal course of its business, Praxair enters into various leases as the lessee, primarily involving manufacturing and distribution equipment and office space. Total lease and rental expenses under operating leases were \$141 million in 2015, \$148 million in 2014 and \$140 million in 2013. Capital leases are not significant and are included in property, plant and equipment – net. Related obligations are included in debt.

At December 31, 2015, minimum payments due under operating leases are as follows:

(Millions of dollars)

2016	\$ 116
2017	100
2018	84
2019	67
2020	51
Thereafter	58
	\$476

The present value of these future lease payments under operating leases is approximately \$416 million.

Praxair’s leases where it is the lessor are not material.

## NOTE 5. INCOME TAXES

Pre-tax income applicable to U.S. and foreign operations is as follows:

(Millions of dollars)

Year Ended December 31,	2015	2014	2013
United States	\$980	\$1,004	\$890
Foreign	1,180	1,391	1,557
Total income before income taxes	\$2,160	\$2,395	\$2,447

Table of Contents

The following is an analysis of the provision for income taxes:

(Millions of dollars) Year Ended December 31,	2015	2014	2013
Current tax expense			
U.S. federal	\$205	\$291	\$94
State and local	33	35	27
Foreign	275	310	427
	513	636	548
Deferred tax expense			
U.S. federal	71	14	164
State and local	10	12	8
Foreign	18	29	(71)
	99	55	101
Total income taxes	\$612	\$691	\$649

An analysis of the difference between the provision for income taxes and the amount computed by applying the U.S. statutory income tax rate to pre-tax income follows:

(Dollar amounts in millions) Year Ended December 31,	2015		2014		2013	
U.S. statutory income tax rate	\$756	35.0	% \$838	35.0	% \$856	35.0
State and local taxes – net of federal benefit	28	1.3	% 31	1.3	% 23	1.0
U.S. tax credits and deductions (a)	(40)	(1.9)	% (37)	(1.5)	% (23)	(1.0)
Foreign tax differentials (b)	(121)	(5.6)	% (186)	(7.8)	% (158)	(6.4)
Venezuela currency devaluation (c)	—	—	% 46	1.9	% 8	0.3
Income tax benefit from realignment of Italian legal structure (d)	—	—	% —	—	% (40)	(1.6)
Other – net	(11)	(0.5)	% (1)	—	% (17)	(0.8)
Provision for income taxes	\$612	28.3	% \$691	28.9	% \$649	26.5

(a) U.S. tax credits and deductions relate to manufacturing deductions and to the research and experimentation tax credit.

Primarily related to differences between the U.S. tax rate of 35% and the statutory tax rate in the countries where

(b) Praxair operates. 2014 includes \$56 million of tax benefits related to a reduction of uncertain tax positions as a result of a lapse of statute of limitations. Other permanent items and tax rate changes were not significant.

(c) Impact related to non-deductible Venezuela currency devaluations in 2014 and 2013 (see Note 2).

In December of 2013, Praxair's Italian legal structure was realigned. As a result of the new structure, an income tax (d) benefit of \$40 million (\$24 million net of noncontrolling interests) was recorded. The benefit is recorded as \$56 million in foreign current tax expense and \$(96) million included in federal deferred tax expense.

Table of Contents

Net deferred tax liabilities included in the consolidated balance sheet are comprised of the following:

(Millions of dollars)	2015	2014	
December 31,			
Deferred tax liabilities			
Fixed assets	\$1,413	\$1,402	
Exchange gains	110	85	
Goodwill	147	144	
Other intangible assets	117	125	
Other	155	146	
	\$1,942	\$1,902	
Deferred tax assets			
Carryforwards	\$287	\$333	
Benefit plans and related (a)	365	389	
Inventory	20	18	
Exchange Losses	16	—	
Accruals and other (b)	351	357	
	\$1,039	\$1,097	
Less: Valuation allowances (c)	(123	) (106	)
	\$916	\$991	
Net deferred tax liabilities	\$1,026	\$911	
Recorded in the consolidated balance sheets as (See Note 7):			
Prepaid and other current assets	\$184	\$189	
Other long-term assets	118	98	
Deferred credits	1,328	1,198	
	\$1,026	\$911	

(a) Includes deferred taxes of \$325 million and \$342 million in 2015 and 2014, respectively, related to pension / OPEB funded status (see Notes 7 and 16).

(b) Includes \$194 million and \$179 million in 2015 and 2014, respectively, related to research and development costs and \$45 million and \$67 million in 2015 and 2014, respectively, related to goodwill.

(c) Summary of valuation allowances relating to deferred tax assets follows (millions of dollars):

	2015	2014	2013
Balance, January 1,	\$(106	) \$(85	) \$(86
Income tax (charge) benefit	(20	) (20	) 1
Translation adjustments	4	6	—
Other, including write-offs	(1	) (7	) —
Balance, December 31,	\$(123	) \$(106	) \$(85

Praxair evaluates deferred tax assets quarterly to ensure that estimated future taxable income will be sufficient in character (e.g., capital gain versus ordinary income treatment), amount and timing to result in their recovery. After considering the positive and negative evidence, a valuation allowance is established to reduce the assets to their realizable value when management determines that it is more likely than not (i.e., greater than 50% likelihood) that a deferred tax asset will not be realized. Considerable judgment is required in establishing deferred tax valuation allowances. At December 31, 2015, Praxair had \$287 million of deferred tax assets relating to net operating losses (“NOLs”) and tax credits and \$123 million of valuation allowances. These deferred tax assets include \$110 million relating to NOLs of which \$51 million are in the United States and \$59 million are in Brazil. The U.S. NOLs expire through 2032 and the Brazil NOLs have no expiration. These NOLs have no valuation allowances. The deferred tax assets as of December 31, 2015





Table of Contents

also include \$61 million relating to U.S. foreign tax credits which expire in 2021 and have a full valuation allowance. The utilization of the U.S. foreign tax credits is dependent on many factors including U.S. interest expense, future U.S. investment, foreign sales and earnings growth, foreign currency exchange rates, and acquisitions and dispositions. Management's assessment and judgment are highly dependent on these variables and any significant changes to any one of them can substantially impact the amount of foreign tax credit utilization over the ten-year carryforward period.

The remaining deferred tax assets of \$116 million relate to U.S. state (\$61 million) and other foreign (\$55 million) NOLs and credit carryforwards, which expire through 2033, have valuation allowances totaling \$62 million. These valuation allowances relate to certain foreign and U.S. state NOLs and are required because management has determined, based on financial projections and available tax strategies, that it is unlikely that the NOLs will be utilized before they expire. If events or circumstances change, valuation allowances are adjusted at that time resulting in an income tax benefit or charge.

A provision has not been made for additional U.S. federal or foreign taxes at December 31, 2015 of approximately \$11 billion of undistributed earnings of foreign subsidiaries because Praxair intends to reinvest these funds indefinitely to support foreign growth opportunities. It is not practicable to estimate the unrecognized deferred tax liability on these undistributed earnings. These earnings could become subject to additional tax if they are remitted as dividends, loaned to Praxair in the U.S., or upon sale of the subsidiary's stock.

Uncertain Tax Positions

Unrecognized income tax benefits represent income tax positions taken on income tax returns but not yet recognized in the consolidated financial statements. The company has unrecognized income tax benefits totaling \$68 million, \$71 million and \$121 million as of December 31, 2015, 2014 and 2013, respectively. If recognized, essentially all of the unrecognized tax benefits and related interest and penalties would be recorded as a benefit to income tax expense on the consolidated statement of income.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

(Millions of dollars)	2015	2014	2013
Unrecognized income tax benefits, January 1	\$71	\$121	\$142
Additions for tax positions of prior years	21	13	8
Reductions for tax positions of prior years	(13	) (2	) (24
Additions for current year tax positions	—	3	10
Reductions for settlements with taxing authorities (a)	(3	) (3	) (2
Reductions as a result of a lapse of an applicable statute of limitations (b)	—	(56	) (1
Foreign currency translation and other	(8	) (5	) (12
Unrecognized income tax benefits, December 31	\$68	\$71	\$121

(a) Settlements are uncertain tax positions that were effectively settled with the taxing authorities, including positions where the company has agreed to amend its tax returns to eliminate the uncertainty.

(b) See note (b) to the effective tax rate reconciliation.

Praxair classifies interest income and expense related to income taxes as tax expense in the consolidated statement of income. Praxair recognized no net interest in 2015 and net interest income of \$3 million and \$11 million in 2014 and 2013, respectively. Praxair had \$8 million of accrued interest and penalties as of December 31, 2015 and December 31, 2014, respectively which were recorded in other long-term liabilities in the consolidated balance sheets (see Note 7).

Table of Contents

As of December 31, 2015, the company remained subject to examination in the following major tax jurisdictions for the tax years as indicated below:

Major tax jurisdictions	Open Years
North America	
United States	2011 through 2015
Canada	2008 through 2015
Mexico	2010 through 2015
Europe	
Germany	2011 through 2015
Italy	2011 through 2015
Spain	2004 through 2015
South America	
Brazil	2005 through 2015
Asia	
China	2010 through 2015
India	2006 through 2015
Korea	2010 through 2015
Thailand	2009 through 2015

The company is currently under audit in a number of tax jurisdictions. As a result, it is reasonably possible that some of these audits will conclude or reach the stage where a change in unrecognized income tax benefits may occur within the next twelve months. At that time, the company will record any adjustment to income tax expense as required. In 2015, settlements were not material to the consolidated financial statements. The company is also subject to income taxes in many hundreds of state and local taxing jurisdictions that are open to tax examinations.

**NOTE 6. EARNINGS PER SHARE – PRAXAIR, INC. SHAREHOLDERS**

Basic earnings per share is computed by dividing Net income – Praxair, Inc. for the period by the weighted average number of Praxair common shares outstanding. Diluted earnings per share is computed by dividing Net income – Praxair, Inc. for the period by the weighted average number of Praxair common shares outstanding and dilutive common stock equivalents, as follows:

	2015	2014	2013
Numerator (Millions of dollars)			
Net income – Praxair, Inc.	\$1,547	\$1,694	\$1,755
Denominator (Thousands of shares)			
Weighted average shares outstanding	286,606	291,987	294,994
Shares earned and issuable under compensation plans	399	507	529
Weighted average shares used in basic earnings per share	287,005	292,494	295,523
Effect of dilutive securities			
Stock options and awards	2,050	3,114	3,442
Weighted average shares used in diluted earnings per share	289,055	295,608	298,965
Basic Earnings Per Common Share	\$5.39	\$5.79	\$5.94
Diluted Earnings Per Common Share	\$5.35	\$5.73	\$5.87

Stock options totaling 2,696,785 were antidilutive and therefore excluded in the computation of diluted earnings per share for the year ended December 31, 2015. There were no antidilutive shares for the years ended December 31, 2014 and 2013.

Table of Contents

## NOTE 7. SUPPLEMENTAL INFORMATION

## Income Statement

(Millions of dollars)

	2015	2014	2013
Year Ended December 31, Selling, General and Administrative Selling	\$507	\$572	\$567
General and administrative	645	736	782
	\$1,152	\$1,308	\$1,349
Year Ended December 31, Depreciation and Amortization	2015	2014	2013
Depreciation	\$1,059	\$1,123	\$1,068
Amortization of other intangibles (Note 10)	47	47	41
	\$1,106	\$1,170	\$1,109
Year Ended December 31, Other Income (Expenses) – Net	2015	2014	2013
Currency related net gains (losses)	\$(2	) \$1	\$3
Partnership income	4	16	7
Net legal settlements	—	—	10
Severance expense	(5	) (22	) (14
Business divestitures and asset gains (losses) – net	34	36	43
Other – net	(3	) (22	) (17
	\$28	\$9	\$32
Year Ended December 31, Interest Expense – Net	2015	2014	2013
Interest incurred on debt	\$194	\$215	\$233
Interest capitalized	(33	) (38	) (69
Amortization of swap termination costs	—	—	(4
Bond redemption (a)	—	36	18
	\$161	\$213	\$178
Year Ended December 31, Income Attributable to Noncontrolling Interests	2015	2014	2013
Noncontrolling interests' operations	\$34	\$40	\$41
Income tax benefit in Italy (Note 5)	—	—	16
Redeemable noncontrolling interests' operations (Note 14)	10	12	24
	\$44	\$52	\$81

Table of Contents

Balance Sheet		
(Millions of dollars)		
December 31,	2015	2014
Accounts Receivable		
Trade	\$1,601	\$1,746
Other	101	152
	1,702	1,898
Less: allowance for doubtful accounts (b)	(101	) (102
	\$1,601	\$1,796
	2015	2014
December 31,		
Inventories (c)		
Raw materials and supplies	\$202	\$200
Work in process	48	52
Finished goods	281	299
	\$531	\$551
December 31,	2015	2014
Prepaid and Other Current Assets		
Deferred income taxes (Note 5)	\$184	\$189
Prepaid (d)	110	116
Other	53	61
	\$347	\$366
December 31,	2015	2014
Other Long-term Assets		
Pension assets (Note 16)	\$41	\$35
Insurance contracts (e)	74	73
Long-term receivables, net (f)	33	43
Deposits	48	64
Investments carried at cost	12	8
Deferred charges	50	81
Deferred income taxes (Note 5)	118	98
Other	100	114
	\$476	\$516

Table of Contents

December 31,	2015	2014	
Other Current Liabilities			
Accrued expenses	\$247	\$296	
Payroll	114	177	
Cost reduction program (Note 2)	44	7	
Pension and postretirement (Note 16)	29	39	
Interest payable	71	69	
Employee benefit accrual	22	22	
Insurance reserves	8	9	
Other	167	299	
	\$702	\$918	
December 31,	2015	2014	
Other Long-term Liabilities			
Pension and postretirement (Note 16)	\$760	\$777	
Tax liabilities for uncertain tax positions	56	57	
Cost reduction program (Note 2)	6	—	
Interest and penalties for uncertain tax positions (Note 5)	8	8	
Insurance reserves	24	23	
Other	301	311	
	\$1,155	\$1,176	
December 31,	2015	2014	
Deferred Credits			
Deferred income taxes (Note 5)	\$1,328	\$1,198	
Other	62	83	
	\$1,390	\$1,281	
December 31,	2015	2014	
Accumulated Other Comprehensive Income (Loss)			
Cumulative translation adjustment - net of taxes:			
North America (g)	\$(899	) \$(553	)
South America (g)	(2,272	) (1,510	)
Europe (g)	(526	) (432	)
Asia (g)	(285	) (49	)
Surface Technologies	(36	) (7	)
	(4,018	) (2,551	)
Derivatives – net of taxes	(1	) (1	)
Pension/OPEB funded status obligation (net of \$325 million and \$342 million tax benefit in 2015 and 2014, respectively) (Note 16)	(577	) (633	)
	\$(4,596	) \$(3,185	)

(a) In December 2014, Praxair redeemed \$400 million of 5.375% notes due November 2016 for \$434 million resulting in an \$36 million charge (\$22 million after-tax, or \$0.07 per diluted share). In December 2013, Praxair

Table of Contents

redeemed \$400 million of 5.25% notes due November 2014 for \$418 million resulting in an \$18 million charge (\$12 million after-tax, or \$0.04 per diluted share).

