VALERO ENERGY CORP/TX
Form 10-K
February 25, 2016
FORM 10-K
UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
(Mark One)

þ 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

o 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 1-13175
VALERO ENERGY CORPORATION
(Exact name of registrant as specified in its charter)

Delaware	74-1828067
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
One Valero Way San Antonio, Texas	78249
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (210) 345-2000

Securities registered pursuant to Section 12(b) of the Act: Common stock, $0.01 par value per share listed on the 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 þ No o
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 o No þ
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 þ No o
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 þ No o
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of 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. þ
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.
Large accelerated filer þ Accelerated filer o Non-accelerated filer o Smaller reporting company o
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes o No þ
The aggregate market value of the voting and non-voting common stock held by non-affiliates was approximately $31.3 billion based on the last sales price quoted as of June 30, 2015 on the New York Stock Exchange, the last business day of the registrant's most recently completed second fiscal quarter.

As of January 29, 2016, 470,392,665 shares of the registrant's common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

We intend to file with the Securities and Exchange Commission a definitive Proxy Statement for our Annual Meeting of Stockholders scheduled for May 12, 2016, at which directors will be elected. Portions of the 2016 Proxy Statement are incorporated by reference in Part III of this Form 10-K and are deemed to be a part of this report.

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CROSS-REFERENCE SHEET

The following table indicates the headings in the 2016 Proxy Statement where certain information required in Part III of this Form 10-K may be found.

Form 10-K Item No. and Caption	Heading in 2016 Proxy Statement
10. Directors, Executive Officers and Corporate Governance	Information Regarding the Board of Directors, Independent Directors, Audit Committee, Proposal No. 1 Election of Directors, Information Concerning Nominees and Other Directors, Identification of Executive Officers, Section 16(a) Beneficial Ownership Reporting Compliance, and Governance Documents and Codes of Ethics
11. Executive Compensation	Compensation Committee, Compensation Discussion and Analysis, Director Compensation, Executive Compensation, and Certain Relationships and Related Transactions
12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	Beneficial Ownership of Valero Securities and Equity Compensation Plan Information
13. Certain Relationships and Related Transactions, and Director Independence	Certain Relationships and Related Transactions and Independent Directors
14. Principal Accountant Fees and Services	KPMG LLP Fees and Audit Committee Pre-Approval Policy

Copies of all documents incorporated by reference, other than exhibits to such documents, will be provided without charge to each person who receives a copy of this Form 10-K upon written request to Valero Energy Corporation, Attn: Secretary, P.O. Box 696000, San Antonio, Texas 78269-6000.

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The terms “Valero,” “we,” “our,” and “us,” as used in this report, may refer to Valero Energy Corporation, to one or more of our consolidated subsidiaries, or to all of them taken as a whole. In this Form 10-K, we make certain forward-looking statements, including statements regarding our plans, strategies, objectives, expectations, intentions, and resources under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. You should read our forward-looking statements together with our disclosures beginning on page 24 of this report under the heading: “CAUTIONARY STATEMENT FOR THE PURPOSE OF SAFE HARBOR PROVISIONS OF THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995.”

PART I

ITEMS 1. and 2. BUSINESS AND PROPERTIES

Overview. We are a Fortune 500 company based in San Antonio, Texas. Our corporate offices are at One Valero Way, San Antonio, Texas, 78249, and our telephone number is (210) 345-2000. Our common stock trades on the New York Stock Exchange (NYSE) under the symbol “VLO.” We were incorporated in Delaware in 1981 under the name Valero Refining and Marketing Company. We changed our name to Valero Energy Corporation on August 1, 1997. On January 31, 2016, we had 10,103 employees.

Our 15 petroleum refineries are located in the United States (U.S.), Canada, and the United Kingdom (U.K.). Our refineries can produce conventional gasolines, premium gasolines, gasoline meeting the specifications of the California Air Resources Board (CARB), diesel, low-sulfur diesel, ultra-low-sulfur diesel, CARB diesel, other distillates, jet fuel, asphalt, petrochemicals, lubricants, and other refined products. We market branded and unbranded refined products on a wholesale basis in the U.S., Canada, the Caribbean, the U.K., and Ireland through an extensive bulk and rack marketing network and through approximately 7,500 outlets that carry our brand names. We also own 11 ethanol plants in the central plains region of the U.S. that primarily produce ethanol, which we market on a wholesale basis through a bulk marketing network.

Available Information. Our website address is www.valero.com. Information on our website is not part of this annual report on Form 10-K. Our annual reports on Form 10-K, quarterly reports on Form 10-Q, and current reports on Form 8-K filed with (or furnished to) the U.S. Securities and Exchange Commission (SEC) are available on our website (under “Investors”) free of charge, soon after we file or furnish such material. In this same location, we also post our corporate governance guidelines, codes of ethics, and the charters of the committees of our board of directors. These documents are available in print to any stockholder that makes a written request to Valero Energy Corporation, Attn: Secretary, P.O. Box 696000, San Antonio, Texas 78269-6000.

SEGMENTS

We have two reportable segments: refining and ethanol. Our refining segment includes refining and marketing operations in the U.S., Canada, the U.K., Aruba, and Ireland. Our ethanol segment includes ethanol and marketing operations in the U.S. Financial information about our segments is presented in Note 17 of Notes to Consolidated Financial Statements and is incorporated herein by reference.

We formerly had a third reportable segment: retail. In 2013, we completed the separation of our retail business by creating an independent public company named CST Brands, Inc. (CST). The separation of our retail business is discussed in Note 3 of Notes to Consolidated Financial Statements and that discussion is incorporated herein by reference.

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VALERO'S OPERATIONS

REFINING

On December 31, 2015, our refining operations included 15 petroleum refineries in the U.S., Canada, and the U.K., with a combined total throughput capacity of approximately 3.0 million barrels per day (BPD). The following table presents the locations of these refineries and their approximate feedstock throughput capacities as of December 31, 2015.

Refinery	Location	Throughput Capacity (a) (BPD)
U.S. Gulf Coast:		
Corpus Christi (b)	Texas	370,000
Port Arthur	Texas	375,000
St. Charles	Louisiana	305,000
Texas City	Texas	260,000
Houston	Texas	175,000
Meraux	Louisiana	135,000
Three Rivers	Texas	100,000
		1,720,000
U.S. Mid-Continent:		
Memphis	Tennessee	195,000
McKee	Texas	200,000
Ardmore	Oklahoma	90,000
		485,000
North Atlantic:		
Pembroke	Wales, U.K.	270,000
Quebec City	Quebec, Canada	235,000
		505,000
U.S. West Coast:		
Benicia	California	170,000
Wilmington	California	135,000
		305,000
Total		3,015,000

(a) "Throughput capacity" represents estimated capacity for processing crude oil, inter-mediates, and other feedstocks. Total estimated crude oil capacity is approximately 2.5 million BPD.

(b) Represents the combined capacities of two refineries – the Corpus Christi East and Corpus Christi West Refineries.

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Total Refining System

The following table presents the percentages of principal charges and yields (on a combined basis) for all of our refineries for the year ended December 31, 2015. Our total combined throughput volumes averaged approximately 2.8 million BPD for the year ended December 31, 2015.

Combined Total Refining System Charges and Yields

Charges:		
sour crude oil	31	%
sweet crude oil	43	%
residual fuel oil	10	%
other feedstocks	5	%
blendstocks	11	%
Yields:		
gasolines and blendstocks	48	%
distillates	38	%
petrochemicals	3	%
other products (includes gas oils, No. 6 fuel oil, petroleum coke, and asphalt)	11	%

U.S. Gulf Coast

The following table presents the percentages of principal charges and yields (on a combined basis) for the eight refineries in this region for the year ended December 31, 2015. Total throughput volumes for the U.S. Gulf Coast refining region averaged approximately 1.6 million BPD for the year ended December 31, 2015.

Combined U.S. Gulf Coast Region Charges and Yields

Charges:		
sour crude oil	40	%
sweet crude oil	25	%
residual fuel oil	16	%
other feedstocks	7	%
blendstocks	12	%
Yields:		
gasolines and blendstocks	46	%
distillates	38	%
petrochemicals	4	%
other products (includes gas oil, No. 6 fuel oil, petroleum coke, and asphalt)	12	%

Corpus Christi East and West Refineries. Our Corpus Christi East and West Refineries are located on the Texas Gulf Coast along the Corpus Christi Ship Channel. The East Refinery processes sour crude oil, and the West Refinery processes sweet crude oil, sour crude oil, and residual fuel oil. In 2015, we completed construction and placed into service a new 70,000 BPD crude distillation unit in the West Refinery. The feedstocks are delivered by tanker or barge via deepwater docking facilities along the Corpus Christi Ship Channel, and West Texas or South Texas crude oil is delivered via pipelines. The refineries' physical locations allow for the transfer of various feedstocks and blending components between them. The refineries produce gasoline, aromatics, jet fuel, diesel, and asphalt. Truck racks service local markets for gasoline, diesel, jet

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fuels, liquefied petroleum gases, and asphalt. These and other finished products are also distributed by ship or barge across docks and third-party pipelines.

Port Arthur Refinery. Our Port Arthur Refinery is located on the Texas Gulf Coast approximately 90 miles east of Houston. The refinery processes heavy sour crude oils and other feedstocks into gasoline, diesel, and jet fuel. In 2015, we completed a 15,000 BPD hydrocracker expansion project at this refinery. The refinery receives crude oil by rail, marine docks, and pipelines. Finished products are distributed into the Colonial, Explorer, and other pipelines and across the refinery docks into ships or barges.

St. Charles Refinery. Our St. Charles Refinery is located approximately 15 miles west of New Orleans along the Mississippi River. The refinery processes sour crude oils and other feedstocks into gasoline and diesel. The refinery receives crude oil over docks and has access to the Louisiana Offshore Oil Port. Finished products can be shipped over these docks or through the Parkway or Bengal pipelines, which ultimately provide access to the Plantation or Colonial pipeline networks.

Texas City Refinery. Our Texas City Refinery is located southeast of Houston on the Texas City Ship Channel. The refinery processes crude oils into gasoline, diesel, and jet fuel. The refinery receives its feedstocks by pipeline and by ship or barge via deepwater docking facilities along the Texas City Ship Channel. The refinery uses ships and barges, as well as the Colonial, Explorer, and other pipelines for distribution of its products.

Houston Refinery. Our Houston Refinery is located on the Houston Ship Channel. It processes a mix of crude and intermediate oils into gasoline, jet fuel, and diesel. The refinery receives its feedstocks by tankers or barges at deepwater docking facilities along the Houston Ship Channel and by various interconnecting pipelines with our Texas City Refinery. The majority of its finished products are delivered to local, mid-continent U.S., and northeastern U.S. markets through various pipelines, including the Colonial and Explorer pipelines.

Meraux Refinery. Our Meraux Refinery is located approximately 25 miles southeast of New Orleans along the Mississippi River. The refinery processes sour and sweet crude oils into gasoline, diesel, jet fuel, and high sulfur fuel oil. The refinery receives crude oil at its dock and has access to the Louisiana Offshore Oil Port. Finished products can be shipped from the refinery’s dock or through the Colonial pipeline. The refinery is located about 40 miles from our St. Charles Refinery, allowing for integration of feedstocks and refined product blending.

Three Rivers Refinery. Our Three Rivers Refinery is located in South Texas between Corpus Christi and San Antonio. It processes sweet and sour crude oils into gasoline, distillates, and aromatics. The refinery has access to crude oil from sources outside the U.S. delivered to the Texas Gulf Coast at Corpus Christi as well as crude oil from local sources through third-party pipelines and trucks. The refinery distributes its refined products primarily through third-party pipelines.

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U.S. Mid-Continent

The following table presents the percentages of principal charges and yields (on a combined basis) for the three refineries in this region for the year ended December 31, 2015. Total throughput volumes for the U.S. Mid-Continent refining region averaged approximately 447,000 BPD for the year ended December 31, 2015.

Combined U.S. Mid-Continent Region Charges and Yields

Charges:		
sour crude oil	6	%
sweet crude oil	85	%
other feedstocks	1	%
blendstocks	8	%
Yields:		
gasolines and blendstocks	54	%
distillates	36	%
petrochemicals	4	%
other products (includes gas oil, No. 6 fuel oil, and asphalt)	6	%

Memphis Refinery. Our Memphis Refinery is located in Tennessee along the Mississippi River. It processes primarily sweet crude oils. Most of its production is gasoline, diesel, and jet fuels. Crude oil is supplied to the refinery via the Capline pipeline and can also be received, along with other feedstocks, via barge. Most of the refinery's products are distributed via truck rack and barges.