Provisions to the allowance for doubtful accounts were \$35 million, \$39 million, and \$38 million in 2015, 2014, (b) and 2013, respectively. The allowance activity in each period related primarily to write-offs of uncollectible amounts, net of recoveries and currency movements.

Effective July 1, 2014, Praxair changed its method of accounting for all remaining U.S. operations that were using the last-in, first-out ("LIFO") method to the average-cost method, primarily raw materials. Prior to this change, approximately 6% of consolidated inventories were accounted for under the LIFO method. Praxair applied this change as a cumulative effect adjustment in the third quarter 2014 and did not restate prior periods because the (c) impact was not material. The accounting change increased inventories by \$9 million at July 1, 2014. The Company believes the change is preferable because it will better reflect the impact of current costs in both the consolidated balance sheets and consolidated statements of income. Had the Company not changed its accounting method, reported inventory amounts at December 31, 2014 would not have been significantly different than the amount disclosed above at July 1, 2014.

(d) Includes estimated income tax payments of \$42 million and \$36 million in 2015 and 2014, respectively.

(e) Consists primarily of insurance contracts and other investments to be utilized for non-qualified pension and OPEB obligations.

Financing receivables is not normal practice for the company. The balances at December 31, 2015 and 2014 are net of reserves of \$35 million and \$48 million, respectively. The amounts in both periods relate primarily to (f) government receivables in Brazil and other long-term notes receivable from customers, the majority of which are fully reserved. Collectability is reviewed regularly and uncollectible amounts are written-off as appropriate. The account balance change during 2015 was primarily the result of currency movements.

North America consists primarily of currency translation adjustments in Canada and Mexico, South America (g) relates primarily to Brazil and Argentina, Europe relates primarily to Spain, Russia and Germany, and Asia relates primarily to China, Korea and India.

**NOTE 8. PROPERTY, PLANT AND EQUIPMENT – NET**

Significant classes of property, plant and equipment are as follows:

(Millions of dollars)	Depreciable Lives (Yrs)	2015	2014
December 31,			
Production plants (primarily 15-year life) (a)	10-20	\$ 13,778	\$ 14,400
Storage tanks	15-20	2,196	2,267
Transportation equipment and other	3-15	1,925	1,895
Cylinders (primarily 30-year life)	10-30	1,654	1,724
Buildings	25-40	1,085	1,089
Land and improvements (b)	0-20	517	499
Construction in progress		1,539	1,980
		22,694	23,854
Less: accumulated depreciation		(11,696	) (11,857
		\$ 10,998	\$ 11,997

(a) - Depreciable lives of production plants related to long-term customer supply contracts are consistent with the contract lives.

(b) - Land is not depreciated.

Table of Contents

## NOTE 9. GOODWILL

Changes in the carrying amount of goodwill for the years ended December 31, 2015 and 2014 were as follows:

(Millions of dollars)	North America	South America	Europe	Asia	Surface Technologies	Total
Balance, December 31, 2013	\$2,117	\$166	\$743	\$24	\$144	\$3,194
Acquisitions (Note 3)	47	4	17	14	4	86
Purchase adjustments & other	1	—	(6)	) —	5	—
Foreign currency translation	(26)	) (23)	) (100)	) —	(10)	) (159)
Balance, December 31, 2014	\$2,139	\$147	\$654	\$38	\$143	\$3,121
Acquisitions (Note 3)	21	9	—	23	3	56
Purchase adjustments & other *	(12)	) —	—	—	—	(12)
Foreign currency translation	(37)	) (58)	) (72)	) (2)	) (10)	) (179)
Balance, December 31, 2015	\$2,111	\$98	\$582	\$59	\$136	\$2,986

\* Primarily relates to the elimination of goodwill with a divestiture.

Praxair has performed its goodwill impairment tests annually during the second quarter of each year, and historically has determined that the fair value of each of its reporting units was substantially in excess of its carrying value. For the 2015 test Praxair applied the FASB's accounting guidance which allows the company to first assess qualitative factors to determine the extent of additional quantitative analysis, if any, that may be required to test goodwill for impairment. Based on the qualitative assessments performed, Praxair concluded that it was more likely than not that the fair value of each reporting unit substantially exceeded its carrying value and therefore, further quantitative analysis was not required. As a result, no impairment was recorded. There were no indicators of impairment through December 31, 2015.

## NOTE 10. OTHER INTANGIBLE ASSETS

The following is a summary of Praxair's other intangible assets at December 31, 2015 and 2014:

(Millions of dollars)	Customer & License/Use Agreements	Non-compete Agreements	Patents & Other	Total
For the year ended December 31, 2015				
Cost:				
Balance, December 31, 2014	\$693	\$37	\$47	\$777
Additions (primarily acquisitions)	23	2	1	26
Foreign currency translation	(21	) (1	) (1	) (23
Other *	3	—	—	3
Balance, December 31, 2015	698	38	47	783
Less: accumulated amortization:				
Balance, December 31, 2014	(147	) (18	) (9	) (174
Amortization expense	(37	) (6	) (4	) (47
Foreign currency translation	7	1	—	8
Other *	(2	) —	—	(2
Balance, December 31, 2015	(179	) (23	) (13	) (215
Net balance at December 31, 2015	\$519	\$15	\$34	\$568
(Millions of dollars)	Customer & License/Use Agreements	Non-compete Agreements	Patents & Other	Total
For the year ended December 31, 2014				
Cost:				
Balance, December 31, 2013	\$661	\$31	\$43	\$735
Additions (primarily acquisitions)	54	12	—	66
Foreign currency translation	(22	) (1	) (1	) (24
Other *	—	(5	) 5	—
Balance, December 31, 2014	693	37	47	777
Less: accumulated amortization:				
Balance, December 31, 2013	(118	) (16	) (5	) (139
Amortization expense	(36	) (7	) (4	) (47
Foreign currency translation	7	—	—	7
Other *	—	5	—	5
Balance, December 31, 2014	(147	) (18	) (9	) (174
Net balance at December 31, 2014	\$546	\$19	\$38	\$603

\* Other primarily relates to the write-off of fully amortized assets, purchase accounting adjustments and reclassifications.

There are no expected residual values related to these intangible assets. Amortization expense for the years ended December 31, 2015, 2014 and 2013 was \$47 million, \$47 million and \$41 million, respectively. The remaining weighted-average amortization period for intangible assets is approximately 18 years.



Total estimated annual amortization expense is as follows:  
(Millions of dollars)

2016	\$48
2017	43
2018	39
2019	38
2020	36
Thereafter	364
	\$568

78

---

Table of Contents

## NOTE 11. DEBT

The following is a summary of Praxair's outstanding debt at December 31, 2015 and 2014:

(Millions of dollars)	2015	2014
Short-term		
Commercial paper and U.S. bank borrowings	\$87	\$514
Other bank borrowings (primarily international)	163	73
Total short-term debt	250	587
Long-term		
U.S. borrowings		
4.625% Notes due 2015 (a)	—	500
3.25% Notes due 2015 (a)	—	407
0.75% Notes due 2016 (b, c, d)	400	399
Floating Rate Notes due 2017 (f)	150	—
5.20% Notes due 2017 (c, d)	325	324
1.05% Notes due 2017 (c, d)	399	399
1.20% Notes due 2018 (c, d)	499	499
1.25% Notes due 2018 (c, d, e)	480	479
4.50% Notes due 2019 (c, d)	597	597
1.90% Notes due 2019 (c, d)	499	498
1.50% Euro denominated notes due 2020 (c, d)	646	719
2.25% Notes due 2020 (c, d, f)	298	—
4.05% Notes due 2021 (c, d)	497	496
3.00% Notes due 2021 (c, d)	496	495
2.45% Notes due 2022 (c, d)	596	596
2.20% Notes due 2022 (c, d)	497	497
2.70% Notes due 2023 (c, d)	497	496
2.65% Notes due 2025 (c, d, f)	396	—
1.625% Euro denominated notes due 2025 (c, d)	535	596
3.20% Notes due 2026 (c, d, f)	446	—
3.55% Notes due 2042 (c, d, f)	661	463
Other	3	3
International bank borrowings	57	167
Obligations under capital lease	7	8
	8,981	8,638
Less: current portion of long-term debt	(6	) (2
Total long-term debt	8,975	8,636
Total debt	\$9,231	\$9,225

(a) In March 2015, Praxair repaid \$500 million of 4.625% notes that became due. In September 2015, Praxair repaid \$400 million of 3.25% notes that became due.

(b) Classified as long-term because of the Company's intent to refinance this debt on a long-term basis and the availability of such financing under the terms of an existing \$2.5 billion long-term credit facility.

(c) Amounts are net of unamortized discounts.

(d) Amounts are net of debt issuance costs (Note 1)

Table of Contents

(e) December 31, 2015 and 2014 include a \$6 million and \$14 million fair value increase, respectively, related to hedge accounting. See Note 12 for additional information.

On February 5, 2015, Praxair issued \$150 million of floating rate notes that bear interest at the Federal funds effective rate plus 0.33% due 2017, \$400 million of 2.65% fixed rate notes due 2025 and \$200 million of 3.550% fixed rates notes due in 2042. On September 21, 2015, Praxair issued the following notes: \$300 million of 2.25% (f) notes due 2020 and \$450 million of 3.20% notes due 2026. The proceeds will be used for general corporate purposes, including acquisitions, the repayment of outstanding indebtedness and share repurchases under the company's share repurchase program.

On February 8, 2016, Praxair initiated the redemption of the \$325 million 5.20% Notes originally due in March of 2017. These Notes require a 20-day notification period prior to redemption. A pre-tax charge of approximately \$16 million is expected to be incurred in the first quarter of 2016.

On February 11, 2016, Praxair issued \$275 million of 3.20% fixed rate notes due 2026. In addition, on February 12, 2016, Praxair issued €550 million of 1.20% Euro-denominated notes due 2024 which the Company designated as a hedge of the net investment position in its European operations. The proceeds will be used for general corporate purposes, including the repayment of outstanding indebtedness.

**Credit Facilities**

At December 31, 2015, the company has the following major credit facility available for future borrowing:

Millions of dollars	Total Facility	Borrowings Outstanding	Available for Borrowing	Expires
Senior Unsecured	\$2,500	\$—	\$2,500	December 2019

The credit facility is non-cancellable by the issuing financial institutions until its maturity in December 2019. No borrowings were outstanding under the credit agreement at December 31, 2015.

**Covenants**

Praxair's \$2.5 billion senior unsecured credit facility and long-term debt agreements contain various covenants which may, among other things, restrict the ability of Praxair to merge with another entity, incur or guarantee debt, sell or transfer certain assets, create liens against assets, enter into sale and leaseback agreements, or pay dividends and make other distributions beyond certain limits. These agreements also require Praxair to not exceed a maximum 70% leverage ratio defined in the agreements as the ratio of consolidated total debt to the sum of consolidated total debt plus consolidated shareholders' equity of the company. For purposes of the leverage ratio calculation, consolidated shareholders' equity excludes changes in the cumulative foreign currency translation adjustments after June 30, 2011. At December 31, 2015, the actual leverage ratio, as calculated according to the agreement, was 53% and the company is in compliance with all financial covenants. Also, there are no material adverse change clauses or other subjective conditions that would restrict the company's ability to borrow under the agreement.

**Other Debt Information**

As of December 31, 2015 and 2014, the weighted-average interest rate of short-term borrowings outstanding was 3.4% and 0.6%, respectively. The increase reflects the higher mix of international borrowings.

Expected maturities on long-term debt are as follows:

(Millions of dollars)		
2016	\$6	*
2017	878	
2018	985	
2019	1,498	*
2020	948	
Thereafter	4,666	
	\$8,981	



Table of Contents

\* \$400 million of debt due in 2016 has been reflected in 2019 maturities due to the company's intent to refinance this debt on a long-term basis and the ability to do so under the \$2.5 billion senior unsecured credit facility with a syndicate of banks which expires in 2019.

As of December 31, 2015, \$5 million of Praxair's assets (principally international fixed assets) were pledged as collateral for \$5 million of long-term debt, including the current portion of long-term debt.

See Note 13 for the fair value information related to debt.

**NOTE 12. FINANCIAL INSTRUMENTS**

In its normal operations, Praxair is exposed to market risks relating to fluctuations in interest rates, foreign currency exchange rates, energy costs and to a lesser extent precious metal prices. The objective of financial risk management at Praxair is to minimize the negative impact of such fluctuations on the company's earnings and cash flows. To manage these risks, among other strategies, Praxair routinely enters into various derivative financial instruments ("derivatives") including interest-rate swap and treasury rate lock agreements, currency-swap agreements, forward contracts, currency options, and commodity-swap agreements. These instruments are not entered into for trading purposes and Praxair only uses commonly traded and non-leveraged instruments.

There are three types of derivatives that the company enters into: (i) those relating to fair-value exposures, (ii) those relating to cash-flow exposures, and (iii) those relating to foreign currency net investment exposures. Fair-value exposures relate to recognized assets or liabilities, and firm commitments; cash-flow exposures relate to the variability of future cash flows associated with recognized assets or liabilities, or forecasted transactions; and net investment exposures relate to the impact of foreign currency exchange rate changes on the carrying value of net assets denominated in foreign currencies.

When a derivative is executed and hedge accounting is appropriate, it is designated as either a fair-value hedge, cash-flow hedge, or a net investment hedge. Currently, Praxair designates all interest-rate and treasury-rate locks as hedges for accounting purposes; however, currency contracts are generally not designated as hedges for accounting purposes unless they are related to forecasted transactions. Whether designated as hedges for accounting purposes or not, all derivatives are linked to an appropriate underlying exposure. On an ongoing basis, the company assesses the hedge effectiveness of all derivatives designated as hedges for accounting purposes to determine if they continue to be highly effective in offsetting changes in fair values or cash flows of the underlying hedged items. If it is determined that the hedge is not highly effective, then hedge accounting will be discontinued prospectively.

Counterparties to Praxair's derivatives are major banking institutions with credit ratings of investment grade or better and no collateral is required, and there are no significant risk concentrations. Management believes the risk of incurring losses on derivative contracts related to credit risk is remote and any losses would be immaterial.

The following table is a summary of the notional amount and fair value of derivatives outstanding at December 31, 2015 and 2014 for consolidated subsidiaries:

(Millions of dollars) December 31,	Notional Amounts		Fair Value		Liabilities	
	2015	2014	Assets 2015	2014	2015	2014
Derivatives Not Designated as Hedging Instruments:						
Currency contracts:						
Balance sheet items (a)	\$2,548	\$2,427	\$15	\$5	\$11	\$13
Derivatives Designated as Hedging Instruments:						
Currency contracts:						
Balance sheet items (a)	\$38	\$—	\$1	\$—	\$—	\$—
Interest rate contracts:						
Interest rate swaps (b)	475	875	6	14	—	—
Total Hedges	\$513	\$875	\$7	\$14	\$—	\$—
Total Derivatives	\$3,061	\$3,302	\$22	\$19	\$11	\$13

---

(a) Assets are recorded in prepaid and other current assets, and liabilities are recorded in other current liabilities.

81

---

Table of Contents

(b) Assets are recorded in other long term assets.

## Currency Contracts

## Balance Sheet Items

Foreign currency contracts related to balance sheet items consist of forward contracts entered into to manage the exposure to fluctuations in foreign-currency exchange rates on recorded balance sheet assets and liabilities denominated in currencies other than the functional currency of the related operating unit. Certain forward currency contracts are entered into to protect underlying monetary assets and liabilities denominated in foreign currencies from foreign exchange risk and are not designated as hedging instruments. The fair value adjustments on these contracts are offset by the fair value adjustments recorded on the underlying monetary assets and liabilities. Praxair also enters into forward currency contracts, which are designated as hedging instruments, to limit the cash flow exposure on certain foreign-currency denominated intercompany loans. The fair value adjustments on these contracts are recorded to AOCI, with the effective portion immediately reclassified to earnings to offset the fair value adjustments on the underlying debt instrument.

## Forecasted Purchases

Foreign currency contracts related to forecasted purchases consist of forward contracts entered into to manage the exposure to fluctuations in foreign-currency exchange rates on forecasted purchases of capital-related equipment and services denominated in currencies other than the functional currency of the related operating units. These forward contracts were designated and accounted for as cash flow hedges.

## Net Investment Hedges

Praxair has designated the €600 million (\$646 million as of December 31, 2015) 1.50% Euro-denominated notes due 2020 and the €500 million (\$535 million as of December 31, 2015) 1.625% Euro-denominated notes due 2025 as hedges of the net investment position in its European operations. These Euro-denominated debt instruments reduce the company's exposure to changes in the currency exchange rate on investments in foreign subsidiaries with Euro functional currencies. Since the time the Euro-denominated notes were issued in 2014, exchange rate movements have reduced long-term debt by \$261 million (\$136 million of which was during the year ended December 31, 2015), with the offsetting gain shown within the cumulative translation component of AOCI in the consolidated balance sheets and the consolidated statements of comprehensive income.

## Interest Rate Contracts

## Outstanding Interest Rate Swaps

At December 31, 2015, Praxair had one outstanding interest rate swap agreement with a \$475 million notional amount related to the \$475 million 1.25% notes that mature in 2018. The interest rate swap effectively converts fixed-rate interest to variable-rate interest and is designated as a fair value hedge. Fair value adjustments are recognized in earnings along with an equally offsetting charge / benefit to earnings for the changes in the fair value of the underlying debt instrument. At December 31, 2015, \$6 million was recognized as an increase in the fair value of this note (\$14 million at December 31, 2014). The interest rate swap agreement with a \$400 million notional amount related to the \$400 million 3.25% fixed-rate notes matured in 2015.

## Terminated Treasury Rate Locks

The following table summarizes the unrecognized gains (losses) related to terminated treasury rate lock contracts:

(Millions of dollars)	Year Terminated	Original Gain / (Loss)	Unrecognized Gain / (Loss) (a)	
			December 31, 2015	December 31, 2014
Treasury Rate Locks				
Underlying debt instrument:				
\$500 million 2.20% fixed-rate notes that mature in 2022 (b) 2012		\$ (2)	\$ (1)	\$ (1)
\$500 million 3.00% fixed-rate notes that mature in 2021 (b) 2011		(11)	(6)	(8)
\$600 million 4.50% fixed-rate notes that mature in 2019 (b) 2009		16	6	8
Total – pre-tax			\$ (1)	\$ (1)
Less: income taxes			—	—

After- tax amounts

\$ (1 ) \$ (1 )

82

---



Table of Contents

The unrecognized gains / (losses) for the treasury rate locks are shown in accumulated other comprehensive income ("AOCI") and are being recognized on a straight line basis to interest expense – net over the term of the underlying debt agreements. Refer to the table below summarizing the impact of the company's consolidated statements of income and AOCI for current period gain (loss) recognition.

The notional amount of the treasury rate lock contracts are equal to the underlying debt instrument with the exception of the treasury rate lock contract entered into to hedge the \$600 million 4.50% fixed-rate notes that mature in 2019. The notional amount of this contract was \$500 million.

The following table summarizes the impact of the company's derivatives not designated as hedging instruments on the consolidated statements of income:

(Millions of dollars)	Amount of Pre-Tax Gain (Loss) Recognized in Earnings *		
	2015	2014	2013
December 31, Derivatives Not Designated as Hedging Instruments			
Currency contracts:			
Balance sheet items:			
Debt-related	\$(162 )	\$(69 )	\$(46 )
Other balance sheet items	(8 )	(2 )	(9 )
Total	\$(170 )	\$(71 )	\$(55 )

\* The gains (losses) on balance sheet items are offset by gains (losses) recorded on the underlying hedged assets and liabilities. Accordingly, the gains (losses) for the derivatives and the underlying hedged assets and liabilities related to debt items are recorded in the consolidated statements of income as interest expense-net. Other balance sheet items and anticipated net income gains (losses) are recorded in the consolidated statements of income as other income (expenses)-net.

The following table summarizes the impact of the company's derivatives designated as hedging instruments that impact AOCI:

(Millions of dollars)	Amount of Gain (Loss) Recognized in AOCI			Amount of (Gain) Loss Reclassified from AOCI to the Consolidated Statement of Income		
	2015	2014	2013	2015	2014	2013
December 31, Derivatives Designated as Hedging Instruments**						
Currency contracts:						
Net Investment hedge	\$—	\$(6 )	\$—	\$—	\$—	\$—
Forecasted purchases	—	1	1	—	—	—
Balance sheet items	1	—	—	(1 )	—	—
Interest rate contracts:						
Treasury rate locks	—	—	—	—	—	—
Total – Pre tax	\$1	\$(5 )	\$1	\$(1 )	\$—	\$—
Less: income taxes	—	2	—	—	—	—
Total - Net of Taxes	\$1	\$(3 )	\$1	\$(1 )	\$—	\$—

\*\* The gains (losses) on net investment hedges are recorded as a component of AOCI within foreign currency translation adjustments in the consolidated balance sheets and consolidated statements of comprehensive income. The gains (losses) on forecasted purchases, balance sheet items, and treasury rate locks are recorded as a component of AOCI within derivative instruments in the consolidated balance sheets and the consolidated statements of comprehensive income. There was no ineffectiveness for these instruments during 2015 or 2014. The gains (losses) on net investment hedges are reclassified to earnings only when the related currency translation adjustments are required to be reclassified, usually upon sale or liquidation of the investment. The gains (losses) for interest rate contracts are

reclassified to earnings as interest expense –net on a straight-line basis over the remaining maturity of the underlying debt. Net losses of approximately \$2 million are expected to be reclassified to earnings during 2016.

Table of Contents

## NOTE 13. FAIR VALUE DISCLOSURES

The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels as follows:

Level 1 – quoted prices in active markets for identical assets or liabilities

Level 2 – quoted prices for similar assets and liabilities in active markets or inputs that are observable

Level 3 – inputs that are unobservable (for example cash flow modeling inputs based on assumptions)

## Assets and Liabilities Measured at Fair Value on a Recurring Basis

The following table summarizes assets and liabilities measured at fair value on a recurring basis at December 31, 2015 and 2014:

(Millions of dollars)	Fair Value Measurements Using					
	Level 1		Level 2		Level 3	
	2015	2014	2015	2014	2015	2014
Assets						
Derivative assets	\$—	\$—	\$22	\$19	\$—	\$—
Liabilities						
Derivative liabilities	\$—	\$—	\$11	\$13	\$—	\$—

The fair values of the derivative assets and liabilities are based on market prices obtained from independent brokers or determined using quantitative models that use as their basis readily observable market parameters that are actively quoted and can be validated through external sources, including third-party pricing services, brokers and market transactions. Investments are marketable securities traded on an exchange.

The fair value of cash and cash equivalents, short-term debt, accounts receivables-net, and accounts payable approximate carrying value because of the short-term maturities of these instruments. The fair value of long-term debt is estimated based on the quoted market prices for the same or similar issues, which is deemed a Level 2 measurement. At December 31, 2015, the estimated fair value of Praxair's long-term debt portfolio was \$9,069 million versus a carrying value of \$8,981 million. At December 31, 2014, the estimated fair value of Praxair's long-term debt portfolio was \$8,753 million versus a carrying value of \$8,638 million. These differences are attributable to interest-rate changes subsequent to when the debt was issued.

## Assets Measured at Fair Value on a Non-Recurring Basis

At December 31, 2014 in connection with the adoption of the SICAD II currency exchange system in Venezuela, Praxair reduced the value of certain assets in Venezuela, primarily long-lived assets, to estimated fair value which resulted in a \$63 million pre-tax charge to income (see Note 2).

The above fair value measurements were based on internal assessments of the best information available about the local business conditions and political environment, including the impact of foreign currency exchange restrictions that would be indicative of what the assets could be sold for and are considered to be Level 3 measurements.

Table of Contents

## NOTE 14. EQUITY AND REDEEMABLE NONCONTROLLING INTERESTS

## Praxair, Inc. Shareholders' Equity

At December 31, 2015 and 2014, there were 800,000,000 shares of common stock authorized (par value \$0.01 per share) of which 383,230,625 shares were issued and 284,879,079 were outstanding at December 31, 2015 (289,261,608 were outstanding at December 31, 2014).

At December 31, 2015 and 2014, there were 25,000,000 shares of preferred stock (par value \$0.01 per share) authorized, of which no shares were issued and outstanding. Praxair's board of directors may from time to time authorize the issuance of one or more series of preferred stock and, in connection with the creation of such series, determine the characteristics of each such series including, without limitation, the preference and relative, participating, optional or other special rights, and the qualifications, limitations or restrictions of the series.

## Redeemable Noncontrolling Interests

Noncontrolling interests with redemption features, such as put/sell options, that are not solely within the company's control ("redeemable noncontrolling interests") are reported separately in the consolidated balance sheets at the greater of carrying value or redemption value. For redeemable noncontrolling interests that are not yet exercisable, Praxair calculates the redemption value by accreting the carrying value to the redemption value over the period until exercisable. If the redemption value is greater than the carrying value, any increase is adjusted directly to retained earnings and does not impact net income.

During 2011, Praxair acquired a controlling interest in Yara Praxair, a joint venture in Scandinavia that was previously accounted for as an equity investment. As part of the transaction, the noncontrolling shareholder obtained the right to sell its shares to Praxair starting in the first quarter 2015 for a period of 4 years at a formula price. Praxair also obtained the right to purchase the shares held by the noncontrolling shareholder starting in 2017 for a period of 2 years, also at a formula price. Accordingly, the noncontrolling interests related to Yara Praxair have been recorded in the consolidated balance sheets as redeemable noncontrolling interests. At December 31, 2015, other redeemable noncontrolling interests relate to a packaged gas distributor in the United States where the noncontrolling shareholders have put options.

The following is a summary of redeemable noncontrolling interests for the years ended December 31, 2015, 2014 and 2013:

(Millions of dollars)	2015	2014	2013	
Beginning Balance	\$176	\$307	\$252	
Net income	10	12	24	
Distributions to noncontrolling interest	(7	) (9	) (11	)
Redemption value adjustment/accretion *	(40	) 2	53	
Foreign currency translation and other	(17	) (24	) (11	)
Purchase/divestiture of noncontrolling interest **	(9	) (112	) —	
Ending Balance	\$113	\$176	\$307	

\* In December 2015, Praxair sold its controlling interest in Praxair Distribution Southeast, LLC and, accordingly, removed the related redeemable noncontrolling interests.