McKee Refinery. Our McKee Refinery is located in the Texas Panhandle. It processes primarily sweet crude oils into gasoline, diesel, jet fuels, and asphalt. The refinery has access to local and Permian Basin crude oil sources via third-party pipelines. In 2015, we completed the final phases of a multi-year project, which increased the refinery's crude oil processing capacity by approximately 20,000 BPD. The refinery distributes its products primarily via third-party pipelines to markets in Texas, New Mexico, Arizona, Colorado, and Oklahoma.

Ardmore Refinery. Our Ardmore Refinery is located in Oklahoma, approximately 100 miles south of Oklahoma City. It processes medium sour and sweet crude oils into gasoline, diesel, and asphalt. The refinery receives local crude oil and feedstock supply via third-party pipelines. Refined products are transported to market via rail, trucks, and the Magellan pipeline system.

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North Atlantic

The following table presents the percentages of principal charges and yields (on a combined basis) for the two refineries in this region for the year ended December 31, 2015. Total throughput volumes for the North Atlantic refining region averaged approximately 494,000 BPD for the year ended December 31, 2015.

Combined North Atlantic Region Charges and Yields

Charges:		
sour crude oil	3	%
sweet crude oil	84	%
residual fuel oil	5	%
other feedstocks	1	%
blendstocks	7	%
Yields:		
gasolines and blendstocks	44	%
distillates	44	%
petrochemicals	1	%
other products (includes gas oil, No. 6 fuel oil, and other products)	11	%

Pembroke Refinery. Our Pembroke Refinery is located in the County of Pembrokeshire in southwest Wales, U.K. The refinery processes primarily sweet crude oils into gasoline, diesel, jet fuel, heating oil, and low-sulfur fuel oil. The refinery receives all of its feedstocks and delivers the majority of its products by ship and barge via deepwater docking facilities along the Milford Haven Waterway, with its remaining products being delivered by our Mainline pipeline system and by trucks.

Quebec City Refinery. Our Quebec City Refinery is located in Lévis, Canada (near Quebec City). It processes sweet crude oils into gasoline, diesel, jet fuel, heating oil, and low-sulfur fuel oil. The refinery receives crude oil by ship at its deepwater dock on the St. Lawrence River or by pipeline/ship from western Canada. The refinery transports its products through our pipeline from Quebec City to our terminal in Montreal and to various other terminals throughout eastern Canada by rail, ships, trucks, and third-party pipelines.

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U.S. West Coast

The following table presents the percentages of principal charges and yields (on a combined basis) for the two refineries in this region for the year ended December 31, 2015. Total throughput volumes for the U.S. West Coast refining region averaged approximately 266,000 BPD for the year ended December 31, 2015.

Combined U.S. West Coast Region Charges and Yields

Charges:		
sour crude oil	70	%
sweet crude oil	5	%
other feedstocks	11	%
blendstocks	14	%
Yields:		
gasolines and blendstocks	60	%
distillates	25	%
other products (includes gas oil, No. 6 fuel oil, petroleum coke, and asphalt)	15	%

Benicia Refinery. Our Benicia Refinery is located northeast of San Francisco on the Carquinez Straits of San Francisco Bay. It processes sour crude oils into gasoline, diesel, jet fuel, and asphalt. Gasoline production is primarily CARBOB gasoline, which meets CARB specifications when blended with ethanol. The refinery receives crude oil feedstocks via a marine dock and crude oil pipelines connected to a southern California crude oil delivery system. Most of the refinery's products are distributed via pipeline and truck rack into northern California markets.

Wilmington Refinery. Our Wilmington Refinery is located near Los Angeles, California. The refinery processes a blend of heavy and high-sulfur crude oils. The refinery produces CARBOB gasoline, diesel, CARB diesel, jet fuel, and asphalt. The refinery is connected by pipeline to marine terminals and associated dock facilities that can move and store crude oil and other feedstocks. Refined products are distributed via pipeline systems to various third-party terminals in southern California, Nevada, and Arizona.

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Feedstock Supply

Approximately 59 percent of our current crude oil feedstock requirements are purchased through term contracts while the remaining requirements are generally purchased on the spot market. Our term supply agreements include arrangements to purchase feedstocks at market-related prices directly or indirectly from various national oil companies as well as international and U.S. oil companies. The contracts generally permit the parties to amend the contracts (or terminate them), effective as of the next scheduled renewal date, by giving the other party proper notice within a prescribed period of time (e.g., 60 days, 6 months) before expiration of the current term. The majority of the crude oil purchased under our term contracts is purchased at the producer's official stated price (i.e., the "market" price established by the seller for all purchasers) and not at a negotiated price specific to us.

Refining Segment Sales

Overview

Our refining segment includes sales of refined products in both the wholesale rack and bulk markets. These sales include refined products that are manufactured in our refining operations as well as refined products purchased or received on exchange from third parties. Most of our refineries have access to marine transportation facilities and interconnect with common-carrier pipeline systems, allowing us to sell products in the U.S., Canada, the U.K., and other countries.

Wholesale Marketing

We market branded and unbranded refined products on a wholesale basis through an extensive rack marketing network. The principal purchasers of our refined products from terminal truck racks are wholesalers, distributors, retailers, and truck-delivered end users throughout the U.S., Canada, the U.K., and Ireland.

The majority of our rack volume is sold through unbranded channels. The remainder is sold to distributors and dealers that are members of the Valero-brand family that operate approximately 5,700 branded sites in the U.S. and the Caribbean, approximately 1,000 branded sites in the U.K. and Ireland, and approximately 800 branded sites in Canada. These sites are independently owned and are supplied by us under multi-year contracts. For wholesale branded sites, we promote the Valero®, Beacon®, Diamond Shamrock®, and Shamrock® brands in the U.S. and the Caribbean, the Texaco® brand in the U.K. and Ireland, and we license the Ultramar® brand in Canada.

Bulk Sales and Trading

We sell a significant portion of our gasoline and distillate production through bulk sales channels in U.S. and international markets. Our bulk sales are made to various oil companies and traders as well as certain bulk end-users such as railroads, airlines, and utilities. Our bulk sales are transported primarily by pipeline, barges, and tankers to major tank farms and trading hubs.

We also enter into refined product exchange and purchase agreements. These agreements help minimize transportation costs, optimize refinery utilization, balance refined product availability, broaden geographic distribution, and provide access to markets not connected to our refined-product pipeline systems. Exchange agreements provide for the delivery of refined products by us to unaffiliated companies at our and third-parties' terminals in exchange for delivery of a similar amount of refined products to us by these unaffiliated companies at specified locations. Purchase agreements involve our purchase of refined products from third parties with delivery occurring at specified locations.

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Specialty Products

We sell a variety of other products produced at our refineries, which we refer to collectively as “Specialty Products.” Our Specialty Products include asphalt, lube oils, natural gas liquids (NGLs), petroleum coke, petrochemicals, and sulfur.

- We produce asphalt at five of our refineries. Our asphalt products are sold for use in road construction, road repair, and roofing applications through a network of refinery and terminal loading racks.
- We produce naphthenic oils at one of our refineries suitable for a wide variety of lubricant and process applications.
- NGLs produced at our refineries include butane, isobutane, and propane. These products can be used for gasoline blending, home heating, and petrochemical plant feedstocks.
- We are a significant producer of petroleum coke, supplying primarily power generation customers and cement manufacturers. Petroleum coke is used largely as a substitute for coal.
- We produce and market a number of commodity petrochemicals including aromatics (benzene, toluene, and xylene) and two grades of propylene. Aromatics and propylenes are sold to customers in the chemical industry for further processing into such products as paints, plastics, and adhesives.
- We are a large producer of sulfur with sales primarily to customers serving the agricultural sector. Sulfur is used in manufacturing fertilizer.

Logistics and Transportation

We own several transportation and logistics assets (crude oil pipelines, refined product pipelines, terminals, tanks, marine docks, truck rack bays, rail cars, and rail facilities) that support our refining and ethanol operations. In addition, through subsidiaries, we own the 2.0 percent general partner interest in Valero Energy Partners LP (VLP) and a 65.7 percent limited partner interest in VLP. VLP is a midstream master limited partnership. Its common units, representing limited partner interests, are traded on the NYSE under the symbol “VLP.” Its assets support the operations of our Ardmore, Corpus Christi, Houston, McKee, Memphis, Port Arthur, St. Charles, and Three Rivers Refineries. VLP is discussed more fully in Note 4 of Notes to Consolidated Financial Statements.

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ETHANOL

We own 11 ethanol plants with a combined ethanol production capacity of about 1.4 billion gallons per year. Our ethanol plants are dry mill facilities[1] that process corn to produce ethanol and distillers grains.[2] We source our corn supply from local farmers and commercial elevators. Our facilities receive corn primarily by rail and truck. We publish on our website a corn bid for local farmers and cooperative dealers to use to facilitate corn supply transactions.

After processing, our ethanol is held in storage tanks on-site pending loading to rail cars, trucks and barges. We sell our ethanol (i) to large customers–primarily refiners and gasoline blenders–under term and spot contracts, and (ii) in bulk markets such as New York, Chicago, the U.S. Gulf Coast, Florida, and the U.S. West Coast. We ship our dry distillers grains (DDG) by truck or rail primarily to animal feed customers in the U.S. and Mexico, with some sales into the Far East. We also sell modified distillers grains locally at our plant sites.

The following table presents the locations of our ethanol plants, their approximate ethanol and DDG production capacities, and their approximate corn processing capacities.

State	City	Ethanol Production Capacity (in gallons per year)	Production of DDG (in tons per year)	Corn Processed (in bushels per year)
Indiana	Linden	130 million	385,000	46 million
	Mount Vernon	100 million	320,000	37 million
Iowa	Albert City	130 million	385,000	46 million
	Charles City	135 million	400,000	48 million
	Fort Dodge	135 million	400,000	48 million
	Hartley	135 million	400,000	48 million
Minnesota	Welcome	135 million	400,000	48 million
Nebraska	Albion	130 million	385,000	46 million
Ohio	Bloomingburg	130 million	385,000	46 million
South Dakota	Aurora	135 million	400,000	48 million
Wisconsin	Jefferson	105 million	335,000	39 million
	total	1,400 million	4,195,000	500 million

The combined production of denatured ethanol from our plants in 2015 averaged 3.8 million gallons per day.

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1 Ethanol is commercially produced using either the wet mill or dry mill process. Wet milling involves separating the grain kernel into its component parts (germ, fiber, protein, and starch) prior to fermentation. In the dry mill process, the entire grain kernel is ground into flour. The starch in the flour is converted to ethanol during the fermentation process, creating carbon dioxide and distillers grains.

2 During fermentation, nearly all of the starch in the grain is converted into ethanol and carbon dioxide, while the remaining nutrients (proteins, fats, minerals, and vitamins) are concentrated to yield modified distillers grains, or, after further drying, dried distillers grains. Distillers grains generally are an economical partial replacement for corn and soybeans in feeds for cattle, swine, and poultry.

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ENVIRONMENTAL MATTERS

We incorporate by reference into this Item the environmental disclosures contained in the following sections of this report:

- Item 1A, “Risk Factors”—Compliance with and changes in environmental laws, including proposed climate change laws and regulations, could adversely affect our performance,
- Item 1A, “Risk Factors”—We may incur additional costs as a result of our use of rail cars for the transportation of crude oil and the products that we manufacture,
- Item 3, “Legal Proceedings” under the caption “Environmental Enforcement Matters,” and
- Item 8, “Financial Statements and Supplementary Data” in Note 9 of Notes to Consolidated Financial Statements under the caption “Environmental Liabilities,” and Note 11 of Notes to Consolidated Financial Statements under the caption “Environmental Matters.”

Capital Expenditures Attributable to Compliance with Environmental Regulations. In 2015, our capital expenditures attributable to compliance with environmental regulations were $140 million, and they are currently estimated to be $83 million for 2016 and $95 million for 2017. The estimates for 2016 and 2017 do not include amounts related to capital investments at our facilities that management has deemed to be strategic investments. These amounts could materially change as a result of governmental and regulatory actions.

PROPERTIES

Our principal properties are described above under the caption “Valero’s Operations,” and that information is incorporated herein by reference. We believe that our properties and facilities are generally adequate for our operations and that our facilities are maintained in a good state of repair. As of December 31, 2015, we were the lessee under a number of cancelable and noncancelable leases for certain properties. Our leases are discussed more fully in Notes 10 and 11 of Notes to Consolidated Financial Statements. Financial information about our properties is presented in Note 7 of Notes to Consolidated Financial Statements and is incorporated herein by reference.

Our patents relating to our refining operations are not material to us as a whole. The trademarks and tradenames under which we conduct our branded wholesale business–including Valero®, Diamond Shamrock®, Shamrock®, Ultramar®, Beacon®, Texaco®–and other trademarks employed in the marketing of petroleum products are integral to our wholesale marketing operations.

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ITEM 1A. RISK FACTORS

You should carefully consider the following risk factors in addition to the other information included in this report. Each of these risk factors could adversely affect our business, operating results, and/or financial condition, as well as adversely affect the value of an investment in our common stock.

Our financial results are affected by volatile refining margins, which are dependent upon factors beyond our control, including the price of crude oil and the market price at which we can sell refined products.

Our financial results are primarily affected by the relationship, or margin, between refined product prices and the prices for crude oil and other feedstocks. Historically, refining margins have been volatile, and we believe they will continue to be volatile in the future. Our cost to acquire feedstocks and the price at which we can ultimately sell refined products depend upon several factors beyond our control, including regional and global supply of and demand for crude oil, gasoline, diesel, and other feedstocks and refined products. These in turn depend on, among other things, the availability and quantity of imports, the production levels of U.S. and international suppliers, levels of refined product inventories, productivity and growth (or the lack thereof) of U.S. and global economies, U.S. relationships with foreign governments, political affairs, and the extent of governmental regulation.

Some of these factors can vary by region and may change quickly, adding to market volatility, while others may have longer-term effects. The longer-term effects of these and other factors on refining and marketing margins are uncertain. We do not produce crude oil and must purchase all of the crude oil we refine. We may purchase our crude oil and other refinery feedstocks long before we refine them and sell the refined products. Price level changes during the period between purchasing feedstocks and selling the refined products from these feedstocks could have a significant effect on our financial results. A decline in market prices may negatively impact the carrying value of our inventories.

Economic turmoil and political unrest or hostilities, including the threat of future terrorist attacks, could affect the economies of the U.S. and other countries. Lower levels of economic activity could result in declines in energy consumption, including declines in the demand for and consumption of our refined products, which could cause our revenues and margins to decline and limit our future growth prospects.

Refining margins are also significantly impacted by additional refinery conversion capacity through the expansion of existing refineries or the construction of new refineries. Worldwide refining capacity expansions may result in refining production capability exceeding refined product demand, which would have an adverse effect on refining margins.

A significant portion of our profitability is derived from the ability to purchase and process crude oil feedstocks that historically have been cheaper than benchmark crude oils, such as Louisiana Light Sweet (LLS) and Brent crude oils. These crude oil feedstock differentials vary significantly depending on overall economic conditions and trends and conditions within the markets for crude oil and refined products, and they could decline in the future, which would have a negative impact on our results of operations.

Compliance with and changes in environmental laws, including proposed climate change laws and regulations, could adversely affect our performance.

The principal environmental risks associated with our operations are emissions into the air and releases into the soil, surface water, or groundwater. Our operations are subject to extensive environmental laws and regulations, including those relating to the discharge of materials into the environment, waste management, pollution prevention measures, greenhouse gas (GHG) emissions, and characteristics and composition of fuels, including gasoline and diesel. Certain of these laws and regulations could impose obligations to conduct

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assessment or remediation efforts at our facilities as well as at formerly owned properties or third-party sites where we have taken wastes for disposal or where our wastes have migrated. Environmental laws and regulations also may impose liability on us for the conduct of third parties, or for actions that complied with applicable requirements when taken, regardless of negligence or fault. If we violate or fail to comply with these laws and regulations, we could be fined or otherwise sanctioned.

Because environmental laws and regulations are becoming more stringent and new environmental laws and regulations are continuously being enacted or proposed, such as those relating to GHG emissions and climate change, the level of expenditures required for environmental matters could increase in the future. Current and future legislative action and regulatory initiatives could result in changes to operating permits, material changes in operations, increased capital expenditures and operating costs, increased costs of the goods we sell, and decreased demand for our products that cannot be assessed with certainty at this time. We may be required to make expenditures to modify operations or install pollution control equipment that could materially and adversely affect our business, financial condition, results of operations, and liquidity.

For example, the U.S. Environmental Protection Agency (EPA) has, in recent years, adopted final rules making more stringent the National Ambient Air Quality Standards (NAAQS) for ozone, sulfur dioxide, and nitrogen dioxide, and the U.S. EPA is considering further revisions to the NAAQS. Emerging rules and permitting requirements implementing these revised standards may require us to install more stringent controls at our facilities, which may result in increased capital expenditures. Governmental regulations regarding GHG emissions–including so-called “cap-and-trade” programs targeted at reducing carbon dioxide emissions–and low carbon fuel standards could result in increased compliance costs, additional operating restrictions or permitting delays for our business, and an increase in the cost of, and reduction in demand for, the products we produce, which could have a material adverse effect on our financial position, results of operations, and liquidity.

In addition, in 2015, the U.S., Canada, and the U.K. participated in the United Nations Conference on Climate Change, which led to the creation of the Paris Agreement. The Paris Agreement will be open for signing on April 22, 2016, and will require countries to review and “represent a progression” in their intended nationally determined contributions (which set GHG emission reduction goals) every five years beginning in 2020. Restrictions on emissions of methane or carbon dioxide that have been or may be imposed in various U.S. states or at the U.S. federal level or in other countries could adversely affect the oil and gas industry.

Finally, some scientists have concluded that increasing concentrations of GHG emissions in the Earth’s atmosphere may produce climate changes that have significant physical effects, such as increased frequency and severity of storms, droughts, and floods and other climatic events. If any such effects were to occur, it is uncertain if they would have an adverse effect on our financial condition and operations.

Disruption of our ability to obtain crude oil could adversely affect our operations.

A significant portion of our feedstock requirements is satisfied through supplies originating in the Middle East, Africa, Asia, North America, and South America. We are, therefore, subject to the political, geographic, and economic risks attendant to doing business with suppliers located in, and supplies originating from, these areas. If one or more of our supply contracts were terminated, or if political events disrupt our traditional crude oil supply, we believe that adequate alternative supplies of crude oil would be available, but it is possible that we would be unable to find alternative sources of supply. If we are unable to obtain adequate crude oil volumes or are able to obtain such volumes only at unfavorable prices, our results of operations could be materially adversely affected, including reduced sales volumes of refined products or reduced margins as a result of higher crude oil costs.

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In addition, the U.S. government can prevent or restrict us from doing business in or with other countries. These restrictions, and those of other governments, could limit our ability to gain access to business opportunities in various countries. Actions by both the U.S. and other countries have affected our operations in the past and will continue to do so in the future.

We are subject to interruptions and increased costs as a result of our reliance on third-party transportation of crude oil and the products that we manufacture.

We generally use the services of third parties to transport feedstocks to our facilities and to transport the products we manufacture to market. If we experience prolonged interruptions of supply or increases in costs to deliver our products to market, or if the ability of the pipelines, vessels, or railroads to transport feedstocks or products is disrupted because of weather events, accidents, derailment, collision, fire, explosion, governmental regulations, or third-party actions, it could have a material adverse effect on our financial position, results of operations, and liquidity.

We may incur additional costs as a result of our use of rail cars for the transportation of crude oil and the products that we manufacture.

We currently use rail cars for the transportation of some feedstocks to certain of our facilities and for the transportation of some of the products we manufacture to their markets. We own and lease rail cars for our operations. Rail transportation is subject to a variety of federal, state, and local regulations. New laws and regulations and changes in existing laws and regulations are continuously being enacted or proposed that could result in increased expenditures for compliance. For example, in May 2014, the U.S. Department of Transportation (DOT) issued an order requiring rail carriers to provide certain notifications to state agencies along routes used by trains over a certain length carrying crude oil. In addition, in November 2014, the U.S. DOT issued a final rule regarding safety training standards under the Rail Safety Improvement Act of 2008. The rule required each railroad or contractor to develop and submit a training program to perform regular oversight and annual written reviews. In May 2015, the Pipeline and Hazardous Materials Safety Administration and the Federal Railroad Administration issued new final rules for enhanced tank car standards and operational controls for high-hazard flammable trains. Although we do not believe recently adopted rules will have a material impact on our financial position, results of operations, and liquidity, further changes in law, regulations or industry standards could require us to incur additional costs to the extent they are applicable to us.

Competitors that produce their own supply of feedstocks, own their own retail sites, have greater financial resources, or provide alternative energy sources may have a competitive advantage.

The refining and marketing industry is highly competitive with respect to both feedstock supply and refined product markets. We compete with many companies for available supplies of crude oil and other feedstocks and for sites for our refined products. We do not produce any of our crude oil feedstocks and, following the separation of our retail business, we do not have a company-owned retail network. Many of our competitors, however, obtain a significant portion of their feedstocks from company-owned production and some have extensive retail sites. Such competitors are at times able to offset losses from refining operations with profits from producing or retailing operations, and may be better positioned to withstand periods of depressed refining margins or feedstock shortages.

Some of our competitors also have materially greater financial and other resources than we have. Such competitors have a greater ability to bear the economic risks inherent in all phases of our industry. In addition, we compete with other industries that provide alternative means to satisfy the energy and fuel requirements of our industrial, commercial, and individual consumers.

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Uncertainty and illiquidity in credit and capital markets can impair our ability to obtain credit and financing on acceptable terms, and can adversely affect the financial strength of our business partners.

Our ability to obtain credit and capital depends in large measure on capital markets and liquidity factors that we do not control. Our ability to access credit and capital markets may be restricted at a time when we would like, or need, to access those markets, which could have an impact on our flexibility to react to changing economic and business conditions. In addition, the cost and availability of debt and equity financing may be adversely impacted by unstable or illiquid market conditions. Protracted uncertainty and illiquidity in these markets also could have an adverse impact on our lenders, commodity hedging counterparties, or our customers, causing them to fail to meet their obligations to us. In addition, decreased returns on pension fund assets may also materially increase our pension funding requirements.

Our access to credit and capital markets also depends on the credit ratings assigned to our debt by independent credit rating agencies. We currently maintain investment-grade ratings by Standard & Poor's Ratings Services (S&P), Moody's Investors Service (Moody's), and Fitch Ratings (Fitch) on our senior unsecured debt. Ratings from credit agencies are not recommendations to buy, sell, or hold our securities. Each rating should be evaluated independently of any other rating. We cannot provide assurance that any of our current ratings will remain in effect for any given period of time or that a rating will not be lowered or withdrawn entirely by a rating agency if, in its judgment, circumstances so warrant. Specifically, if ratings agencies were to downgrade our long-term rating, particularly below investment grade, our borrowing costs would increase, which could adversely affect our ability to attract potential investors and our funding sources could decrease. In addition, we may not be able to obtain favorable credit terms from our suppliers or they may require us to provide collateral, letters of credit, or other forms of security, which would increase our operating costs. As a result, a downgrade below investment grade in our credit ratings could have a material adverse impact on our financial position, results of operations, and liquidity.

From time to time, our cash needs may exceed our internally generated cash flow, and our business could be materially and adversely affected if we were unable to obtain necessary funds from financing activities. From time to time, we may need to supplement our cash generated from operations with proceeds from financing activities. We have existing revolving credit facilities, committed letter of credit facilities, and an accounts receivable sales facility to provide us with available financing to meet our ongoing cash needs. In addition, we rely on the counterparties to our derivative instruments to fund their obligations under such arrangements. Uncertainty and illiquidity in financial markets may materially impact the ability of the participating financial institutions and other counterparties to fund their commitments to us under our various financing facilities or our derivative instruments, which could have a material adverse effect on our financial position, results of operations, and liquidity.

A significant interruption in one or more of our refineries could adversely affect our business.

Our refineries are our principal operating assets. As a result, our operations could be subject to significant interruption if one or more of our refineries were to experience a major accident or mechanical failure, be damaged by severe weather or other natural or man-made disaster, such as an act of terrorism, or otherwise be forced to shut down. If any refinery were to experience an interruption in operations, earnings from the refinery could be materially adversely affected (to the extent not recoverable through insurance) because of lost production and repair costs. Significant interruptions in our refining system could also lead to increased volatility in prices for crude oil feedstocks and refined products, and could increase instability in the financial and insurance markets, making it more difficult for us to access capital and to obtain insurance coverage that we consider adequate.