\*\* In January 2014, Praxair acquired the noncontrolling interests related to Praxair Distribution Mid-Atlantic, LLC. The cash payment is shown in the financing section of the consolidated statements of cash flows under the caption "Noncontrolling interest transactions and other".

Table of Contents

## NOTE 15. SHARE-BASED COMPENSATION

Share-based compensation expense was \$30 million in 2015 (\$51 million and \$70 million in 2014 and 2013, respectively). The related income tax benefit recognized was \$8 million in 2015 (\$14 million and \$21 million in 2014 and 2013, respectively). The share-based compensation expense was primarily recorded in selling, general and administrative expenses and no share-based compensation expense was capitalized.

## Summary of Plans

The 2009 Praxair, Inc. Long-Term Incentive Plan was initially adopted by the board of directors and shareholders of the company on April 28, 2009 and was amended and restated in its entirety by the board and shareholders on April 22, 2014 ("the 2009 Plan"). Prior to April 28, 2009, equity awards were granted under the 2002 Praxair, Inc. Long-Term Incentive Plan and the company's ability to make further equity awards under that plan ended with its adoption of the 2009 Plan. The 2009 Plan permits awards of stock options, stock appreciation rights, restricted stock and restricted stock units, performance-based stock units and other equity awards to eligible officer and non-officer employees and non-employee directors of the company and its affiliates. Under the 2009 Plan, as amended and restated in 2014, the aggregate number of shares available for option and other equity grants is 8,000,000 shares, of which up to 2,600,000 shares may be granted as awards other than options or stock appreciation rights. The 2009 Plan also provides calendar year per-participant limits on grants of stock options and stock appreciation rights and on other types of awards intended to qualify as Performance-Based Compensation under Section 162(m) of the Internal Revenue Code. As of December 31, 2015, 6,356,118 shares remained available for equity grants under the 2009 Plan.

In 2005, the board of directors and shareholders of the company adopted the 2005 Equity Compensation Plan for Non-Employee Directors of Praxair, Inc. ("the 2005 Plan"). Under the 2005 Plan, the aggregate number of shares available for option and other equity grants was limited to a total of 500,000 shares. The 2005 Plan expired on April 30, 2010, by its own terms, and no shares were available for grant thereafter.

Exercise prices for options granted under the 2009 Plan may not be less than the closing market price of the company's common stock on the date of grant and granted options may not be re-priced or exchanged without shareholder approval. Options granted under the 2009 Plan subject only to time vesting requirements may become partially exercisable after a minimum of one year after the date of grant but may not become fully exercisable until at least three years have elapsed from the date of grant, and all options have a maximum duration of ten years. Options granted under predecessor plans had similar terms.

The company has the ability to repurchase shares on the open market to satisfy share option exercises and issues shares from treasury stock upon the exercise of certain stock options.

## Stock Option Fair Value

The company utilizes the Black-Scholes Options-Pricing Model to determine the fair value of stock options consistent with that used for pro forma disclosures in prior years. Management is required to make certain assumptions with respect to selected model inputs, including anticipated changes in the underlying stock price (i.e., expected volatility) and option exercise activity (i.e., expected life). Expected volatility is based on the historical volatility of the company's stock over the most recent period commensurate with the estimated expected life of the company's stock options and other factors. The expected life of options granted, which represents the period of time that the options are expected to be outstanding, is based primarily on historical exercise experience. The expected dividend yield is based on the company's most recent history and expectation of dividend payouts. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant for a period commensurate with the estimated expected life. If factors change and result in different assumptions in future periods, the stock option expense that the company records for future grants may differ significantly from what the company has recorded in the current period.

The weighted-average fair value of options granted during 2015 was \$11.99 per option (\$14.62 in 2014 and \$16.31 in 2013) based on the Black-Scholes Options-Pricing model. The decrease in grant date fair value year-over-year is primarily attributable to a decrease in volatility.

The following weighted-average assumptions were used to value the grants in 2015, 2014 and 2013:

Year Ended December 31,	2015	2014	2013	
Dividend yield	2.2	% 2.0	% 2.2	%

Edgar Filing: PRAXAIR INC - Form 10-K

Volatility	13.5	%	15.2	%	21.7	%
Risk-free interest rate	1.51	%	1.57	%	0.76	%
Expected term years	5		5		5	

86

---

Table of Contents

The following table summarizes option activity under the plans for 2015 and changes during the period then ended (averages are calculated on a weighted basis; life in years; intrinsic value expressed in millions):

Activity	Number of Options (000's)	Average Exercise Price	Average Remaining Life	Aggregate Intrinsic Value
Outstanding at January 1, 2015	10,981	\$89.02		
Granted	1,567	128.38		
Exercised	(1,146)	) 64.38		
Cancelled or expired	(129)	) 124.83		
Outstanding at December 31, 2015	11,273	\$96.58	5.1	\$ 156
Exercisable at December 31, 2015	8,579	\$87.39	4.1	\$ 156

The aggregate intrinsic value represents the difference between the company's closing stock price of \$102.40 as of December 31, 2015 and the exercise price multiplied by the number of in the money options outstanding as of that date. The total intrinsic value of stock options exercised during 2015 was \$65 million (\$93 million and \$143 million in 2014 and 2013, respectively).

Cash received from option exercises under all share-based payment arrangements for 2015 was \$72 million (\$88 million and \$138 million in 2014 and 2013, respectively). The cash tax benefit realized from share-based compensation totaled \$33 million for 2015, of which \$19 million in excess tax benefits was classified as financing cash flows (\$48 million and \$62 million cash tax benefit in 2014 and 2013, respectively, of which \$31 million and \$46 million represented excess tax benefits).

As of December 31, 2015, \$17 million of unrecognized compensation cost related to non-vested stock options is expected to be recognized over a weighted-average period of approximately 1 year.

#### Performance-Based and Restricted Stock Awards

In 2015, the company granted performance-based stock awards under the 2009 Plan to senior level executives of 219,612 shares that vest, subject to the attainment of pre-established minimum performance criteria, principally on the third anniversary of their date of grant. The actual number of shares issued in settlement of a vested award can range from zero to 200 percent of the target number of shares granted based upon the company's attainment of specified performance targets at the end of a three-year period. Compensation expense related to these awards is recognized over the three-year performance period based on the fair value of the closing market price of the company's common stock on the date of the grant and the estimated performance that will be achieved. Compensation expense will be adjusted during the three-year performance period based upon the estimated performance levels that will be achieved. There were 91,194 restricted stock units granted to employees during 2015. In addition, the company had previously granted restricted stock to certain key employees that vest after a designated service period ranging from 2 to 10 years. Generally, restricted stock does not earn quarterly dividends while vesting. Compensation expense related to the restricted stock units is recognized on a straight-line basis over the vesting period.

The weighted-average fair value of performance-based stock units granted during 2015 was \$120.04 per unit (\$121.16 in 2014 and \$103.46 in 2013). The weighted-average fair value of restricted stock units granted during 2015 was \$120.24 per unit (\$122.55 in 2014 and \$105.79 in 2013). This is based on the closing market price of Praxair's common stock on the grant date adjusted for dividends that will not be paid during the vesting period.

Table of Contents

The following table summarizes non-vested performance-based and restricted stock award activity as of December 31, 2015 and changes during the period then ended (shares based on target amounts, averages are calculated on a weighted basis):

Performance-Based and Restricted Stock Activity	Performance-Based		Restricted Stock	
	Number of Shares (000's)	Average Grant Date Fair Value	Number of Shares (000's)	Average Grant Date Fair Value
Non-vested at January 1, 2015	833	\$ 109.09	307	\$ 106.63
Granted (a)	220	120.04	91	120.24
Vested	(225)	) 103.16	(100)	) 107.34
Cancelled	(26)	) 117.01	(12)	) 115.02
Non-vested at December 31, 2015	802	\$ 114.41	286	\$ 112.48

(a) Performance-based stock unit ("PSU") grants during 2015 include 35 thousand shares relating to the actual payout of the 2012 PSU grants in 2015.

There are approximately 15 thousand performance-based shares and 21 thousand restricted stock shares that are non-vested at December 31, 2015 which will be settled in cash due to foreign regulatory limitations. The liability related to these grants reflects the current estimate of performance that will be achieved and the current common stock price.

As of December 31, 2015, based on current estimates of future performance, \$21 million of unrecognized compensation cost related to performance-based awards and \$13 million of unrecognized compensation cost related to the restricted stock awards is expected to be recognized primarily through the first quarter of 2018.

**NOTE 16. RETIREMENT PROGRAMS****Defined Benefit Pension Plans**

Praxair has two main U.S. retirement programs which are non-contributory defined benefit plans: the Praxair Pension Plan and the CBI Pension Plan. The latter program benefits primarily former employees of CBI Industries, Inc. which Praxair acquired in 1996. Effective July 1, 2002, the Praxair Pension Plan was amended to give participating employees a one-time choice to remain covered by the old formula or to elect coverage under a new formula. The old formula is based predominantly on years of service, age and compensation levels prior to retirement, while the new formula provides for an annual contribution to an individual account which grows with interest each year at a predetermined rate. Also, this new formula applies to all new employees hired after April 30, 2002 into businesses adopting this plan. The U.S. and international pension plan assets are comprised of a diversified mix of investments, including domestic and international corporate equities, government securities and corporate debt securities. Praxair has several plans that provide supplementary retirement benefits primarily to higher level employees that are unfunded and are nonqualified for federal tax purposes. Pension coverage for employees of certain of Praxair's international subsidiaries generally is provided by those companies through separate plans. Obligations under such plans are primarily provided for through diversified investment portfolios, with some smaller plans provided for under insurance policies or by book reserves.

**Multi-employer Pension Plans**

In the United States Praxair participates in seven multi-employer defined benefit pension plans ("MEP") pursuant to the terms of collective bargaining agreements covering approximately 200 union-represented employees. The collective bargaining agreements expire on different dates through 2020. In connection with such agreements, the Company is required to make periodic contributions to the MEPs in accordance with the terms of the respective collective bargaining agreements. Praxair's participation in these plans is not material either at the plan level or in the aggregate. Praxair's contributions to these plans were \$2 million in 2015, 2014, and 2013 (these costs are not included in the tables that follow). For all MEPs, Praxair's contributions were significantly less than 1% of the total contributions to each plan for 2014 and 2013. Total 2015 contributions were not yet available from the MEPs.

Praxair has obtained the most recently available Pension Protection Act ("PPA") zone status letters from the Trustees of the MEPs. The PPA classifies MEPs as either Red, Yellow or Green zone plans. Among other factors, plans in the Red zone are generally less than 65 percent funded; plans in the Yellow zone are generally 65 to 80 percent funded;



and plans in the Green zone are generally at least 80 percent funded. According to the most current data available, four of the MEPs that the Company participates in are in a Red zone status; one is in a Yellow zone status; and two are in a Green zone status. As of December 31, 2015, the five Red and Yellow Zone plans have pending or have implemented financial improvement or rehabilitation plans. Praxair does not currently anticipate significant future obligations due to the funding status of these plans. If Praxair determined it was probable that it would withdraw from an MEP, the Company would record a liability for

88

---

Table of Contents

its portion of the MEP's unfunded pension obligations, as calculated at that time. Historically, such withdrawal payments have not been significant.

**Defined Contribution Plans**

Praxair's U.S. business employees are eligible to participate in the Praxair defined contribution savings plan. Employees may contribute up to 40% of their compensation, subject to the maximum allowable by IRS regulations. For the U.S. packaged gases business, company contributions to this plan are calculated as a percentage of salary based on age plus service. U.S. employees other than those in the packaged gases business have company contributions to this plan calculated on a graduated scale based on employee contributions to the plan. The cost for these defined contribution plans was \$28 million in 2015, \$26 million in 2014 and \$25 million in 2013 (these costs are not included in the tables that follow).

The defined contribution plans include a non-leveraged employee stock ownership plan ("ESOP") which covers all employees participating in this plan. The collective number of shares of Praxair common stock in the two ESOPs totaled 2,959,745 at December 31, 2015.

Certain international subsidiaries of the company also sponsor defined contribution plans where contributions are determined under various formulas. The expense for these plans was \$17 million in 2015, 2014, and 2013 (these expenses are not included in the tables that follow).

**Postretirement Benefits Other Than Pensions (OPEB)**

Praxair provides health care and life insurance benefits to certain eligible retired employees. These benefits are provided through various insurance companies and healthcare providers. Praxair is also obligated to make payments for a portion of postretirement benefits related to retirees of Praxair's former parent. Additionally, as part of the CBI acquisition in 1996, Praxair assumed responsibility for healthcare and life insurance benefit obligations for CBI's retired employees. All postretirement healthcare programs have cost caps that limit the company's exposure to future cost increases. In addition, as part of the retirement elections made for July 1, 2002, eligible employees were given the choice of maintaining coverage in the current retiree medical design (as may be amended from time to time), or to move to a design whereby coverage would be provided, but with no Praxair subsidy whatsoever. Also, all new employees hired after April 30, 2002 into a business adopting these plans will not receive a company subsidy. Praxair does not currently fund its postretirement benefits obligations. Praxair's retiree plans may be changed or terminated by Praxair at any time for any reason with no liability to current or future retirees.

Praxair uses a measurement date of December 31 for its pension and other post-retirement benefit plans.