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A significant interruption related to our information technology systems could adversely affect our business.
Our information technology systems and network infrastructure may be subject to unauthorized access or attack, which could result in a loss of sensitive business information, systems interruption, or the disruption of our business operations. There can be no assurance that our infrastructure protection technologies and disaster recovery plans can prevent a technology systems breach or systems failure, which could have a material adverse effect on our financial position or results of operations.
Our business may be negatively affected by work stoppages, slowdowns or strikes by our employees, as well as new labor legislation issued by regulators.
Workers at some of our refineries are covered by collective bargaining agreements. To the extent we are in negotiations for labor agreements expiring in the future, there is no assurance an agreement will be reached without a strike, work stoppage, or other labor action. Any prolonged strike, work stoppage, or other labor action could have an adverse effect on our financial condition or results of operations. In addition, future federal or state labor legislation could result in labor shortages and higher costs, especially during critical maintenance periods.
We are subject to operational risks and our insurance may not be sufficient to cover all potential losses arising from operating hazards. Failure by one or more insurers to honor its coverage commitments for an insured event could materially and adversely affect our financial position, results of operations, and liquidity.
Our operations are subject to various hazards common to the industry, including explosions, fires, toxic emissions, maritime hazards, and natural catastrophes. As protection against these hazards, we maintain insurance coverage against some, but not all, potential losses and liabilities. We may not be able to maintain or obtain insurance of the type and amount we desire at reasonable rates. As a result of market conditions, premiums and deductibles for certain of our insurance policies could increase substantially. In some instances, certain insurance could become unavailable or available only for reduced amounts of coverage. For example, coverage for hurricane damage is very limited, and coverage for terrorism risks includes very broad exclusions. If we were to incur a significant liability for which we were not fully insured, it could have a material adverse effect on our financial position, results of operations, and liquidity.
Our insurance program includes a number of insurance carriers. Significant disruptions in financial markets could lead to a deterioration in the financial condition of many financial institutions, including insurance companies. We can make no assurances that we will be able to obtain the full amount of our insurance coverage for insured events.
Large capital projects can take many years to complete, and market conditions could deteriorate over time, negatively impacting project returns.
We may engage in capital projects based on the forecasted project economics and level of return on the capital to be employed in the project. Large-scale projects take many years to complete, and market conditions can change from our forecast. As a result, we may be unable to fully realize our expected returns, which could negatively impact our financial condition, results of operations, and cash flows.
Compliance with and changes in tax laws could adversely affect our performance.
We are subject to extensive tax liabilities imposed by multiple jurisdictions, including income taxes, indirect taxes (excise/duty, sales/use, gross receipts, and value-added taxes), payroll taxes, franchise taxes, withholding taxes, and ad valorem taxes. New tax laws and regulations and changes in existing tax laws and regulations are continuously being enacted or proposed that could result in increased expenditures for tax

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liabilities in the future. Many of these liabilities are subject to periodic audits by the respective taxing authority. Subsequent changes to our tax liabilities as a result of these audits may subject us to interest and penalties.

We may incur losses and incur additional costs as a result of our forward-contract activities and derivative transactions.

We currently use commodity derivative instruments, and we expect to continue their use in the future. If the instruments we use to hedge our exposure to various types of risk are not effective, we may incur losses. In addition, we may be required to incur additional costs in connection with future regulation of derivative instruments to the extent it is applicable to us.

One of our subsidiaries acts as the general partner of a publicly traded master limited partnership, VLP, which may involve a greater exposure to legal liability than our historic business operations.

One of our subsidiaries acts as the general partner of VLP, a publicly traded master limited partnership. Our control of the general partner of VLP may increase the possibility of claims of breach of fiduciary duties, including claims of conflicts of interest, related to VLP. Liability resulting from such claims could have a material adverse effect on our financial position, results of operations, and liquidity.

If our spin-off of CST (the “Spin-off”), or certain internal transactions undertaken in anticipation of the Spin-off, were determined to be taxable for U.S. federal income tax purposes, then we and certain of our stockholders could be subject to significant tax liability.

We received a private letter ruling from the Internal Revenue Service (IRS) substantially to the effect that, for U.S. federal income tax purposes, the Spin-off, except for cash received in lieu of fractional shares, qualified as tax-free under sections 355 and 361 of the U.S. Internal Revenue Code of 1986, as amended (Code), and that certain internal transactions undertaken in anticipation of the Spin-off qualified for favorable treatment. The IRS did not rule, however, on whether the Spin-off satisfied certain requirements necessary to obtain tax-free treatment under section 355 of the Code. Instead, the private letter ruling was based on representations by us that those requirements were satisfied, and any inaccuracy in those representations could invalidate the private letter ruling. In connection with the private letter ruling, we also obtained an opinion from a nationally recognized accounting firm, substantially to the effect that, for U.S. federal income tax purposes, the Spin-off qualified under sections 355 and 361 of the Code. The opinion relied on, among other things, the continuing validity of the private letter ruling and various assumptions and representations as to factual matters made by CST and us which, if inaccurate or incomplete in any material respect, would jeopardize the conclusions reached by such counsel in its opinion. The opinion is not binding on the IRS or the courts, and there can be no assurance that the IRS or the courts would not challenge the conclusions stated in the opinion or that any such challenge would not prevail. Furthermore, notwithstanding the private letter ruling, the IRS could determine on audit that the Spin-off or the internal transactions undertaken in anticipation of the Spin-off should be treated as taxable transactions if it determines that any of the facts, assumptions, representations, or undertakings we or CST have made or provided to the IRS are incorrect or incomplete, or that the Spin-off or the internal transactions should be taxable for other reasons, including as a result of a significant change in stock or asset ownership after the Spin-off.

If the Spin-off ultimately were determined to be taxable, each holder of our common stock who received shares of CST common stock in the Spin-off generally would be treated as receiving a spin-off of property in an amount equal to the fair market value of the shares of CST common stock received by such holder. Any such spin-off would be a dividend to the extent of our current earnings and profits as of the end of 2013, and any accumulated earnings and profits. Any amount that exceeded our relevant earnings and profits would be treated first as a non-taxable return of capital to the extent of such holder’s tax basis in our shares of common stock with any remaining amount generally being taxed as a capital gain. In addition, we would

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recognize gain in an amount equal to the excess of the fair market value of shares of CST common stock distributed to our holders on the Spin-off date over our tax basis in such shares of CST common stock. Moreover, we could incur significant U.S. federal income tax liabilities if it ultimately were determined that certain internal transactions undertaken in anticipation of the Spin-off were taxable.

Under the terms of the tax matters agreement we entered into with CST in connection with the Spin-off, we generally are responsible for any taxes imposed on us and our subsidiaries in the event that the Spin-off and/or certain related internal transactions were to fail to qualify for tax-free treatment. However, if the Spin-off and/or such internal transactions were to fail to qualify for tax-free treatment because of actions or failures to act by CST or its subsidiaries, CST would be responsible for all such taxes. If we were to become liable for taxes under the tax matters agreement, that liability could have a material adverse effect on us. The Spin-off is more fully described in Note 3 of Notes to Consolidated Financial Statements.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 3. LEGAL PROCEEDINGS

Litigation

We incorporate by reference into this Item our disclosures made in Part II, Item 8 of this report included in Note 11 of Notes to Consolidated Financial Statements under the caption “Litigation Matters.”

Environmental Enforcement Matters

While it is not possible to predict the outcome of the following environmental proceedings, if any one or more of them were decided against us, we believe that there would be no material effect on our financial position, results of operations, or liquidity. We are reporting these proceedings to comply with SEC regulations, which require us to disclose certain information about proceedings arising under federal, state, or local provisions regulating the discharge of materials into the environment or protecting the environment if we reasonably believe that such proceedings will result in monetary sanctions of $100,000 or more.

People of the State of Illinois, ex rel. v. The Premcor Refining Group Inc., et al., Third Judicial Circuit Court, Madison County (Case No. 03-CH-00459, filed May 29, 2003) (Hartford Refinery and terminal). The Illinois EPA has issued several Notices of Violation (NOVs) alleging violations of air and waste regulations at Premcor’s Hartford, Illinois terminal and closed refinery. We are negotiating the terms of a consent order for corrective action.

Bay Area Air Quality Management District (BAAQMD) (Benicia Refinery). We currently have multiple outstanding Violation Notices (VNs) issued by the BAAQMD. These VNs are for various alleged air regulation and air permit violations at our Benicia Refinery and asphalt plant. In the fourth quarter of 2015, we entered into an agreement with BAAQMD to resolve various VNs and continue to work with the BAAQMD to resolve the remaining VNs.

South Coast Air Quality Management District (SCAQMD) (Wilmington Refinery). We currently have multiple NOVs issued by the SCAQMD. These NOVs are for alleged reporting violations and excess emissions at our Wilmington Refinery. In the fourth quarter of 2015, we entered into an agreement to resolve various NOVs, and we continue to work with the SCAQMD to resolve the remaining NOVs.

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Texas Commission on Environmental Quality (TCEQ) (Port Arthur Refinery). In our annual report on Form 10-K for the year ended December 31, 2014, we reported that we had received two proposed Agreed Orders from the TCEQ resolving multiple violations that occurred at our Port Arthur Refinery between May 2007 and April 2013. We continue to work with the TCEQ to finalize these Agreed Orders.

Quebec Ministry of Environment (QME) (Quebec City Refinery). In the fourth quarter of 2015, the QME issued a NOV for alleged excess emissions at our Quebec City Refinery. We are currently working with the QME to resolve the NOV.

ITEM 4. MINE SAFETY DISCLOSURES

None.

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PART II

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

Our common stock trades on the NYSE under the symbol "VLO."

As of January 31, 2016, there were 5,911 holders of record of our common stock.

The following table shows the high and low sales prices of and dividends declared on our common stock for each quarter of 2015 and 2014.

	Sales Prices of the Common Stock		Dividends Per Common Share
Quarter Ended	High	Low	
2015:			
December 31	$73.88	$58.98	$0.500
September 30	71.50	51.68	0.400
June 30	64.28	56.09	0.400
March 31	64.49	43.45	0.400
2014:			
December 31	52.10	42.53	0.275
September 30	54.61	45.73	0.275
June 30	59.69	50.03	0.250
March 31	55.96	45.90	0.250

On January 21, 2016, our board of directors declared a quarterly cash dividend of $0.60 per common share payable March 3, 2016 to holders of record at the close of business on February 9, 2016.

Dividends are considered quarterly by the board of directors and may be paid only when approved by the board.

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The following table discloses purchases of shares of our common stock made by us or on our behalf during the fourth quarter of 2015.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Not Purchased as Part of Publicly Announced Plans or Programs (a)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (b)
October 2015	1,658,771	$62.12	842,059	816,712	$2.0 billion
November 2015	2,412,467	$71.08	212,878	2,199,589	$1.8 billion
December 2015	7,008,414	$70.31	980	7,007,434	$1.3 billion
Total	11,079,652	$69.25	1,055,917	10,023,735	$1.3 billion

(a) The shares reported in this column represent purchases settled in the fourth quarter of 2015 relating to (i) our purchases of shares in open-market transactions to meet our obligations under stock-based compensation plans, and (ii) our purchases of shares from our employees and non-employee directors in connection with the exercise of stock options, the vesting of restricted stock, and other stock compensation transactions in accordance with the terms of our stock-based compensation plans.

(b) On July 13, 2015, we announced that our board of directors approved our purchase of $2.5 billion of our outstanding common stock (with no expiration date), which was in addition to the remaining amount available under our $3 billion program previously authorized. During the third quarter of 2015, we completed our purchases under the $3 billion program. As of December 31, 2015, we had $1.3 billion remaining available for purchase under the $2.5 billion program.

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The following performance graph is not "soliciting material," is not deemed filed with the SEC, and is not to be incorporated by reference into any of Valero's filings under the Securities Act of 1933 or the Securities Exchange Act of 1934, as amended, respectively.

This performance graph and the related textual information are based on historical data and are not indicative of future performance. The following line graph compares the cumulative total return[1] on an investment in our common stock against the cumulative total return of the S&P 500 Composite Index and an index of peer companies (that we selected) for the five-year period commencing December 31, 2010 and ending December 31, 2015. Our peer group comprises the following 11 companies: Alon USA Energy, Inc.; BP plc; CVR Energy, Inc.; Delek US Holdings, Inc.; HollyFrontier Corporation; Marathon Petroleum Corporation; PBF Energy Inc.; Phillips 66; Royal Dutch Shell plc; Tesoro Corporation; and Western Refining, Inc.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN[1]
Among Valero Energy Corporation, the S&P 500 Index,
and Peer Group

	As of December 31,					
	2010	2011	2012	2013	2014	2015
Valero Common Stock	$100.00	$92.15	$153.13	$252.67	$253.28	$371.80
S&P 500	100.00	102.11	118.45	156.82	178.29	180.75
Peer Group	100.00	107.70	117.64	143.16	131.88	118.95

[1] Assumes that an investment in Valero common stock and each index was $100 on December 31, 2010. "Cumulative total return" is based on share price appreciation plus reinvestment of dividends from December 31, 2010 through December 31, 2015.

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ITEM 6. SELECTED FINANCIAL DATA

The selected financial data for the five-year period ended December 31, 2015 was derived from our audited financial statements. The following table should be read together with Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and with the historical financial statements and accompanying notes included in Item 8, “Financial Statements and Supplementary Data.”

The following summaries are in millions of dollars, except for per share amounts:

	Year Ended December 31,				
	2015 (a)	2014	2013 (b)	2012	2011 (c)
Operating revenues	$87,804	$130,844	$138,074	$138,393	$120,607
Income from continuing operations	4,101	3,775	2,722	3,114	2,336
Earnings per common share from continuing operations – assuming dilution	7.99	6.97	4.96	5.61	4.11
Dividends per common share	1.70	1.05	0.85	0.65	0.30
Total assets	44,343	45,550	47,260	44,477	42,783
Debt and capital lease obligations, less current portion	7,250	5,780	6,261	6,463	6,732

(a) Includes a noncash lower of cost or market inventory valuation adjustment of $790 million, as described in Note 6 of Notes to Consolidated Financial Statements.

(b) Includes the operations of our retail business prior to its separation from us on May 1, 2013, as further described in Note 3 of Notes to Consolidated Financial Statements.

(c) We acquired the Meraux Refinery on October 1, 2011 and the Pembroke Refinery on August 1, 2011. The information presented for 2011 includes the results of operations from these acquisitions commencing on their respective acquisition dates.

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

The following review of our results of operations and financial condition should be read in conjunction with Item 1A, "Risk Factors," and Item 8, "Financial Statements and Supplementary Data," included in this report.

CAUTIONARY STATEMENT FOR THE PURPOSE OF SAFE HARBOR PROVISIONS OF THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995

This report, including without limitation our disclosures below under the heading "OVERVIEW AND OUTLOOK," includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. You can identify our forward-looking statements by the words "anticipate," "believe," "expect," "plan," "intend," "estimate," "project," "projection," "predict," "budget," "forecast," "goal," "guidance," "
"should," "may," and similar expressions.

These forward-looking statements include, among other things, statements regarding:

- future refining margins, including gasoline and distillate margins;
- future ethanol margins;
- expectations regarding feedstock costs, including crude oil differentials, and operating expenses;
- anticipated levels of crude oil and refined product inventories;
- our anticipated level of capital investments, including deferred costs for refinery turnarounds and catalyst, capital expenditures for environmental and other purposes, and joint venture investments, and the effect of those capital investments on our results of operations;
- anticipated trends in the supply of and demand for crude oil and other feedstocks and refined products in the regions where we operate, as well as globally;
- expectations regarding environmental, tax, and other regulatory initiatives; and
- the effect of general economic and other conditions on refining and ethanol industry fundamentals.

We based our forward-looking statements on our current expectations, estimates, and projections about ourselves and our industry. We caution that these statements are not guarantees of future performance and involve risks, uncertainties, and assumptions that we cannot predict. In addition, we based many of these forward-looking statements on assumptions about future events that may prove to be inaccurate. Accordingly, our actual results may differ materially from the future performance that we have expressed or forecast in the forward-looking statements. Differences between actual results and any future performance suggested in these forward-looking statements could result from a variety of factors, including the following:

- acts of terrorism aimed at either our facilities or other facilities that could impair our ability to produce or transport refined products or receive feedstocks;
- political and economic conditions in nations that produce crude oil or consume refined products;
- demand for, and supplies of, refined products such as gasoline, diesel, jet fuel, petrochemicals, and ethanol;
- demand for, and supplies of, crude oil and other feedstocks;
- the ability of the members of the Organization of Petroleum Exporting Countries to agree on and to maintain crude oil price and production controls;
- the level of consumer demand, including seasonal fluctuations;
- refinery overcapacity or undercapacity;
- our ability to successfully integrate any acquired businesses into our operations;

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- the actions taken by competitors, including both pricing and adjustments to refining capacity in response to market conditions;
- the level of competitors' imports into markets that we supply;
- accidents, unscheduled shutdowns, or other catastrophes affecting our refineries, machinery, pipelines, equipment, and information systems, or those of our suppliers or customers;
- changes in the cost or availability of transportation for feedstocks and refined products;
- the price, availability, and acceptance of alternative fuels and alternative-fuel vehicles;
- the levels of government subsidies for alternative fuels;
- the volatility in the market price of biofuel credits (primarily Renewable Identification Numbers (RINs) needed to comply with the U.S. federal Renewable Fuel Standard) and GHG emission credits needed to comply with the requirements of various GHG emission programs;
- delay of, cancellation of, or failure to implement planned capital projects and realize the various assumptions and benefits projected for such projects or cost overruns in constructing such planned capital projects;
- earthquakes, hurricanes, tornadoes, and irregular weather, which can unforeseeably affect the price or availability of natural gas, crude oil, grain and other feedstocks, and refined products and ethanol;
- rulings, judgments, or settlements in litigation or other legal or regulatory matters, including unexpected environmental remediation costs, in excess of any reserves or insurance coverage;
- legislative or regulatory action, including the introduction or enactment of legislation or rulemakings by governmental authorities, including tax and environmental regulations, such as those implemented under the California Global Warming Solutions Act (also known as AB 32), Quebec's Regulation respecting the cap-and-trade system for greenhouse gas emission allowances (the Quebec cap-and-trade system), and the U.S. EPA's regulation of GHGs, which may adversely affect our business or operations;
- changes in the credit ratings assigned to our debt securities and trade credit;
- changes in currency exchange rates, including the value of the Canadian dollar, the pound sterling, and the euro relative to the U.S. dollar;
- overall economic conditions, including the stability and liquidity of financial markets; and
- other factors generally described in the "Risk Factors" section included in Item 1A, "Risk Factors" in this report.

Any one of these factors, or a combination of these factors, could materially affect our future results of operations and whether any forward-looking statements ultimately prove to be accurate. Our forward-looking statements are not guarantees of future performance, and actual results and future performance may differ materially from those suggested in any forward-looking statements. We do not intend to update these statements unless we are required by the securities laws to do so.

All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the foregoing. We undertake no obligation to publicly release any revisions to any such forward-looking statements that may be made to reflect events or circumstances after the date of this report or to reflect the occurrence of unanticipated events.

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OVERVIEW AND OUTLOOK

Overview

For the year ended December 31, 2015, we reported net income attributable to Valero stockholders from continuing operations of $4.0 billion, or $7.99 per share (assuming dilution), compared to $3.7 billion, or $6.97 per share (assuming dilution), for the year ended December 31, 2014. Included in our 2015 results was a noncash charge for a lower of cost or market inventory valuation adjustment recorded in December 2015 of $790 million ($624 million after taxes, or $1.25 per share (assuming dilution)), of which $740 million was attributable to our refining segment and $50 million was attributable to our ethanol segment. This matter is more fully described in Note 6 of Notes to Consolidated Financial Statements. Included in our 2014 results was a last-in, first-out (LIFO) inventory gain of $233 million ($151 million after taxes, or $0.29 per share (assuming dilution)) primarily related to our refining segment.

Our operating income increased $456 million from 2014 to 2015 as outlined by business segment in the following table (in millions):

	Year Ended December 31,		
	2015	2014	Change
Operating income (loss) by business segment:			
Refining	$6,973	$5,884	$1,089
Ethanol	142	786	(644)
Corporate	(757)	(768)	11
Total	$6,358	$5,902	$456

However, excluding the effect of the lower of cost or market inventory valuation adjustment and the LIFO gain discussed above, total operating income for 2015 and 2014 was $7.1 billion and $5.7 billion, respectively, reflecting a $1.4 billion favorable increase between the years, with refining segment operating income of $7.7 billion and $5.6 billion, respectively, (a favorable increase of $2.1 billion) and ethanol segment operating income of $192 million and $782 million, (an unfavorable decrease of $590 million).

The $2.1 billion increase in refining segment operating income in 2015 compared to 2014 was due to higher margins on gasoline and other refined products (e.g., petroleum coke, propane, sulfur, and lubes), partially offset by lower discounts for most sweet and sour crude oils relative to Brent crude oil and lower distillate margins. Our ethanol segment operating income decreased $590 million in 2015 compared to 2014 due to lower ethanol margins that resulted from lower ethanol and co-product prices, partially offset by lower corn feedstock costs.

Additional details and analysis of the changes in the operating income of our business segments and other components of net income attributable to Valero stockholders are provided below under “RESULTS OF OPERATIONS.”

In March 2015, we issued $600 million of 3.65 percent senior notes due March 15, 2025 and $650 million of 4.9 percent senior notes due March 15, 2045, and our consolidated subsidiary, VLP, borrowed $200 million under its revolving credit facility (the VLP Revolver), as further described in Note 10 of Notes to Consolidated Financial Statements. On July 1, 2015, VLP repaid $25 million of the amount borrowed under the VLP Revolver.

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On July 13, 2015, our board of directors authorized us to purchase an additional $2.5 billion of our outstanding common stock, with no expiration date to such authorization, and we had $1.3 billion remaining available under that authorization as of December 31, 2015.

Effective November 24, 2015, VLP completed a public offering of 4,250,000 common units at a price of $46.25 per unit and received net proceeds from the offering of $189 million after deducting the underwriting discount and other offering costs. This transaction is further described in Note 4 of Notes to Consolidated Financial Statements.

Outlook

Energy markets and margins were volatile during 2015, and we expect them to continue to be volatile in the 2016. Below is a summary of factors that have impacted or may impact our results of operations during the first quarter of 2016:

- Gasoline margins have been volatile, but are expected to recover from seasonal lows in the near term as domestic and export demand is expected to increase. Distillate margins have been negatively impacted by mild winter temperatures and are also expected to recover from their seasonal lows.
- Medium and heavy sour crude oil discounts are expected to remain wide as sour crude oil remains oversupplied. Fuel oil price weakness has also put pressure on heavy sour crude oil discounts. Sweet crude oil discounts are expected to remain weak on lower domestic sweet crude oil production and higher foreign sweet and sour crude oil imports.
- Ethanol margins are expected to remain depressed as long as gasoline prices remain low.
- A further decline in market prices of crude oil and refined products may negatively impact the carrying value of our inventories.

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RESULTS OF OPERATIONS

The following tables highlight our results of operations, our operating performance, and market prices that directly impact our operations. The narrative following these tables provides an analysis of our results of operations.

2015 Compared to 2014

Financial Highlights

(millions of dollars, except per share amounts)

	Year Ended December 31,		
	2015	2014	Change
Operating revenues	$87,804	$130,844	$(43,040)
Costs and expenses:			
Cost of sales (excluding the lower of cost or market inventory valuation adjustment) (a)	73,861	118,141	(44,280)
Lower of cost or market inventory valuation adjustment (b)	790	—	790
Operating expenses:			
Refining	3,795	3,900	(105)
Ethanol	448	487	(39)
General and administrative expenses	710	724	(14)
Depreciation and amortization expense:			
Refining	1,745	1,597	148
Ethanol	50	49	1
Corporate	47	44	3
Total costs and expenses	81,446	124,942	(43,496)
Operating income	6,358	5,902	456
Other income, net	46	47	(1)
Interest and debt expense, net of capitalized interest	(433)	(397)	(36)
Income from continuing operations before income tax expense	5,971	5,552	419
Income tax expense	1,870	1,777	93
Income from continuing operations	4,101	3,775	326
Loss from discontinued operations	—	(64)	64
Net income	4,101	3,711	390
Less: Net income attributable to noncontrolling interests	111	81	30
Net income attributable to Valero Energy Corporation stockholders	$3,990	$3,630	$360
Net income attributable to Valero Energy Corporation stockholders:			
Continuing operations	$3,990	$3,694	$296
Discontinued operations	—	(64)	64
Total	$3,990	$3,630	$360
Earnings per common share – assuming dilution:			
Continuing operations	$7.99	$6.97	$1.02
Discontinued operations	—	(0.12)	0.12
Total	$7.99	$6.85	$1.14

See note references on page 32.

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Refining Operating Highlights
(millions of dollars, except per barrel amounts)

	Year Ended December 31,		
	2015	2014	Change
Refining (c):			
Operating income	$6,973	$5,884	$1,089
Throughput margin per barrel (a) (b) (d)	$12.97	$11.05	$1.92
Operating costs per barrel:			
Operating expenses	3.71	3.87	(0.16)
Depreciation and amortization expense	1.71	1.58	0.13
Total operating costs per barrel	5.42	5.45	(0.03)
Operating income per barrel	$7.55	$5.60	$1.95
Throughput volumes (thousand BPD):			
Feedstocks:			
Heavy sour crude oil	438	457	(19)
Medium/light sour crude oil	428	466	(38)
Sweet crude oil	1,208	1,149	59
Residuals	274	230	44
Other feedstocks	140	134	6
Total feedstocks	2,488	2,436	52
Blendstocks and other	311	329	(18)
Total throughput volumes	2,799	2,765	34
Yields (thousand BPD):			
Gasolines and blendstocks	1,364	1,329	35
Distillates	1,066	1,047	19
Other products (e)	408	423	(15)
Total yields	2,838	2,799	39

See note references on page 32.