**Pension and Postretirement Benefit Costs**

The components of net pension and OPEB costs for 2015, 2014 and 2013 are shown below:

(Millions of dollars) Year Ended December 31,	Pensions			OPEB		
	2015	2014	2013	2015	2014	2013
Service cost	\$54	\$49	\$56	\$3	\$4	\$5
Interest cost	112	121	112	7	11	11
Expected return on plan assets	(154)	(155)	(149)	—	—	—
Net amortization and deferral	79	60	91	(2)	(8)	(5)
Net periodic benefit cost before pension settlement charges	\$91	\$75	\$110	\$8	\$7	\$11
Pension settlement charges *	7	7	9	—	—	—
Net periodic benefit cost	\$98	\$82	\$119	\$8	\$7	\$11

\* 2015 includes a \$7 million pension settlement charge related to lump sum benefits paid to retired senior managers in the third quarter. The fourth quarter of 2014 and the third quarter of 2013 also include charges of \$7 million and \$9 million, respectively, related primarily to the retirement of senior managers in the United States (see Note 2).

Table of Contents

## Funded Status

The changes in benefit obligation and plan assets for Praxair's pension and OPEB programs, including reconciliation of the funded status of the plans to amounts recorded in the consolidated balance sheet, as of December 31, 2015 and 2014 are shown below:

(Millions of dollars) Year Ended December 31,	Pensions		2014		OPEB	
	2015 U.S.	International	U.S.	International	2015	2014
Change in Benefit Obligation ("PBO")						
Benefit obligation January 1	\$2,050	\$719	\$1,791	\$661	\$180	\$208
Service cost	36	18	34	15	3	4
Interest cost	80	32	85	36	7	11
Participant contributions	—	—	—	—	10	10
Plan amendment	—	2	—	—	—	—
Actuarial loss (gain)	(68 )	(41 )	276	109	(9 )	(21 )
Benefits paid	(106 )	(32 )	(136 )	(35 )	(24 )	(25 )
Divestiture	—	—	—	(1 )	—	—
Foreign currency translation	—	(118 )	—	(66 )	(7 )	(7 )
Benefit obligation, December 31	\$1,992	\$580	\$2,050	\$719	\$160	\$180
Accumulated benefit obligation ("ABO")	\$1,900	\$551	\$1,944	\$681		
Change in Plan Assets						
Fair value of plan assets, January 1	\$1,607	\$561	\$1,620	\$551	\$—	\$—
Actual return on plan assets	(11 )	18	108	76	—	—
Company contributions	—	15	2	16	—	—
Benefits paid from plan assets	(87 )	(28 )	(123 )	(30 )	—	—
Foreign currency translation	—	(91 )	—	(52 )	—	—
Fair value of plan assets, December 31	\$1,509	\$475	\$1,607	\$561	\$—	\$—
Funded Status, End of Year	\$(483 )	\$(105 )	\$(443 )	\$(158 )	\$(160 )	\$(180 )
Recorded in the Balance Sheet						
Other long-term assets	\$—	\$41	\$—	\$35	\$—	\$—
Other current liabilities	(12 )	(4 )	(18 )	(5 )	(13 )	(16 )
Other long-term liabilities	(471 )	(142 )	(425 )	(188 )	(147 )	(164 )
Net amount recognized, December 31	\$(483 )	\$(105 )	\$(443 )	\$(158 )	\$(160 )	\$(180 )
Amounts recognized in accumulated other comprehensive income (loss) consist of:						
Net actuarial loss (gain)	\$782	\$135	\$792	\$193	\$(25 )	\$(24 )
Prior service cost (credit)	—	11	—	15	(1 )	(1 )
Deferred tax benefit (Note 5)	(299 )	(37 )	(303 )	(50 )	11	11
Amount recognized in accumulated other comprehensive income (loss) (Note 7)	\$483	\$109	\$489	\$158	\$(15 )	\$(14 )

Table of Contents

The changes in plan assets and benefit obligations recognized in other comprehensive income in 2015 and 2014 are as follows:

(Millions of dollars)	Pensions		OPEB	
	2015	2014	2015	2014
Current year net actuarial losses (gains)*	\$38	\$356	\$(9)	\$(21)
Amortization of net actuarial gains (losses)	(78)	(59)	2	2
Amortization of prior service credits (costs)	(1)	(1)	—	6
Pension settlements (Note 2)	(7)	(7)	—	—
Foreign currency translation and other	(24)	(16)	6	(1)
Total recognized in other comprehensive income	\$(72)	\$273	\$(1)	\$(14)

Pension net actuarial losses in 2015 relate primarily to lower actual returns on plan assets when compared with 2014 \*offset by higher U.S. discount rates. Pension net actuarial losses in 2014 relate primarily to the decrease in discount rates when compared to 2013 as well as updated mortality assumptions. OPEB net actuarial gains in 2015 and 2014 relate primarily to higher discount rates and favorable plan experience, respectively.

The amounts in accumulated other comprehensive income (loss) that are expected to be recognized as components of net periodic benefit cost during 2016 are as follows:

(Millions of dollars)	Pension	OPEB
Net actuarial loss (gain)	\$59	\$(2)
Prior service cost (credit)	1	—
	\$60	\$(2)

The following table provides information for pension plans where the accumulated benefit obligation exceeds the fair value of the plan assets:

(Millions of dollars)	Pensions		2014	
	2015		U.S.	International
Year Ended December 31,	U.S.	International	U.S.	International
Projected benefit obligation ("PBO")	\$1,992	\$336	\$2,050	\$428
Accumulated benefit obligation ("ABO")	\$1,900	\$324	\$1,944	\$412
Fair value of plan assets	\$1,509	\$188	\$1,607	\$234

Table of Contents

## Assumptions

The assumptions used to determine benefit obligations are as of the respective balance sheet dates and the assumptions used to determine net benefit cost are as of the previous year-end, as shown below:

	Pensions		International		OPEB		
	U.S. 2015	2014	2015	2014	2015	2014	
Weighted average assumptions used to determine benefit obligations at December 31,							
Discount rate (1)	4.32	% 3.95	% 5.32	% 5.36	% 4.24	% 4.48	%
Rate of increase in compensation levels	3.25	% 3.25	% 3.57	% 3.72	% N/A	N/A	
Weighted average assumptions used to determine net periodic benefit cost for years ended December 31,							
Discount rate	3.95	% 4.80	% 5.36	% 6.30	% 4.48	% 5.87	%
Rate of increase in compensation levels	3.25	% 3.25	% 3.72	% 4.00	% N/A	N/A	
Expected long-term rate of return on plan assets (2)	8.00	% 8.00	% 7.71	% 8.10	% N/A	N/A	

At the end of 2015, the Company changed the approach used to measure service and interest costs for significant pension and OPEB plans. Through 2015, Praxair measured service and interest costs utilizing a single weighted-average discount rate for each plan derived from the yield curve used to measure the respective plan obligations. Effective in 2016, the Company elected to measure service and interest costs for significant plans by applying the specific spot rates along that yield curve to the plan's expected cash flows ("spot rate approach"). The Company believes the new spot rate approach provides a more precise measurement of service and interest costs by aligning the timing of the plans' expected cash flows to the corresponding spot rates on the yield curve. This change does not affect the measurement of plan obligations nor the funded status of the plans. The Company has accounted for this change as a change in accounting estimate and, accordingly has accounted for it on a prospective basis.

(1) The expected long term rate of return on the U.S. and international plan assets is estimated based on the plans' investment strategy and asset allocation, historical capital market performance and, to a lesser extent, historical plan performance. For the U.S. plans, the expected rate of return of 8.00% was derived based on the target asset allocation of 50%-70% equity securities (approximately 9.5% expected return), 20%-40% fixed income securities (approximately 5.5% expected return) and 2% - 10% real estate funds (approximately 7% expected return). For the international plans, the expected rate of return was derived based on the weighted average target asset allocation of 30%-50% equity securities (approximately 10% expected return), 40%-60% fixed income securities (approximately 7.5% expected return), and 0%-10% alternative investments (approximately 7.5% expected return).

(2) For the U.S. plan assets, the actual annualized total returns for the most recent 10-year and 20-year periods ended December 31, 2015 were approximately 5.4% and 6.9%, respectively. For the international plan assets, the actual annualized total returns for the same two periods were approximately 7.4% and 8.7%, respectively. Changes to plan asset allocations and investment strategy over this time period limit the value of historical plan performance as factor in estimating the expected long term rate of return. For 2016, the expected long-term rate of return on plan assets will be 8.00% for the U.S. plans. Expected weighted average returns for international plans will vary.

	OPEB		
	2015	2014	
Assumed healthcare cost trend rates			
Healthcare cost trend assumed	7.00	% 7.50	%
	5.00	% 5.00	%

Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)

Year that the rate reaches the ultimate trend rate	2020	2020
--	------	------

These healthcare-cost trend rate assumptions have an impact on the amounts reported. However, cost caps limit the impact on the net OPEB benefit cost in the U.S. To illustrate the effect, a one-percentage point change in assumed

92

---

Table of Contents

healthcare cost trend rates would have the following effects:

(Millions of dollars)	One-Percentage Point	
	Increase	Decrease
Effect on the total of service and interest cost components of net OPEB benefit cost	\$—	\$—
Effect on OPEB benefit obligation	\$2	\$(2 )

**Pension Plan Assets**

The investments of the U.S. pension plan are managed to meet the future expected benefit liabilities of the plan over the long term by investing in diversified portfolios consistent with prudent diversification and historical and expected capital market returns. When Praxair became an independent, publicly traded company in 1992, its former parent retained all liabilities for its term-vested and retired employees. Praxair's plan received assets and retained pension liabilities for its own active employee base. Therefore, the liabilities under the Praxair U.S. pension plan mature at a later date compared to pension funds of other similar companies. Investment strategies are reviewed by the Finance and Pension Committee of the company's Board of Directors and investment performance is tracked against appropriate benchmarks. There are no concentrations of risk as it relates to the assets within the plans.

The international pension plans are managed individually based on diversified investment portfolios, with different target asset allocations that vary for each plan. Praxair's U.S. and international pension plans' weighted-average asset allocations at December 31, 2015 and 2014, and the target asset allocation range for 2015, by major asset category, are as follows:

Asset Category	U.S.			International			
	Target	2015	2014	Target	2015	2014	
Equity securities	50%-70%	62	% 65	% 30%-50%	50	% 49	%
Fixed income securities	20%-40%	30	% 28	% 40%-60%	41	% 42	%
Other	2% - 10%	8	% 7	% 0%-10%	9	% 9	%

Table of Contents

The following table summarizes pension assets measured at fair value by asset category at December 31, 2015 and 2014. During the years presented, there has been no transfer of assets between Levels 1, 2 and 3 (see Note 13 for definition of the levels):

(Millions of dollars)	Fair Value Measurements Using						Total	
	Level 1		Level 2		Level 3 *		2015	2014
	2015	2014	2015	2014	2015	2014	2015	2014
Cash and cash equivalents	\$1	\$1	\$—	\$—	\$—	\$—	\$1	\$1
Equity securities:								
U.S. equities	302	340	—	—	—	—	302	340
International equities	62	82	—	—	—	—	62	82
Mutual funds	236	330	—	—	—	—	236	330
Pooled funds	—	—	575	565	—	—	575	565
Fixed income securities:								
U.S. government bonds	—	—	50	44	—	—	50	44
International government bonds	—	—	89	125	—	—	89	125
Mutual funds	91	253	—	—	—	—	91	253
Corporate bonds	—	—	163	175	—	—	163	175
Pooled funds	—	—	249	90	—	—	249	90
Other:								
Insurance contracts	—	—	—	—	43	53	43	53
Real Estate Funds	—	—	—	—	123	110	123	110
Fair value of plan assets, December 31,	\$692	\$1,006	\$1,126	\$999	\$166	\$163	\$1,984	\$2,168

\* The following table summarizes changes in fair value of the pension plan assets classified as level 3 for the periods ended December 31, 2015 and 2014:

(Millions of dollars)	Insurance Contracts	Real Estate Funds	Total
Balance, December 31, 2013	\$48	\$—	\$48
Gain for the period	12	10	22
Acquisitions	—	100	100
Foreign currency translation	(7	) —	(7
Balance, December 31, 2014	53	110	163
Gain/(Loss) for the period	(4	) 13	9
Acquisitions	—	—	—
Foreign currency translation	(6	) —	(6
Balance, December 31, 2015	\$43	\$123	\$166

The descriptions and fair value methodologies for the U.S. and international pension plan assets are as follows:

**Cash and Cash Equivalents** – This category includes cash and short-term interest bearing investments with maturities of three months or less. Investments are valued at cost plus accrued interest. Cash and cash equivalents are classified within level 1 of the valuation hierarchy.

**Equity Securities** – This category is comprised of shares of common stock in U.S. and international companies from a diverse set of industries and size. Common stock is valued at the closing market price reported on a U.S. or international exchange where the security is actively traded. Equity securities are classified within level 1 of the valuation hierarchy.

**Mutual Funds and Pooled Funds** – This category consists of publicly and privately managed funds that invest primarily in marketable equity and fixed income securities. The fair value of these investments is determined by reference





Table of Contents

to the net asset value of the underlying securities of the fund. Shares of publicly traded mutual funds are valued at the net asset value quoted on the exchange where the fund is traded and are classified as level 1 within the valuation hierarchy. Units of pooled funds are valued at the per unit net asset value determined by the fund manager and are classified as level 2 within the valuation hierarchy.

U.S. and International Government Bonds – This category includes U.S. treasuries, U.S. federal agency obligations and international government debt. The majority of these investments do not have quoted market prices available for a specific government security and so the fair value is determined using quoted prices of similar securities in active markets and is classified as level 2 within the valuation hierarchy.

Corporate Bonds – This category is comprised of corporate bonds of U.S. and international companies from a diverse set of industries and size. The fair values for U.S. and international corporate bonds are determined using quoted prices of similar securities in active markets and observable data or broker or dealer quotations. The fair values for these investments are classified as level 2 within the valuation hierarchy.

Insurance Contracts – The fair value of insurance contracts is determined based on the cash surrender value of the insurance contract, which is determined based on such factors as the fair value of the underlying assets and discounted cash flow. These contracts are with highly rated insurance companies. Insurance contracts are classified within level 3 of the valuation hierarchy.