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Refining Operating Highlights by Region (a) (b) (f)
(millions of dollars, except per barrel amounts)

	Year Ended December 31,		
	2015	2014	Change
U.S. Gulf Coast:			
Operating income	$3,978	$3,368	$610
Throughput volumes (thousand BPD)	1,592	1,600	(8)
Throughput margin per barrel (d)	$12.27	$11.03	$1.24
Operating costs per barrel:			
Operating expenses	3.64	3.66	(0.02)
Depreciation and amortization expense	1.78	1.60	0.18
Total operating costs per barrel	5.42	5.26	0.16
Operating income per barrel	$6.85	$5.77	$1.08
U.S. Mid-Continent:			
Operating income	$1,434	$1,323	$111
Throughput volumes (thousand BPD)	447	446	1
Throughput margin per barrel (d)	$14.09	$13.63	$0.46
Operating costs per barrel:			
Operating expenses	3.59	3.90	(0.31)
Depreciation and amortization expense	1.71	1.61	0.10
Total operating costs per barrel	5.30	5.51	(0.21)
Operating income per barrel	$8.79	$8.12	$0.67
North Atlantic:			
Operating income	$1,446	$911	$535
Throughput volumes (thousand BPD)	494	457	37
Throughput margin per barrel (d)	$12.06	$10.02	$2.04
Operating costs per barrel:			
Operating expenses	2.88	3.40	(0.52)
Depreciation and amortization expense	1.17	1.16	0.01
Total operating costs per barrel	4.05	4.56	(0.51)
Operating income per barrel	$8.01	$5.46	$2.55
U.S. West Coast:			
Operating income	$855	$53	$802
Throughput volumes (thousand BPD)	266	262	4
Throughput margin per barrel (d)	$17.00	$8.60	$8.40
Operating costs per barrel:			
Operating expenses	5.92	5.91	0.01
Depreciation and amortization expense	2.26	2.14	0.12
Total operating costs per barrel	8.18	8.05	0.13
Operating income per barrel	$8.82	$0.55	$8.27
Operating income for regions above	$7,713	$5,655	$2,058

Lower of cost or market inventory valuation adjustment (b)	(740)	—	(740)
LIFO gain (a)	—	229	(229)
Total refining operating income	$6,973	$5,884	$1,089

See note references on page 32.

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Average Market Reference Prices and Differentials
(dollars per barrel, except as noted)

	Year Ended December 31,		
	2015	2014	Change
Feedstocks:			
Brent crude oil	$53.62	$99.57	$(45.95)
Brent less West Texas Intermediate (WTI) crude oil	4.91	6.40	(1.49)
Brent less Alaska North Slope (ANS) crude oil	0.67	1.73	(1.06)
Brent less LLS crude oil	2.37	2.79	(0.42)
Brent less Mars crude oil	6.54	6.75	(0.21)
Brent less Maya crude oil	9.54	13.73	(4.19)
LLS crude oil	51.25	96.78	(45.53)
LLS less Mars crude oil	4.17	3.96	0.21
LLS less Maya crude oil	7.17	10.94	(3.77)
WTI crude oil	48.71	93.17	(44.46)
Natural gas (dollars per million British thermal units (MMBtu))	2.58	4.36	(1.78)
Products:			
U.S. Gulf Coast:			
CBOB gasoline less Brent	9.83	3.54	6.29
Ultra-low-sulfur diesel less Brent	12.64	14.28	(1.64)
Propylene less Brent	(5.94)	5.57	(11.51)
CBOB gasoline less LLS	12.20	6.33	5.87
Ultra-low-sulfur diesel less LLS	15.01	17.07	(2.06)
Propylene less LLS	(3.57)	8.36	(11.93)
U.S. Mid-Continent:			
CBOB gasoline less WTI	17.59	12.28	5.31
Ultra-low-sulfur diesel less WTI	19.02	24.05	(5.03)
North Atlantic:			
CBOB gasoline less Brent	12.85	9.07	3.78
Ultra-low-sulfur diesel less Brent	16.05	18.25	(2.20)
U.S. West Coast:			
CARBOB 87 gasoline less ANS	25.56	13.40	12.16
CARB diesel less ANS	16.90	19.14	(2.24)
CARBOB 87 gasoline less WTI	29.80	18.07	11.73
CARB diesel less WTI	21.14	23.81	(2.67)
New York Harbor corn crush (dollars per gallon)	0.22	0.85	(0.63)

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Ethanol Operating Highlights (a) (b)
(millions of dollars, except per gallon amounts)

	Year Ended December 31,		
	2015	2014	Change
Ethanol (c):			
Operating income	$192	$782	$(590)
Production (thousand gallons per day)	3,827	3,422	405
Gross margin per gallon of production (d)	$0.49	$1.06	$(0.57)
Operating costs per gallon of production:			
Operating expenses	0.32	0.39	(0.07)
Depreciation and amortization expense	0.03	0.04	(0.01)
Total operating costs per gallon of production	0.35	0.43	(0.08)
Operating income per gallon of production	$0.14	$0.63	$(0.49)
Operating income from above	$192	$782	$(590)
Lower of cost or market inventory valuation adjustment (b)	(50)	—	(50)
LIFO gain (a)	—	4	(4)
Total ethanol operating income	$142	$786	$(644)

See note references below.

The following notes relate to references on pages 28 through 32.

(a) Cost of sales for the year ended December 31, 2014 reflects a LIFO gain of $233 million ($151 million after taxes), of which $229 million is attributable to our refining segment and $4 million is attributable to our ethanol segment.

(b) These amounts have been excluded from (1) the segment and regional throughput margins per barrel and the regional operating income amounts for the refining segment, and (2) the operating income and gross margin per gallon of production amounts for the ethanol segment.

(c) In December 2015, we recorded a lower of cost or market inventory valuation adjustment of $790 million ($624 million after taxes), of which $740 million is attributable to our refining segment and $50 million is attributable to our ethanol segment. In accordance with U.S. generally accepted accounting principles (GAAP), we are required to state our inventories at the lower of cost or market. Cost is primarily determined using the LIFO inventory valuation methodology, whereby the most recently incurred costs are charged to cost of sales in the statement of income and inventories are valued at base layer acquisition costs in the balance sheet. Market is determined based on an assessment of the net realizable value of our inventory. In periods where the market price of our inventory falls below cost, we record an inventory valuation adjustment to write down the value to market in accordance with U.S. GAAP. The lower of cost or market inventory valuation adjustment for the year ended December 31, 2015 has been excluded from (1) the segment and regional throughput margins per barrel and the regional operating income amounts for the refining segment, and (2) the gross operating income and the gross margin per gallon of production amounts for the ethanol segment. This adjustment is further discussed in Note 6 of Notes to Consolidated Financial Statements.

(d) The LIFO gain of $233 million recorded in 2014 (see note (a)) and the lower of cost or market inventory valuation adjustment of $790 million recorded in 2015 (see note (b)) are reflected in refining operating income and ethanol operating income for the years ended December 31, 2015 and 2014, but are excluded from throughput margin per barrel and operating income per barrel for the refining segment, and from gross margin per gallon and operating income per gallon for the ethanol segment, respectively, as also described in notes (a) and (b).

(e) Throughput margin per barrel represents operating revenues less cost of sales of our refining segment divided by throughput volumes. Gross margin per gallon of production represents operating revenues less cost of sales of our ethanol segment divided by production volumes.

Other products primarily include petrochemicals, gas oils, No. 6 fuel oil, petroleum coke, sulfur, and asphalt.

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(f) The regions reflected herein contain the following refineries: the U.S. Gulf Coast region includes the Corpus Christi East, Corpus Christi West, Houston, Meraux, Port Arthur, St. Charles, Texas City, and Three Rivers Refineries; the U.S. Mid-Continent region includes the Ardmore, McKee, and Memphis Refineries; the North Atlantic region includes the Pembroke and Quebec City Refineries; and the U.S. West Coast region includes the Benicia and Wilmington Refineries.

General

Operating revenues decreased $43.0 billion (or 33 percent) and cost of sales decreased $44.3 billion (or 37 percent) for the year ended December 31, 2015 compared to the year ended December 31, 2014 primarily due to a decrease in refined product prices and crude oil feedstock costs, respectively. Despite the decrease in operating revenues, cost of sales decreased to a greater extent resulting in an increase in operating income of $456 million in 2015, with refining segment operating income increasing by $1.1 billion and ethanol segment operating income decreasing by $644 million. The reasons for these changes in the operating results of our segments and corporate expenses, as well as other items that affected our income, are discussed below.

Refining

Refining segment operating income increased $1.1 billion from $5.9 billion in 2014 to $7.0 billion in 2015. Excluding the effect of the lower of cost or market inventory valuation adjustment of $740 million in 2015 and the LIFO gain of $229 million in 2014, our refining segment operating income increased $2.1 billion. This increase was primarily due to a $2.1 billion (or $1.92 per barrel) increase in refining margin and a $105 million decrease in operating expenses, partially offset by a $148 million increase in depreciation and amortization expense.

The increase in refining margin of $2.1 billion was due primarily to the following:

- Increase in gasoline margins - We experienced an increase in gasoline margins throughout all our regions during 2015. For example, the Brent-based benchmark reference margin for U.S. Gulf Coast CBOB gasoline was $9.83 per barrel in 2015 compared to $3.54 per barrel in 2014, a favorable increase of $6.29 per barrel. Another example is the ANS-based reference margin for U.S. West Coast CARBOB gasoline that was $25.56 per barrel in 2015 compared to $13.40 per barrel in 2014, a favorable increase of $12.16 per barrel. We estimate that the increase in gasoline margins per barrel in 2015 compared to 2014 had a positive impact to our refining margin of approximately $2.9 billion.

- Increase in other refined products margins - We experienced an increase in the margins of other refined products such as petroleum coke, propane, sulfur, and lubes in 2015 compared to 2014. Margins for other refined products were higher during 2015 due to the lower cost of crude oils in 2015 compared to 2014. Because the market prices for our other refined products remain relatively stable, we benefit when the cost of crude oils that we process declines. For example, the benchmark price of Brent crude oil was $53.62 per barrel in 2015 compared to $99.57 per barrel in 2014. We estimate that the increase in margins for other refined products in 2015 compared to 2014 had a positive impact to our refining margin of approximately $1.6 billion.

- Lower discounts on light sweet and sour crude oils - Because the market prices for refined products generally track the price of Brent crude oil, which is a benchmark sweet crude oil, we benefit when we process crude oils that are priced at a discount to Brent crude oil. For 2015, the discount in the price of light sweet and sour crude oils compared to the price of Brent crude oil narrowed. Therefore, while we benefitted from processing crude oils priced at a discount to Brent crude oil, that benefit declined in 2015 compared to 2014. For example, we processed LLS crude oil (a type of light sweet crude oil) in our U.S. Gulf Coast region that sold at a discount of $2.37 per barrel to Brent crude oil in 2015 compared

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to $2.79 per barrel in 2014, representing an unfavorable decrease of $0.42 per barrel. Another example is Maya crude oil (a type of sour crude oil) that sold at a discount of $9.54 per barrel to Brent crude oil in 2015 compared to a discount of $13.73 per barrel in 2014, representing an unfavorable decrease of $4.19 per barrel. We estimate that the narrowing of the discounts for sweet crude oils and sour crude oils that we processed during 2015 had an unfavorable impact to our refining margin of approximately $260 million and $770 million, respectively.

- Lower benefit from processing other feedstocks - In addition to crude oil, we use other feedstocks and blendstocks in our refining processes, such as natural gas. When combined with steam, natural gas produces hydrogen that is used in our hydrotreater and hydrocracker processing units to produce refined products. Although natural gas costs declined from 2014 to 2015, the decline was not as significant as the decline in the cost of Brent crude oil; therefore, the benefit we normally derive by using natural gas as a feedstock declined. We estimate that the decline in the benefit we derived from processing other feedstocks had an unfavorable impact to our refining margin of approximately $980 million in 2015 compared to 2014.

- Decrease in distillate margins - We experienced a decrease in distillate margins throughout all our regions during 2015. For example, the WTI-based benchmark reference margin for U.S. Mid-Continent ultra-low-sulfur diesel (a type of distillate) was $19.02 per barrel in 2015 compared to $24.05 per barrel in 2014, an unfavorable decrease of $5.03 per barrel. Another example is the Brent-based benchmark reference margin for U.S. Gulf Coast ultra-low-sulfur diesel that was $12.64 per barrel in 2015 compared to $14.28 per barrel in 2014, an unfavorable decrease of $1.64 per barrel. We estimate that the decrease in distillate margins per barrel in 2015 compared to 2014 had an unfavorable impact to our refining margin of approximately $650 million.

- Higher throughput volumes - Refining throughput volumes increased by 34,000 BPD in 2015. We estimate that the increase in refining throughput volumes had a positive impact to our refining margin of approximately $160 million in 2015.

The decrease of $105 million in operating expenses was primarily due to a $196 million decrease in energy costs driven by lower natural gas prices ($2.58 per MMBtu in 2015 compared to $4.36 per MMBtu in 2014). This decrease in energy costs was partially offset by a $47 million increase in employee-related expenses primarily due to higher employee benefit costs and incentive compensation expenses, and a $26 million increase in costs associated with higher levels of maintenance activities in 2015.

The increase of $148 million in depreciation and amortization expense was primarily associated with the impact of new capital projects that began operating in 2015 and higher refinery turnaround and catalyst amortization.

Ethanol

Ethanol segment operating income was $142 million in 2015 compared to $786 million in 2014. Excluding the effect of the lower of cost or market inventory valuation adjustment of $50 million in 2015 and the LIFO gain of $4 million in 2014, our ethanol segment operating income decreased $590 million. This decrease was primarily due to a $628 million (or $0.57 per gallon) decrease in gross margin, partially offset by a $39 million decrease in operating expenses.

The decrease in ethanol gross margin of $628 million was due primarily to the following:

- Lower ethanol prices - Ethanol prices were lower in 2015 primarily due to the decrease in crude oil and gasoline prices in 2015 compared to 2014. For example, the New York Harbor ethanol price was $1.59 per

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gallon in 2015 compared to $2.37 per gallon in 2014. We estimate that the decrease in the price of ethanol per gallon during 2015 had an unfavorable impact to our ethanol margin of approximately $800 million.

- Lower corn prices - Corn prices were lower in 2015 compared to 2014 due to a higher domestic corn yield realized during the 2014 fall harvest (most of which is processed in the following year). For example, the Chicago Board of Trade (CBOT) corn price was $3.77 per bushel in 2015 compared to $4.16 per bushel in 2014. We estimate that the decrease in the price of corn that we processed during 2015 had a favorable impact to our ethanol margin of approximately $160 million.

- Lower co-product prices - The decrease in corn prices in 2015 compared to 2014 had a negative effect on the prices we received for corn-related ethanol co-products, such as distillers grains and corn oil. We estimate that the decrease in co-product prices had an unfavorable impact to our ethanol margin of approximately $40 million.

- Increased production volumes - Ethanol margin was favorably impacted by increased production volumes of 405,000 gallons per day in 2015. Production volumes in 2014 were negatively impacted by weather-related rail disruptions. In addition, production volumes in 2015 were positively impacted by production volumes from our Mount Vernon plant, which began operations in August 2014. We estimate that the increase in production volumes had a favorable impact to our ethanol margin of approximately $50 million.

The $39 million decrease in operating expenses was primarily due to a $40 million decrease in energy costs related to lower natural gas prices ($2.58 per MMBtu in 2015 compared to $4.36 per MMBtu in 2014).

Other

“Interest and debt expense, net of capitalized interest” increased by $36 million in 2015. This increase was primarily due to the impact from $1.25 billion of debt issued by Valero and $200 million borrowed by VLP under the VLP Revolver in 2015.

Income tax expense increased $93 million in 2015. This increase was lower than expected given the increase in income from continuing operations of $419 million and was due primarily to earnings from our international operations that are taxed at statutory tax rates that are lower than in the U.S. In addition, in 2015, the U.K. statutory rate was lowered and we favorably settled various U.S. income tax audits.

The loss from discontinued operations in 2014 includes expenses of $64 million primarily related to an asset retirement obligation associated with our decision in May 2014 to abandon the Aruba Refinery, as further described in Note 2 of Notes to Consolidated Financial Statements.

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2014 Compared to 2013

Financial Highlights (a)
(millions of dollars, except per share amounts)

	Year Ended December 31,		
	2014	2013 (c)	Change
Operating revenues	$130,844	$138,074	$(7,230)
Costs and expenses:			
Cost of sales (b)	118,141	127,316	(9,175)
Operating expenses:			
Refining	3,900	3,710	190
Retail	—	226	(226)
Ethanol	487	387	100
General and administrative expenses	724	758	(34)
Depreciation and amortization expense:			
Refining	1,597	1,566	31
Retail	—	41	(41)
Ethanol	49	45	4
Corporate	44	68	(24)
Total costs and expenses	124,942	134,117	(9,175)
Operating income	5,902	3,957	1,945
Gain on disposition of retained interest in CST Brands, Inc. (c)	—	325	(325)
Other income, net	47	59	(12)
Interest and debt expense, net of capitalized interest	(397)	(365)	(32)
Income from continuing operations before income tax expense	5,552	3,976	1,576
Income tax expense	1,777	1,254	523
Income from continuing operations	3,775	2,722	1,053
Income (loss) from discontinued operations	(64)	6	(70)
Net income	3,711	2,728	983
Less: Net income attributable to noncontrolling interest	81	8	73
Net income attributable to Valero Energy Corporation stockholders	$3,630	$2,720	$910
Net income attributable to Valero Energy Corporation stockholders:			
Continuing operations	$3,694	$2,714	$980
Discontinued operations	(64)	6	(70)
Total	$3,630	$2,720	$910
Earnings per common share – assuming dilution:			
Continuing operations	$6.97	$4.96	$2.01
Discontinued operations	(0.12)	0.01	(0.13)
Total	$6.85	$4.97	$1.88

See note references on page 40.

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Refining Operating Highlights (a)
(millions of dollars, except per barrel amounts)

	Year Ended December 31,		
	2014	2013	Change
Refining (d):			
Operating income	$5,884	$4,211	$1,673
Throughput margin per barrel (b) (e)	$11.05	$9.69	$1.36
Operating costs per barrel:			
Operating expenses	3.87	3.79	0.08
Depreciation and amortization expense	1.58	1.60	(0.02)
Total operating costs per barrel	5.45	5.39	0.06
Operating income per barrel	$5.60	$4.30	$1.30
Throughput volumes (thousand BPD):			
Feedstocks:			
Heavy sour crude oil	457	486	(29)
Medium/light sour crude oil	466	466	—
Sweet crude oil	1,149	1,039	110
Residuals	230	282	(52)
Other feedstocks	134	106	28
Total feedstocks	2,436	2,379	57
Blendstocks and other	329	303	26
Total throughput volumes	2,765	2,682	83
Yields (thousand BPD):			
Gasolines and blendstocks	1,329	1,287	42
Distillates	1,047	984	63
Other products (f)	423	440	(17)
Total yields	2,799	2,711	88

See note references on page 40.

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Refining Operating Highlights by Region (b) (g)
(millions of dollars, except per barrel amounts)

	Year Ended December 31,		
	2014	2013	Change
U.S. Gulf Coast (a):			
Operating income	$3,368	$2,375	$993
Throughput volumes (thousand BPD)	1,600	1,523	77
Throughput margin per barrel (e)	$11.03	$9.57	$1.46
Operating costs per barrel:			
Operating expenses	3.66	3.67	(0.01)
Depreciation and amortization expense	1.60	1.63	(0.03)
Total operating costs per barrel	5.26	5.30	(0.04)
Operating income per barrel	$5.77	$4.27	$1.50
U.S. Mid-Continent:			
Operating income	$1,323	$1,293	$30
Throughput volumes (thousand BPD)	446	435	11
Throughput margin per barrel (e)	$13.63	$13.37	$0.26
Operating costs per barrel:			
Operating expenses	3.90	3.58	0.32
Depreciation and amortization expense	1.61	1.64	(0.03)
Total operating costs per barrel	5.51	5.22	0.29
Operating income per barrel	$8.12	$8.15	$(0.03)
North Atlantic:			
Operating income	$911	$570	$341
Throughput volumes (thousand BPD)	457	459	(2)
Throughput margin per barrel (e)	$10.02	$7.93	$2.09
Operating costs per barrel:			
Operating expenses	3.40	3.50	(0.10)
Depreciation and amortization expense	1.16	1.03	0.13
Total operating costs per barrel	4.56	4.53	0.03
Operating income per barrel	$5.46	$3.40	$2.06
U.S. West Coast:			
Operating income (loss)	$53	$(27)	$80
Throughput volumes (thousand BPD)	262	265	(3)
Throughput margin per barrel (e)	$8.60	$7.43	$1.17
Operating costs per barrel:			
Operating expenses	5.91	5.35	0.56
Depreciation and amortization expense	2.14	2.35	(0.21)
Total operating costs per barrel	8.05	7.70	0.35
Operating income (loss) per barrel	$0.55	$(0.27)	$0.82
Operating income for regions above	$5,655	$4,211	$1,444

LIFO gain (b)	229	—	229
Total refining operating income	$5,884	$4,211	$1,673

See note references on page 40.

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Average Market Reference Prices and Differentials
(dollars per barrel, except as noted)

	Year Ended December 31,		
	2014	2013	Change
Feedstocks:			
Brent crude oil	$99.57	$108.74	$(9.17)
Brent less WTI crude oil	6.40	10.80	(4.40)
Brent less ANS crude oil	1.73	1.00	0.73
Brent less LLS crude oil	2.79	0.41	2.38
Brent less Mars crude oil	6.75	5.52	1.23
Brent less Maya crude oil	13.73	11.31	2.42
LLS crude oil	96.78	108.33	(11.55)
LLS less Mars crude oil	3.96	5.11	(1.15)
LLS less Maya crude oil	10.94	10.90	0.04
WTI crude oil	93.17	97.94	(4.77)
Natural gas (dollars per MMBtu)	4.36	3.69	0.67
Products:			
U.S. Gulf Coast:			
CBOB gasoline less Brent	3.54	2.69	0.85
Ultra-low-sulfur diesel less Brent	14.28	15.95	(1.67)
Propylene less Brent	5.57	(2.72)	8.29
CBOB gasoline less LLS	6.33	3.10	3.23
Ultra-low-sulfur diesel less LLS	17.07	16.36	0.71
Propylene less LLS	8.36	(2.31)	10.67
U.S. Mid-Continent:			
CBOB gasoline less WTI	12.28	16.77	(4.49)
Ultra-low-sulfur diesel less WTI	24.05	28.33	(4.28)
North Atlantic:			
CBOB gasoline less Brent	9.07	8.50	0.57
Ultra-low-sulfur diesel less Brent	18.25	17.84	0.41
U.S. West Coast:			
CARBOB 87 gasoline less ANS	13.40	12.69	0.71
CARB diesel less ANS	19.14	18.83	0.31
CARBOB 87 gasoline less WTI	18.07	22.49	(4.42)
CARB diesel less WTI	23.81	28.63	(4.82)
New York Harbor corn crush (dollars per gallon)	0.85	0.42	0.43

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Ethanol and Retail Operating Highlights
(millions of dollars, except per gallon amounts)

	Year Ended December 31,		
	2014	2013	Change
Ethanol (d):			
Operating income	$782	$491	$291
Production (thousand gallons per day)	3,422	3,294	128
Gross margin per gallon of production (e)	$1.06	$0.77	$0.29
Operating costs per gallon of production:			
Operating expenses	0.39	0.32	0.07
Depreciation and amortization expense	0.04	0.04	—
Total operating costs per gallon of production	0.43	0.36	0.07
Operating income per gallon of production	$0.63	$0.41	$0.22
Operating income from above	$782	$491	$291
LIFO gain (b)	4	—	4
Total ethanol operating income	$786	$491	$295
Retail:			
Operating income	$—	$81	$(81)

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See note references below.

The following notes relate to references on pages 36 through 40.

(a) In May 2014, we abandoned our Aruba Refinery, except for the associated crude oil and refined products terminal assets that we continue to operate. As a result, the refinery's results of operations have been presented as discontinued operations and the operating highlights for the refining segment and the U.S. Gulf Coast region exclude the Aruba Refinery for all years presented.This transaction is more fully described in Note 2 of Notes to Consolidated Financial Statements.

(b) Cost of sales for the year ended December 31, 2014 reflects a LIFO gain of $233 million ($151 million after taxes), of which $229 million is attributable to our refining segment and $4 million is attributable to our ethanol segment. These amounts have been excluded from (1) the segment and regional throughput margins per barrel and the regional operating income amounts for the refining segment, and (2) the operating income and gross margin per gallon of production amounts for the ethanol segment.

(c) On May 1, 2013, we completed the separation of our retail business. As a result and effective May 1, 2013, our results of operations no longer include those of CST, our former retail business. The nature and significance of our post-separation participation in the supply of motor fuel to CST represents a continuation of activities with CST for accounting purposes. As such, the historical results of operations related to CST have not been reported as discontinued operations in the statements of income. This transaction is more fully discussed in Note 3 of Notes to Consolidated Financial Statements.