Real Estate Funds – This category includes real estate properties, partnership equities and investments in operating companies. The fair value of the assets is determined using discounted cash flows by estimating an income stream for the property plus a reversion into a present value at a risk adjusted rate. Yield rates and growth assumptions utilized are derived from market transactions as well as other financial and industry data. The fair value for these investments are classified within level 3 of the valuation hierarchy.

**Contributions**

At a minimum, Praxair contributes to its pension plans to comply with local regulatory requirements (e.g., ERISA in the United States). Discretionary contributions in excess of the local minimum requirements are made based on many factors, including long-term projections of the plans' funded status, the economic environment, potential risk of overfunding, pension insurance costs and alternative uses of the cash. Changes to these factors can impact the timing of discretionary contributions from year to year. Pension contributions were \$15 million in 2015, \$18 million in 2014 and \$52 million in 2013. Estimated required contributions for 2016 are currently expected to be in the area of \$10 million to \$15 million.

**Estimated Future Benefit Payments**

The following table presents estimated future benefit payments, net of participants contributions:

(Millions of dollars)	Pensions		
Year Ended December 31,	U.S.	International	OPEB
2016	\$105	\$28	\$13
2017	109	28	13
2018	113	30	13
2019	119	31	12
2020	121	33	12
2021-2025	648	182	51

**NOTE 17. COMMITMENTS AND CONTINGENCIES**

The company accrues non income-tax liabilities for contingencies when management believes that a loss is probable and the amounts can be reasonably estimated, while contingent gains are recognized only when realized. In the event any losses are sustained in excess of accruals, they will be charged against income at that time. Attorney fees are recorded as incurred. Commitments represent obligations, such as those for future purchases of goods or services, that are not yet recorded on the company's balance sheet as liabilities. The company records liabilities for commitments when incurred (i.e., when the goods or services are received).

**Contingent Liabilities**

Praxair is subject to various lawsuits and government investigations that arise from time to time in the ordinary course of business. These actions are based upon alleged environmental, tax, antitrust and personal injury claims, among



Table of Contents

others. Praxair has strong defenses in these cases and intends to defend itself vigorously. It is possible that the company may incur losses in connection with some of these actions in excess of accrued liabilities. Management does not anticipate that in the aggregate such losses would have a material adverse effect on the company's consolidated financial position or liquidity; however, it is possible that the final outcomes could have a significant impact on the company's reported results of operations in any given period.

Significant matters are:

- During May 2009, the Brazilian government published Law 11941/2009 instituting a new voluntary amnesty program ("Refis Program") which allowed Brazilian companies to settle certain federal tax disputes at reduced amounts. During the 2009 third quarter, Praxair decided that it was economically beneficial to settle many of its outstanding federal tax disputes and such disputes were enrolled in the Refis Program, subject to final calculation and review by the Brazilian federal government. The Company recorded estimated liabilities based on the terms of the Refis Program. Since 2009, Praxair has been unable to reach final agreement on the calculations and recently initiated litigation against the government in an attempt to resolve certain items. Open issues relate to the following matters: (i) application of cash deposits and net operating loss carryforwards to satisfy obligations and (ii) the amount of tax reductions available under the Refis Program. Although it is difficult to estimate the timing of resolution of legal matters in Brazil, it is possible that individual disputed matters may be resolved during the next year.

At December 31, 2015 the most significant non-income and income tax claims in Brazil, after enrollment in the Refis Program, relate to state VAT tax matters and a federal income tax matter where the taxing authorities are challenging the tax rate that should be applied to income generated by a subsidiary company. The total estimated exposure relating to such claims, including interest and penalties, as appropriate, is approximately \$170 million. Praxair has not recorded any liabilities related to such claims based on management judgments, after considering judgments and opinions of outside counsel. Because litigation in Brazil historically takes many years to resolve, it is very difficult to estimate the timing of resolution of these matters; however, it is possible that certain of these matters may be resolved within the near term. The company is vigorously defending against the proceedings.

On September 1, 2010, CADE ("Brazilian Administrative Council for Economic Defense") announced alleged anticompetitive activity on the part of five industrial gas companies in Brazil and imposed fines on all five companies. Originally, CADE imposed a civil fine of R\$2.2 billion Brazilian reais (US\$563 million) against White Martins, the Brazil-based subsidiary of Praxair, Inc. In response to a motion for clarification, the fine was reduced to R\$1.7 billion Brazilian reais (US\$435 million) due to a calculation error made by CADE. The amount of the fine is subject to indexation using SELIC. On September 2, 2010, Praxair issued a press release and filed a report on Form 8-K rejecting all claims and stating that the fine represents a gross and arbitrary disregard of Brazilian law.

On October 19, 2010, White Martins filed an annulment petition ("appeal") with the Federal Court in Brasilia seeking to have the fine against White Martins entirely overturned. In order to suspend payment of the fine pending the completion of the appeal process, Brazilian law required that the company tender a form of guarantee in the amount of the fine as security. Currently, 50% of the guarantee is satisfied by letters of credit with a financial institution and 50% of the guarantee is satisfied by equity of a Brazilian subsidiary.

On September 14, 2015, the Ninth Federal Court of Brasilia overturned the fine against White Martins and declared the original CADE administrative proceeding to be null and void. We expect CADE to appeal this decision to the Federal Circuit Court in Brasilia. On September 21, 2015, White Martins submitted a motion to the Ninth Federal Court in Brasilia requesting approval to withdraw the guarantee which was securing the fine.

Praxair strongly believes that the allegations are without merit and that the fine will be entirely overturned during the appeal process. The company further believes that it has strong defenses and will vigorously defend against the allegations and related fine up to such levels of the Federal Courts in Brazil as may be necessary. Because appeals in Brazil historically take many years to resolve, it is very difficult to estimate when the appeal will be finally decided. Based on management judgments, after considering judgments and opinions of outside counsel, no reserve has been recorded for this proceeding as management does not believe that a loss is probable.



Table of Contents

## Commitments and Contractual Obligations

The following table sets forth Praxair's material commitments and contractual obligations as of December 31, 2015, excluding leases, tax liabilities for uncertain tax positions, long-term debt, other post retirement and pension obligations which are summarized elsewhere in the financial statements (see Notes 4, 5, 11, and 16):

(Millions of dollars) Expiring through December 31,	Unconditional Purchase Obligations	Construction Commitments	Guarantees and Other
2016	\$507	\$1,090	\$59
2017	450	250	—
2018	415	2	—
2019	362	—	—
2020	282	—	—
Thereafter	1,992	—	—
	\$4,008	\$1,342	\$59

Unconditional purchase obligations of \$4,008 million represent contractual commitments under various long and short-term take-or-pay arrangements with suppliers and are not included on Praxair's balance sheet. These obligations are primarily minimum-purchase commitments for helium, electricity, natural gas and feedstock used to produce atmospheric and process gases. A significant portion of these obligations is passed on to customers through similar take-or-pay or other contractual arrangements. Purchase obligations that are not passed along to customers through such contractual arrangements are subject to market conditions, but do not represent a material risk to Praxair. During 2015, payments related to Praxair's unconditional purchase obligations totaled \$847 million, including \$399 million for electricity and \$148 million for natural gas. Approximately \$2,350 million of the purchase obligations relates to power and is intended to secure the uninterrupted supply of electricity and feedstock to Praxair's plants to reliably satisfy customer product supply obligations, and extend through 2030. Certain of the power contracts contain various cancellation provisions requiring supplier agreement, and many are subject to annual escalations based on local inflation factors. The purchase obligations also include a multi-year contract for silane, with a total purchase obligation of \$112 million as of December 31, 2015. At December 31, 2015, Praxair's current selling prices and estimated future demand for silane are in excess of its contractual purchase obligations under the contract.

Construction commitments of \$1,342 million represent outstanding commitments to complete authorized construction projects as of December 31, 2015. A significant portion of Praxair's capital spending is related to the construction of new production facilities to satisfy customer commitments which may take a year or more to complete.

Guarantees and other of \$59 million are primarily related to Praxair's contingent obligations under guarantees of certain debt of unconsolidated affiliates. Unconsolidated equity investees had total debt of approximately \$263 million at December 31, 2015, which was non-recourse to Praxair with the exception of the guaranteed portions described above. Additionally, Praxair pledged its interest in an unconsolidated equity investment as collateral for \$20 million of debt held by that same equity investee. Praxair has no significant financing arrangements with closely-held related parties.

At December 31, 2015, Praxair had undrawn outstanding letters of credit, bank guarantees and surety bonds valued at approximately \$925 million from financial institutions, including \$406 million relating to the CADE anti-trust litigation in Brazil. These relate primarily to customer contract performance guarantees (including plant construction in connection with certain on-site contracts), self-insurance claims and other commercial and governmental requirements, including foreign litigation matters.

Table of Contents

## NOTE 18. SEGMENT INFORMATION

The company's operations are organized into five reportable segments, four of which have been determined on a geographic basis of segmentation: North America, Europe, South America and Asia. In addition, Praxair operates its worldwide surface technologies business through its wholly-owned subsidiary, Praxair Surface Technologies, Inc., which represents the fifth reportable segment.

Praxair's operations consist of two major product lines: industrial gases and surface technologies. The industrial gases product line centers on the manufacturing and distribution of atmospheric gases (oxygen, nitrogen, argon, rare gases) and process gases (carbon dioxide, helium, hydrogen, electronic gases, specialty gases, acetylene). Many of these products are co-products of the same manufacturing process. Praxair manufactures and distributes nearly all of its products and manages its customer relationships on a regional basis. Praxair's industrial gases are distributed to various end-markets within a regional segment through one of three basic distribution methods: on-site or tonnage; merchant or bulk; and packaged or cylinder gases. The distribution methods are generally integrated in order to best meet the customer's needs and very few of its products can be economically transported outside of a region. Therefore, the distribution economics are specific to the various geographies in which the company operates and are consistent with how management assesses performance.

Praxair evaluates the performance of its reportable segments based primarily on operating profit, excluding inter-company royalties and items not indicative of ongoing business trends. Corporate and globally managed expenses, and research and development costs relating to Praxair's global industrial gases business, are allocated to operating segments based on sales.

The table below presents information about reportable segments for the years ended December 31, 2015, 2014 and 2013.

(Millions of dollars)	2015	2014	2013
Sales (a)			
North America	\$5,865	\$6,436	\$6,164
Europe	1,320	1,546	1,542
South America	1,431	1,993	2,042
Asia	1,551	1,619	1,525
Surface Technologies	609	679	652
	\$10,776	\$12,273	\$11,925
	2015	2014	2013
Operating Profit			
North America	\$1,558	\$1,580	\$1,538
Europe	250	291	270
South America	291	449	467
Asia	289	303	271
Surface Technologies	105	123	111
Segment operating profit	2,493	2,746	2,657
Cost reduction program and other charges (Note 2)	(172	) (138	) (32
Total operating profit	\$2,321	\$2,608	\$2,625

Table of Contents

	2015	2014	2013
Total Assets (b)			
North America	\$9,748	\$10,187	\$10,116
Europe	2,704	2,996	3,404
South America	2,124	2,718	2,929
Asia	3,113	3,194	3,094
Surface Technologies	630	674	680
	\$18,319	\$19,769	\$20,223
(Millions of dollars)	2015	2014	2013
Depreciation and Amortization			
North America	\$609	\$611	\$567
Europe	145	168	169
South America	135	177	181
Asia	176	170	150
Surface Technologies	41	44	42
	\$1,106	\$1,170	\$1,109
	2015	2014	2013
Capital Expenditures and Acquisitions			
North America	\$869	\$837	\$2,106
Europe	227	319	451
South America	285	373	284
Asia	208	310	459
Surface Technologies	34	56	43
	\$1,623	\$1,895	\$3,343
	2015	2014	2013
Sales by Product Group			
Atmospheric gases and related	\$7,595	\$8,623	\$8,451
Process gases and other	2,572	2,971	2,822
Surface technologies	609	679	652
	\$10,776	\$12,273	\$11,925
	2015	2014	2013
Sales by Major Country			
United States	\$4,771	\$5,171	\$4,764
Brazil	1,107	1,511	1,603
Other – foreign	4,898	5,591	5,558
	\$10,776	\$12,273	\$11,925



Table of Contents

	2015	2014	2013
Long-lived Assets by Major Country (c)			
United States	\$4,825	\$4,817	\$4,723
Brazil	986	1,344	1,376
Other – foreign	5,187	5,836	6,179
	\$10,998	\$11,997	\$12,278

(a) Sales reflect external sales only. Intersegment Sales, primarily from North America to other segments, were not material.

(b) Includes equity investments as of December 31, as follows:

(Millions of dollars)	2015	2014	2013
North America	\$127	\$132	\$128
Europe	195	207	218
Asia	343	354	356
	\$665	\$693	\$702

Changes primarily relate to equity investment earnings, dividends and currency impacts.

(c) Long-lived assets include property, plant and equipment – net.

## NOTE 19. QUARTERLY DATA (UNAUDITED)

(Dollar amounts in millions, except per share data)

2015	1Q	2Q (a)	3Q (a)	4Q	YEAR (a)
Sales	\$2,757	\$2,738	\$2,686	\$2,595	\$10,776
Cost of sales, exclusive of depreciation and amortization	\$1,530	\$1,516	\$1,488	\$1,426	\$5,960
Depreciation and amortization	\$277	\$278	\$276	\$275	\$1,106
Operating profit	\$623	\$480	\$594	\$624	\$2,321
Net income – Praxair, Inc.	\$416	\$308	\$401	\$422	\$1,547
Basic Per Share Data					
Net income	\$1.44	\$1.07	\$1.40	\$1.48	\$5.39
Weighted average shares (000's)	289,143	287,939	285,651	285,288	287,005
Diluted Per Share Data					
Net income	\$1.43	\$1.06	\$1.40	\$1.47	\$5.35
Weighted average shares (000's)	291,652	290,102	287,311	286,856	289,055

Table of Contents

2014	1Q	2Q	3Q	4Q (a)	YEAR (a)
Sales	\$3,026	\$3,113	\$3,144	\$2,990	\$12,273
Cost of sales, exclusive of depreciation and amortization	\$1,726	\$1,767	\$1,780	\$1,689	\$6,962
Depreciation and amortization	\$285	\$293	\$301	\$291	\$1,170
Operating profit	\$675	\$697	\$711	\$525	\$2,608
Net income – Praxair, Inc.	\$448	\$467	\$477	\$302	\$1,694
Basic Per Share Data					
Net income	\$1.52	\$1.59	\$1.63	\$1.04	\$5.79
Weighted average shares (000's)	294,195	292,945	292,170	290,667	292,494
Diluted Per Share Data					
Net income	\$1.51	\$1.58	\$1.62	\$1.03	\$5.73
Weighted average shares (000's)	297,253	295,976	295,239	293,555	295,608

(a) 2015 and 2014 include the impact of the following charges (see Notes 2 & 7):

(Millions of dollars)	Operating Profit/ (Loss)	Net Income/ (Loss)	Diluted Earnings Per Share	
Cost reduction program and other charges - Q2	\$(146)	) \$(112	) \$(0.39	)
Cost reduction program and other charges - Q3	(19)	) (13	) (0.04	)
Pension settlement charge - Q3	(7)	) (5	) (0.02	)
Year 2015	\$(172)	) \$(130	) \$(0.45	)
Venezuela currency devaluation – Q4	\$(131	) \$(131	) \$(0.45	)
Pension settlement charge – Q4	(7	) (5	) (0.02	)
Bond redemption - Q4	—	) (22	) (0.07	)
Year 2014	\$(138	) \$(158	) \$(0.54	)

Table of Contents

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Based on an evaluation of the effectiveness of Praxair's disclosure controls and procedures, which was made under the supervision and with the participation of management, including Praxair's principal executive officer and principal financial officer, the principal executive officer and principal financial officer have each concluded that, as of the end of the annual period covered by this report, such disclosure controls and procedures are effective in ensuring that information required to be disclosed by Praxair in reports that it files under the Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and accumulated and communicated to management including Praxair's principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure.

Management's Report on Internal Control Over Financial Reporting

Praxair's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of management, including the company's principal executive officer and principal financial officer, Praxair conducted an evaluation of the effectiveness of its internal control over financial reporting based on the framework in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (often referred to as COSO). Based on this evaluation, management concluded that the company's internal control over financial reporting was effective as of December 31, 2015.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, has issued their opinion on the company's internal control over financial reporting as of December 31, 2015 as stated in their report in Item 8.

Changes in Internal Control over Financial Reporting

There were no changes in Praxair's internal control over financial reporting that occurred during the fourth quarter of 2015 that have materially affected, or are reasonably likely to materially affect, Praxair's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

Table of Contents

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Certain information required by this item is incorporated herein by reference to the sections captioned “The Board of Directors”, “Executive Officers” and “Corporate Governance And Board Practices-Section 16(a) Beneficial Ownership Reporting Compliance” in Praxair’s Proxy Statement for the Annual Meeting of Shareholders to be held on April 26, 2016.

Identification of the Audit Committee

Praxair has a separately-designated standing Audit Committee established in accordance with Section 3(a)(58)(A) of the Securities Exchange Act of 1934 as amended (the “Exchange Act”). The members of that Audit Committee are Ira D. Hall, Chairman, Nance K. Dicciani, Raymond W. LeBoeuf, Larry D. McVay and Denise L. Ramos.

Audit Committee Financial Expert

The Praxair Board of Directors has determined that each of, Raymond W. LeBoeuf, Ira D. Hall and Denise L. Ramos is an “audit committee financial expert” as defined by Item 407(d)(5)(ii) of Regulation S-K of the Exchange Act and is independent within the meaning of the independence standards adopted by the Board of Directors and those of the New York Stock Exchange.

Code of Ethics

Praxair has adopted a code of ethics that applies to the company’s directors and all employees, including its Chief Executive Officer, Chief Financial Officer, and Controller. This code of ethics has been approved by the Praxair Board of Directors and is named the “Compliance with Laws and Business Integrity and Ethics Policy”. To assist employees and directors in complying with this code of ethics, management, from time to time, develops specific standards implementing certain provisions of the code which standards are contained in Praxair’s “Standards of Business Integrity.” Both documents are posted on the company’s public website, [www.praxair.com](http://www.praxair.com).

ITEM 11. EXECUTIVE COMPENSATION

Information required by this item is incorporated herein by reference to the sections captioned “Executive Compensation” and “Director Compensation” in Praxair’s Proxy Statement for the Annual Meeting of Shareholders to be held on April 26, 2016.

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

Equity Compensation Plans Information – The table below provides information as of December 31, 2015 about company stock that may be issued upon the exercise of options, warrants and rights granted to employees or members of Praxair’s Board of Directors under present and former equity compensation plans, including plans approved by shareholders and one plan which has not been approved by shareholders, the 1996 Praxair, Inc. Performance Incentive Plan (“the 1996 Plan”). The equity compensation plan not approved by shareholders was terminated in March 2001 and directors and officers of the company were not eligible to participate in that plan. Shareholder approval of that plan was not required under applicable NYSE rules. The 1996 Plan provided for granting nonqualified or incentive stock options, stock grants, performance awards and other stock related incentives for key employees. The exercise price under the 1996 Plan was equal to the closing price of Praxair’s common stock on the date of grant. Options that were granted under this plan became exercisable after one or more years after the date of grant and the option term was no more than ten years.

Table of Contents

## EQUITY COMPENSATION PLANS TABLE

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by shareholders	12,361,843	(1) \$88.07	6,356,118
Equity compensation plans not approved by shareholders	—	—	—
Total	12,361,843	\$88.07	6,356,118

This amount includes 286,635 restricted shares and 801,985 performance shares. Up to an additional 801,985 (1)performance shares could be issued if performance goals are achieved at the maximum specified targets. See Note 15 to the consolidated financial statements.

Certain information required by this item regarding the beneficial ownership of the Company's common stock is incorporated herein by reference to the section captioned "Share Ownership" in Praxair's Proxy Statement for the Annual Meeting of Shareholders to be held on April 26, 2016.

#### ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

Information required by this item is incorporated herein by reference to the sections captioned "Corporate Governance And Board Practices – Review, Approval or Ratification of Transactions with Related Persons," "Corporate Governance And Board Practices – Certain Relationships and Transactions," and "Corporate Governance And Board Practices – Director Independence" in Praxair's Proxy Statement for the Annual Meeting of Shareholders to be held on April 26, 2016.

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

Information required by this item is incorporated herein by reference to the section captioned "The Independent Auditor" in Praxair's Proxy Statement for the Annual Meeting of Shareholders to be held on April 26, 2016.

Table of Contents

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

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

- (1) The company's 2015 Consolidated Financial Statements and the Report of the Independent Registered Public Accounting Firm are included in Part II, Item 8. Financial Statements and Supplementary Data.
- (2) Financial Statement Schedules – All financial statement schedules have been omitted because they are not applicable or the required information is shown in the financial statements or notes thereto.
- (3) Exhibits – The exhibits filed as part of this Annual Report on Form 10-K are listed in the accompanying index.

Table of Contents

SIGNATURES

Praxair, Inc. and Subsidiaries

Pursuant to the requirements 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.

Date: February 24, 2016

PRAXAIR, INC.

(Registrant)

By: /s/ ELIZABETH T. HIRSCH

Elizabeth T. Hirsch

Vice President and Controller

(On behalf of the Registrant and

as Chief Accounting Officer)

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 indicated on February 24, 2016.

/s/ STEPHEN F. ANGEL

Stephen F. Angel

Chairman, President,

Chief Executive Officer and

Director

/s/ MATTHEW J. WHITE

Matthew J. White

Senior Vice President and

Chief Financial Officer

/s/ NANCE K. DICCIANI

Nance K. Dicciani

Director

/s/ EDWARD G. GALANTE

Edward G. Galante

Director

/s/ DENISE L. RAMOS

Denise L. Ramos

Director

/s/ IRA D. HALL

Ira D. Hall

Director

/s/ RAYMOND W. LEBOEUF

Raymond W. LeBoeuf

Director

/s/ LARRY D. MCVAY

Larry D. McVay

Director

/s/ WAYNE T. SMITH

Wayne T. Smith

Director

/s/ OSCAR DE PAULA

BERNARDES

Oscar de Paula Bernardes

Director

/s/ ROBERT L. WOOD

Robert L. Wood

Director

/s/ MARTIN H.

RICHENHAGEN

Martin H. Richenhagen

Director

Table of Contents

INDEX TO EXHIBITS

Praxair, Inc. and Subsidiaries

Exhibit No.	Description
3.01	Restated Certificate of Incorporation of Praxair, Inc. as filed with the Secretary of State of the State of Delaware on April 27, 2012 (Filed as Exhibit 3.01 to the Company's Current Report on Form 8-K dated April 30, 2012, Filing No. 1-11037, and incorporated herein by reference).
3.02	Amended and Restated By-Laws of Praxair, Inc. (Filed as Exhibit 3.02 to the Company's Current Report on Form 8-K dated January 29, 2016, Filing No. 1-11037, and incorporated herein by reference).
3.03	Certificate of Designations for the 7.48% Cumulative Preferred Stock, Series A (Filed on February 13, 1997 as Exhibit 3.3 to Amendment #1 to the Company's Registration Statement on Form S-3, Registration No. 333-18141).
3.04	Certificate of Designations for the 6.75% Cumulative Preferred Stock, Series B (Filed on February 13, 1997 as Exhibit 3.4 to Amendment #1 to the Company's Registration Statement on Form S-3, Registration No. 333-18141).
4.01	Common Stock Certificate (Filed as Exhibit 4.01 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).
4.02a	Indenture, dated as of July 15, 1992, between Praxair, Inc. and U.S. Bank National Association, as the ultimate successor trustee to Bank of America, Illinois, formerly Continental Bank, National Association (Filed as Exhibit 4 to the Company's Current Report on Form 8-K dated March 19, 2007, Filing No. 1-11037, and incorporated herein by reference).
4.02b	Form of Subordinated Indenture was filed as Exhibit 4.3 to the Company's Form S-3 filed on May 12, 2015, and is incorporated herein by reference.
4.03	Copies of the agreements relating to long-term debt which are not required to be filed as exhibits to this Annual Report on Form 10-K will be furnished to the Securities and Exchange Commission upon request.
4.04	Series A Preferred Stock Certificate (Filed on February 7, 1997 as Exhibit 4.3 to Amendment #1 to the Company's Registration Statement on Form S-3, Registration No. 333-18141).
4.05	Series B Preferred Stock Certificate (Filed on February 7, 1997 as Exhibit 4.4 to Amendment #1 to the Company's Registration Statement on Form S-3, Registration No. 333-18141).
*10.01	Restated 2002 Praxair, Inc. Long Term Incentive Plan (Filed as Exhibit 10.01 to the Company's 2003 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.01a	Amendment, dated as of October 24, 2006, to the Amended and Restated 2002 Praxair, Inc. Long Term Incentive Plan (Filed as Exhibit 10.01a to the Company's 2006 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).



- \*10.01b Amendment, dated as of January 23, 2007, to the Amended and Restated 2002 Praxair, Inc. Long Term Incentive Plan (Filed as Exhibit 10.01b to the Company's 2006 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
- \*10.01c Form of Standard Option Award under the 2002 Praxair, Inc. Long Term Incentive Plan (Filed as Exhibit 10.01c to the Company's 2007 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
- \*10.01d Form of Transferable Option Award under the 2002 Praxair, Inc. Long Term Incentive Plan (Filed as Exhibit 10.01d to the Company's 2007 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).

Table of Contents

Exhibit No.	Description
*10.02	Form of Executive Severance Compensation Agreement effective January 1, 2009 (Filed as Exhibit 10.02 to the Company's 2008 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.02a	Form of Amendment, effective December 31, 2012, to Executive Severance Compensation Agreements that were effective January 1, 2009 (Filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated December 14, 2012, Filing No. 1-11037, and incorporated herein by reference).
*10.02b	Form of Executive Severance Compensation Agreement effective January 1, 2010 (Filed as Exhibit 10.02 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010, Filing No. 1-11037, and incorporated herein by reference).
*10.02c	Form of Amendment, effective December 31, 2012, to Executive Severance Compensation Agreements that were effective January 1, 2010 (Filed as Exhibit 10.02c to the Company's 2012 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.02d	Form of Executive Severance Compensation Agreement effective January 1, 2013 (Filed as Exhibit 10.02d to the Company's 2012 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.03	Praxair, Inc. Variable Compensation Plan amended and restated effective April 24, 2012 (Filed as Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2012, Filing No. 1-11037, and incorporated herein by reference).
*10.04	Amended and Restated 1995 Stock Option Plan for Non-Employee Directors (Filed as Exhibit 10.04 to the Company's 2003 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.04a	First Amendment, dated as of October 24, 2006, to the Amended and Restated 1995 Stock Option Plan for Non-Employee Directors (Filed as Exhibit 10.04a to the Company's 2006 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.04b	2005 Equity Compensation Plan for Non-Employee Directors of Praxair, Inc. amended and restated effective January 26, 2010 (Filed as Exhibit 10.04b to the Company's 2009 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.04c	Form of Option Award under the 2005 Equity Compensation Plan for Non-Employee Directors of Praxair, Inc (Filed as Exhibit 10.04a to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2005, Filing No. 1-11037, and incorporated herein by reference).
*10.05a	Praxair, Inc. Supplemental Retirement Income Plan A effective January 1, 2008 (Filed as Exhibit 10.05a to the Company's 2008 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).

- \*10.05b First amendment to the Praxair, Inc. Supplemental Retirement Income Plan A effective January 1, 2010 (Filed as Exhibit 10.05b to the Company's 2009 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
- \*10.05c Praxair, Inc. Supplemental Retirement Income Plan B amended and restated effective December 31, 2007 (Filed as Exhibit 10.05b to the Company's 2008 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
- \*10.05d First amendment to the Praxair, Inc. Supplemental Retirement Income Plan B effective January 1, 2010 (Filed as Exhibit 10.05d to the Company's 2009 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
- \*10.05e Second Amendment to Praxair, Inc. Supplemental Retirement Income Plan B effective July 1, 2012 (Filed as Exhibit 10.05e to the Company's 2012 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
- \*10.05f Praxair, Inc. Equalization Benefit Plan amended and restated effective December 31, 2007 (Filed as Exhibit 10.05c to the Company's 2008 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).

Table of Contents

Exhibit No.	Description
*10.05g	First amendment to the Praxair, Inc. Equalization Benefit Plan effective January 1, 2010 (Filed as Exhibit 10.05f to the Company's 2009 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.06	Praxair, Inc. Director's Fees Deferral Plan amended and restated effective January 26, 2010 (Filed as Exhibit 10.06 to the Company's 2009 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.07	Praxair, Inc. Compensation Deferral Program Amended and Restated as of July 15, 2014 (Filed as Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2014, Filing No. 1-11037, and incorporated herein by reference).
10.08	Transfer Agreement dated January 1, 1989, between Union Carbide Corporation and the registrant (Filed as Exhibit 10.06 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).
10.08a	Amendment No. 1 dated as of December 31, 1989, to the Transfer Agreement (Filed as Exhibit 10.07 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).
10.08b	Amendment No. 2 dated as of July 2, 1990, to the Transfer Agreement (Filed as Exhibit 10.08 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).
10.08c	Amendment No. 3 dated as of January 2, 1991, to the Transfer Agreement (Filed as Exhibit 10.09 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).
10.09	Transfer Agreement dated January 1, 1989, between Union Carbide Corporation and Union Carbide Coatings Service Corporation (Filed as Exhibit 10.14 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).
10.09a	Amendment No. 1 dated as of December 31, 1989, to the Transfer Agreement (Filed as Exhibit 10.15 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).
10.09b	Amendment No. 2 dated as of July 2, 1990, to the Transfer Agreement (Filed as Exhibit 10.16 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).
10.10	Additional Provisions Agreement dated as of June 4, 1992 (Filed as Exhibit 10.21 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).
10.11	

Edgar Filing: PRAXAIR INC - Form 10-K

Amended and Restated Realignment Indemnification Agreement dated as of June 4, 1992 (Filed as Exhibit 10.23 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).

10.12 Environmental Management, Services and Liabilities Allocation Agreement dated as of January 1, 1990 (Filed as Exhibit 10.13 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).

10.12a Amendment No. 1 to the Environmental Management, Services and Liabilities Allocation Agreement dated as of June 4, 1992 (Filed as Exhibit 10.22 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).

10.13 Danbury Lease-Related Services Agreement dated as of June 4, 1992 (Filed as Exhibit 10.24 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).

10.13a First Amendment to Danbury Lease-Related Services Agreement (Filed as Exhibit 10.13a to the Company's 1994 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).

Table of Contents

Exhibit No.	Description
10.14	Danbury Lease Agreements, as amended (Filed as Exhibit 10.26 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).
10.14a	Second Amendment to Linde Data Center Lease (Danbury) (Filed as Exhibit 10.14a to the Company's 1993 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
10.14b	Fourth Amendment to Carbide Center Lease (Filed as Exhibit 10.14b to the Company's 1993 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
10.14c	Third Amendment to Linde Data Center Lease (Filed as Exhibit 10.14c to the Company's 1994 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
10.14d	Fifth Amendment to Carbide Center Lease (Filed as Exhibit 10.14d to the Company's 1994 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
10.14e	Sixth Amendment to Carbide Center Lease (Filed as Exhibit 10.14e to the Company's 2004 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
10.15	Employee Benefits Agreement dated as of June 4, 1992 (Filed as Exhibit 10.25 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).
10.15a	First Amendatory Agreement to the Employee Benefits Agreement (Filed as Exhibit 10.15a to the Company's 1994 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
10.16	Tax Disaffiliation Agreement dated as of June 4, 1992 (Filed as Exhibit 10.20 to the Company's Registration Statement on Form 10, Filing No. 1-11037, and incorporated herein by reference).
10.17	Credit Agreement dated as of December 19, 2014 among Praxair, Inc. and the Eligible Subsidiaries Referred to therein, the Lenders listed therein, and Bank of America, N.A., as Administrative Agent, Citibank N.A., Deutsche Bank Securities Inc. and HSBC Securities (USA) Inc., as Syndication Agents was filed as Exhibit 10.1 to the Company's current report on Form 8-K, dated December 22, 2014, Filing No. 1-11037, and is incorporated herein by reference.
*10.18	Praxair, Inc. Plan for Determining Performance-Based Awards Under Section 162(m) (included as Appendix 3 to the Company's definitive proxy statement for its 2011 annual meeting of shareholders filed on March 16, 2011 and incorporated herein by reference).
*10.19	

Edgar Filing: PRAXAIR INC - Form 10-K

Service Credit Arrangement for Stephen F. Angel dated May 23, 2007 was filed as Exhibit 10.20 to the Company's Form 8-K filed on May 24, 2007 and is incorporated herein by reference.

\*10.20 2009 Praxair, Inc. Long Term Incentive Plan as amended on April 27, 2010, January 25, 2011 and October 23, 2012 was filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated December 14, 2012 Filing No. 1-11037, and incorporated herein by reference.

\*10.21 Form of Standard Option Award under the 2009 Praxair, Inc. Long Term Incentive Plan (Filed as Exhibit 10.22 to the Company's 2009 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).

\*10.22 Form of Transferable Option Award under the 2009 Praxair, Inc. Long Term Incentive Plan (Filed as Exhibit 10.23 to the Company's 2009 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).

\*10.23 Form of Restricted Stock Unit Award under the 2009 Praxair, Inc. Long Term Incentive Plan (Filed as Exhibit 10.24 to the Company's 2009 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).

\*10.24a Form of Performance Share Unit Award under the 2009 Praxair, Inc. Long Term Incentive Plan for grants made from 2010-2013 (Filed as Exhibit 10.25 to the Company's 2009 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).

Table of Contents

Exhibit No.	Description
*10.24b	Form of Performance Share Unit Award under the 2009 Praxair, Inc. Long Term Incentive Plan for grants made in 2013-2014 with Earnings Per Share performance metrics (Filed as Exhibit 10.24b to the Company's 2012 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.24c	Form of Performance Share Unit Award under the 2009 Praxair, Inc. Long Term Incentive Plan for grants made in 2013-2014 with Return on Capital performance metrics (Filed as Exhibit 10.24c to the Company's 2012 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.25	Amended and Restated 2009 Praxair, Inc. Long Term Incentive Plan (Filed as Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2014, Filing No. 1-11037, and incorporated herein by reference).
*10.26	Form of Transferable Option Award under the Amended and Restated 2009 Praxair, Inc. Long Term Incentive Plan for grants made in 2015 and thereafter (Filed as Exhibit 10.26 to the Company's 2014 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.27	Form of Restricted Stock Unit Award under the Amended and Restated 2009 Praxair, Inc. Long Term Incentive Plan for grants made in 2015 and thereafter (Filed as Exhibit 10.27 to the Company's 2014 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.28a	Form of Performance Share Unit Award under the Amended and Restated 2009 Praxair, Inc. Long Term Incentive Plan for grants made in 2015 and thereafter with Earnings Per Share performance metrics (Filed as Exhibit 10.28A to the Company's 2014 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.28b	Form of Performance Share Unit Award under the Amended and Restated 2009 Praxair, Inc. Long Term Incentive Plan for grants made in 2015 and thereafter with Return on Capital performance metrics (Filed as Exhibit 10.28B to the Company's 2014 Annual Report on Form 10-K, Filing No. 1-11037, and incorporated herein by reference).
*10.28c	Form of Performance Share Unit Award under the Amended and Restated 2009 Praxair, Inc. Long Term Incentive Plan for grants made in 2016 and thereafter with Total Shareholder Return performance metrics is filed herewith.
*10.28d	Form of Non-Employee Director Restricted Stock Unit Award under the Amended and Restated 2009 Praxair, Inc. Long Term Incentive Plan (Filed as Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2015, Filing No. 1-11037, and incorporated herein by reference).



- \*10.29 Letter of Clarification of Certain Pension Benefits dated October 26, 2010 between the Company and James T. Breedlove (Filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2010, Filing No. 1-11037, and incorporated herein by reference).
- 10.30 Form of Standard Underwriting Provisions was filed as Exhibit 1.1 to the Company's Registration Statement on Form S-3 filed on May 12, 2015, and is incorporated herein by reference.
- 10.31 Terms Agreement dated February 13, 2013 among the Company, HSBC Securities (USA) Inc., Merrill Lynch, Pierce, Fenner & Smith Incorporated and Mitsubishi UFJ Securities (USA), Inc., as representatives of the underwriters named therein for the issuance and sale of \$400,000,000 0.75% Notes due 2016, and \$500,000,000 aggregate principal amount of its 2.70 % Notes due 2023, was filed as Exhibit 1 to the Company's Current Report on Form 8-K, dated February 19, 2013, Filing No. 1-11037, and incorporated herein by reference.
- 10.32 Terms Agreement dated February 27, 2013 between the Company and Citigroup Global Markets Inc., the underwriter named therein for the issuance and sale of \$500,000,000 1.200% Notes due 2018, was filed as Exhibit 1 to the Company's Current Report on Form 8-K, dated March 4, 2013, Filing No. 1-11037, and incorporated herein by reference.

Table of Contents

Exhibit No.	Description
10.33	Terms Agreement dated April 29, 2013 among the Company, Citigroup Global Markets Inc. , Credit Suisse Securities (USA) LLC and RBS Securities Inc., as representatives of the underwriters named therein for the issuance and sale of \$475,000,000 1.250% Notes due 2018 and \$175,000,000 3.550% Notes due 2042, was filed as Exhibit 1 to the Company’s Current Report on Form 8-K, dated April 30, 2013, Filing No. 1-11037, and incorporated herein by reference.
10.34	Terms Agreement dated November 4, 2013 between the Company and Citigroup Global Markets Inc., the underwriter named therein for the issuance and sale of \$500,000,000 1.900% Notes due 2019, was filed as Exhibit 1 to the Company’s Current Report on Form 8-K, dated November 5, 2013, Filing No 1-11037, and incorporated herein by reference.
10.35	Terms Agreement dated March 4, 2014 among the Company and Credit Suisse Securities (Europe) Limited, Deutsche Bank AG, London Branch and HSBC Bank plc, acting on behalf of the several underwriters for the issuance and sale of €600,000,000 1.500% Notes due 2020, was filed as Exhibit 1 to the Company’s current report on Form 8-K dated March 5, 2014, Filing No. 1-11037, and incorporated herein by reference.
10.36	Terms Agreement dated November 21, 2014 among the Company and Citigroup Global Markets Limited, Deutsche Bank AG, London Branch, HSBC Bank plc and Merrill Lynch International, acting on behalf of the several underwriters for the issuance and sale of €500,000,000 1.625% Notes due 2025, was filed as Exhibit 1 to the Company’s current report on Form 8-K dated November 24, 2014, Filing No. 1-11037, and incorporated herein by reference.
10.37	Terms Agreement dated September 21, 2015 among the Company and Citigroup Global Markets Inc., Deutsche Bank Securities Inc., HSBC Securities (USA) Inc. and Mitsubishi UFJ Securities (USA), acting on behalf of the several underwriters for the issuance and sale of \$300,000,000 2.250% Notes due 2020 and \$450,000,000 3.200% Notes due 2026, was filed as Exhibit 1 to the Company’s current report on Form 8-K dated September 24, 2015, Filing No. 1-11037, and incorporated herein by reference.
10.38	Terms Agreement dated February 4, 2016 among the Company and Credit Suisse Securities (Europe) Limited, Deutsche Bank AG, London Branch and Merrill Lynch International, acting on behalf of the several underwriters for the issuance and sale of €550,000,000 1.200% Notes due 2024, was filed as Exhibit 1.1 to the Company’s current report on Form 8-K dated February 8, 2016, Filing No. 1-11037, and incorporated herein by reference.
10.39	Terms Agreement dated February 4, 2016 among the Company and J.P. Morgan Securities LLC, Mizuho Securities USA Inc. and Wells Fargo Securities, LLC, acting on behalf of the several underwriters for the issuance and sale of \$275,000,000 3.200% Notes due 2026, was filed as Exhibit 1.2 to the Company’s current report on Form 8-K dated February 8, 2016, Filing No. 1-11037, and incorporated herein by reference.
12.01	Computation of Ratio of Earnings to Fixed Charges.

21.01	Subsidiaries of Praxair, Inc.
23.01	Consent of Independent Registered Public Accounting Firm.
31.01	Rule 13a-14(a) Certification
31.02	Rule 13a-14(a) Certification
32.01	Section 1350 Certification (such certifications are furnished for the information of the Commission and shall not be deemed incorporated by reference into any filing under the Securities Act or the Exchange Act).
32.02	Section 1350 Certification (such certifications are furnished for the information of the Commission and shall not be deemed incorporated by reference into any filing under the Securities Act or the Exchange Act).
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase

Table of Contents

Exhibit No.	Description
101.LAB	XBRL Taxonomy Extension Label Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Linkbase

Copies of exhibits incorporated by reference can be obtained from the SEC and are located in SEC File No. 1-11037.  
\* Indicates a management contract or compensatory plan or arrangement.