(d) The LIFO gain of $233 million recorded in 2014 (see note (b)) is reflected in refining operating income and ethanol operating income for the year ended December 31, 2014, but is excluded from throughput margin per barrel and operating income per barrel for the refining segment, and from gross margin per gallon and operating income per gallon for the ethanol segment, respectively, as also described in note (b).

(e) Throughput margin per barrel represents operating revenues less cost of sales of our refining segment divided by throughput volumes. Gross margin per gallon of production represents operating revenues less cost of sales of our ethanol segment divided by production volumes.

(f) Other products primarily include petrochemicals, gas oils, No. 6 fuel oil, petroleum coke, sulfur, and asphalt.

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(g) The regions reflected herein contain the following refineries: the U.S. Gulf Coast region includes Corpus Christi East, Corpus Christi West, Houston, Meraux, Port Arthur, St. Charles, Texas City, and Three Rivers Refineries; the U.S. Mid-Continent region includes the Ardmore, McKee, and Memphis Refineries; the North Atlantic region includes the Pembroke and Quebec City Refineries; and the U.S. West Coast region includes the Benicia and Wilmington Refineries.

General

Operating revenues decreased $7.2 billion (or 5 percent) for the year ended December 31, 2014 compared to the year ended December 31, 2013. This decrease was primarily due to a decrease in refined product prices in all of our regions. Despite the decline in operating revenues, operating income increased $1.9 billion in 2014 due primarily to a $1.7 billion increase in refining segment operating income, a $295 million increase in ethanol segment operating income, and a $34 million decrease in general and administrative expenses, partially offset by an $81 million decrease in retail segment operating income due to the spin-off of our retail business in 2013 as mentioned previously. The reasons for these changes in the operating results of our segments and general and administrative expenses, as well as other items that affected our income, are discussed below.

Refining

Refining segment operating income increased $1.7 billion from $4.2 billion in 2013 to $5.9 billion in 2014. Excluding the LIFO gain of $229 million in 2014 related to our refining segment, our refining segment operating income increased by $1.4 billion. This increase was primarily due to a $1.7 billion (or $1.36 per barrel) increase in refining margin, partially offset by a $190 million increase in operating expenses and a $31 million increase in depreciation and amortization expense.

The increase in refining margin of $1.7 billion was due primarily to the following:

- Higher discounts on light sweet crude oils and sour crude oils - Because the market prices for refined products generally track the price of Brent crude oil, which is a benchmark sweet crude oil, we benefit when we process crude oils that are priced at a discount to Brent crude oil. For 2014, the discount in the price of some light sweet crude oils and sour crude oils compared to the price of Brent crude oil widened. For example, LLS crude oil processed in our U.S. Gulf Coast region, which is a light sweet crude oil, sold at a discount of $2.79 per barrel to Brent crude oil in 2014 compared to $0.41 per barrel in 2013, representing a favorable increase of $2.38 per barrel. Another example is Maya crude oil, a sour crude oil, which sold at a discount of $13.73 per barrel to Brent crude oil in 2014 compared to a discount of $11.31 per barrel in 2013, representing a favorable increase of $2.42 per barrel. We estimate that the discounts for light sweet crude oils and sour crude oils that we processed in 2014 had a positive impact to our refining margin of approximately $680 million and $800 million, respectively.

- Higher throughput volumes - Refining throughput volumes increased 83,000 BPD in 2014. We estimate that the increase in refining throughput volumes had a positive impact on our refining margin of approximately $340 million.

- Lower costs of biofuel credits - As more fully described in Note 20 of Notes to Consolidated Financial Statements, we purchase biofuel credits in order to meet our biofuel blending obligations under various government and regulatory compliance programs, and the cost of these credits (primarily RINs in the U.S.) decreased by $145 million from $517 million in 2013 to $372 million in 2014. This decrease was due primarily to a reduction in the market price of RINs between the years.

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- Increase in other refinery products margins - We experienced an increase in the margins of other refinery products relative to Brent crude oil, such as petroleum coke and sulfur during 2014 compared to 2013. Margins for other refinery products were higher during 2014 due to the decrease in the cost of crude oils during the year compared to 2013. For example, the benchmark price of Brent crude oil was $99.57 per barrel in 2014 compared to $108.74 in 2013. We estimate that the increase in other refinery products margins in 2014 had a positive impact to our refining margin of approximately $430 million.

- Decrease in distillate margins - We experienced a decrease in distillate margins in our U.S. Gulf Coast region primarily due to the decrease in refined product prices . For example, the Brent-based benchmark reference margin for U.S. Gulf Coast ultra-low sulfur diesel was $14.28 per barrel in 2014 compared to $15.95 per barrel in 2013, representing an unfavorable decrease of $1.67 per barrel. We estimate that the decline in distillate margins in 2014 had a negative impact to our refining margin of approximately $400 million.

The increase of $190 million in operating expenses was primarily due to a $128 million increase in energy costs related to higher natural gas prices ($4.36 per MMBtu in 2014 compared to $3.69 per MMBtu in 2013) and a $22 million increase in maintenance expense primarily related to higher levels of routine maintenance activities in 2014.

The increase of $31 million in depreciation and amortization expense was primarily due to additional depreciation expense of $25 million associated with the new hydrocracker unit at our St. Charles Refinery that began operating in July 2013.

Ethanol

Ethanol segment operating income was $786 million in 2014 compared to $491 million in 2013. The $295 million increase in operating income was due primarily to a $399 million (or $0.29 per gallon) increase in gross margin, partially offset by a $100 million increase in operating expenses.

The increase in ethanol gross margin of $399 million was due primarily to the following:

- Lower corn prices - Corn prices were lower in 2014 due to higher corn inventories in 2014 compared to 2013, which resulted from a higher yielding harvest in 2013 compared to the drought-stricken harvest of 2012. For example, the CBOT corn price was $4.16 per bushel in 2014 compared to $5.80 per bushel in 2013. The decrease in the price of corn that we processed during 2014 favorably impacted our ethanol margin by approximately $910 million.

- Lower ethanol prices - Ethanol prices were lower in 2014 due to higher ethanol inventories resulting from higher industry run rates in 2014 as compared to 2013. The decrease in crude oil and gasoline prices in 2014 also contributed to the decrease in ethanol prices. For example, the New York Harbor ethanol price was $2.37 per gallon in 2014 compared to $2.53 per gallon in 2013. The decrease in the price of ethanol per gallon during 2014 had an unfavorable impact to our ethanol margin of approximately $260 million.

- Lower co-product prices - The decrease in corn prices in 2014 had a negative effect on the prices we received for corn-related ethanol co-products, such as distillers grains and corn oil. The decrease in co-products prices had an unfavorable impact to our ethanol segment margin of approximately $250 million.

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The $100 million increase in operating expenses in 2014 was partially due to $22 million in operating expenses of the Mount Vernon plant acquired in March 2014. The remaining increase of $78 million was primarily due to increased energy costs and chemical costs. The increase in energy costs of $57 million was due primarily to the severe winter weather in the U.S. in the first quarter of 2014 that caused a significant increase in regional natural gas prices combined with higher use of natural gas due to the increase in production volumes. The increase in chemical costs of $16 million was due to higher production volumes.

Corporate Expenses and Other

General and administrative expenses decreased $34 million in 2014 primarily due to $30 million of transaction costs in 2013 related to the separation of our retail business on May 1, 2013.

Depreciation and amortization expense decreased $24 million primarily due to a $20 million loss on the sale of certain corporate property in 2013 that was reflected in depreciation and amortization expense.

“Interest and debt expense, net of capitalized interest” increased $32 million in 2014. This increase was primarily due to a $48 million decrease in capitalized interest due to the completion of several large capital projects during 2013, including the new hydrocracker at our St. Charles Refinery, partially offset by a $20 million favorable impact from a decrease in average borrowings.

Income tax expense increased $523 million in 2014 due to higher income from continuing operations before income tax expense. The effective rate for both years is lower than the U.S. statutory rate because income from continuing operations from our international operations was taxed at statutory rates that were lower than in the U.S. and due to a higher benefit from our U.S. manufacturing deduction.

Income (loss) from discontinued operations in 2014 includes expenses of $59 million for an asset retirement obligation and $4 million for certain contractual obligations associated with our decision in May 2014 to abandon the Aruba Refinery, as further described in Note 2 of Notes to Consolidated Financial Statements.

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LIQUIDITY AND CAPITAL RESOURCES

Cash Flows for the Year Ended December 31, 2015

Our operations generated $5.6 billion of cash in 2015, driven primarily by net income of $4.1 billion and excluding $2.6 billion of noncash charges to income ($1.8 billion for depreciation and amortization expense and $790 million for a lower of cost or market inventory valuation adjustment). See “RESULTS OF OPERATIONS” for further discussion of our operations. However, the change in working capital during the year had a negative impact to cash generated by our operations of $1.3 billion. This use of cash was composed primarily of (i) a decrease in accounts payable, net of a decrease in receivables, of $493 million, (ii) an increase in income taxes receivable and a decrease in income taxes payable totaling $432 million, and (iii) an increase in inventories of $222 million as shown in Note 18 of Notes to Consolidated Financial Statements. The unfavorable effect of accounts payable, net of accounts receivable, was mainly due to a decrease in commodity prices from December 2014 to December 2015. The unfavorable effect in income taxes was due to tax payments associated with the settlement of several IRS audits and an overpayment of taxes in 2015. This overpayment resulted from a change in the U.S. Federal tax laws late in the year that reinstated the bonus depreciation deduction, which lowered our current income tax expense. The unfavorable effect in inventories was mainly due to the build in inventory volumes in 2015 as we purchased crude oil at prices we deemed favorable during the fourth quarter of 2015.

The $5.6 billion of cash generated by our operations in 2015, along with (i) $1.45 billion in proceeds from the issuance of debt and (ii) net proceeds of $189 million from VLP’s public offering of 4,250,000 common units as discussed in Note 4 of Notes to Consolidated Financial Statements, were used mainly to:

- fund $2.5 billion of investing activities, including $2.4 billion in capital investments. Capital investments are comprised of capital expenditures, deferred turnaround and catalyst costs, and joint venture investments;
- make payments on debt and capital lease obligations of $513 million, of which $400 million related to our 4.5 percent senior notes, $75 million related to our 8.75 percent debentures, $25 million related to the VLP Revolver, $10 million related to capital lease obligations, and $3 million related to other non-bank debt;
- purchase common stock for treasury of $2.8 billion;
- pay common stock dividends of $848 million; and
- increase available cash on hand by $425 million.

Cash Flows for the Year Ended December 31, 2014

Our operations generated $4.2 billion of cash in 2014, driven primarily by net income of $3.7 billion and excluding $1.7 billion of noncash charges to income (primarily depreciation and amortization expense). See “RESULTS OF OPERATIONS” for further discussion of our operations. However, the change in our working capital during the year had a negative impact to cash generated by our operations of $1.8 billion. This use of cash was composed primarily of a decrease in accounts receivable of $2.8 billion, which was offset by a decrease in accounts payable of $3.1 billion, a decrease in income taxes payable of $319 million, and an increase in inventories of $1.0 billion as shown in Note 18 of Notes to Consolidated Financial Statements. The favorable effect in accounts receivable and the unfavorable effect in accounts payable were mainly due to a decrease in commodity prices from December 2013 to December 2014. The unfavorable effect associated with income taxes payable resulted from income tax payments exceeding income tax liabilities incurred in 2014 due to the payment of liabilities associated with prior period earnings. The unfavorable effect in inventories was mainly due to the build in inventory volumes from 2013 to 2014 as we purchased crude oil at prices we deemed favorable during the fourth quarter of 2014.

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The $4.2 billion of cash provided by our operations in 2014, along with $603 million from available cash on hand, was used mainly to:

- fund $2.8 billion of capital investments, which included capital expenditures and deferred turnaround and catalyst costs;
- make debt and capital lease obligations repayments of $204 million, of which $200 million related to our 4.75 percent senior notes, and $4 million related to capital lease obligations;
- purchase common stock for treasury of $1.3 billion; and
- pay common stock dividends of $554 million.

Capital Investments

We define capital investments as capital expenditures for additions to and improvements of our refining and ethanol segment assets (including turnaround and catalyst costs) and investments in joint ventures.

Our operations, especially those of our refining segment, are highly capital intensive. Each of our refineries comprises a large base of property assets, consisting of a series of interconnected, highly integrated and interdependent crude oil processing facilities and supporting logistical infrastructure (Units), and these Units are improved continuously. The cost of improvements, which consist of the addition of new Units and betterments of existing Units, can be significant. We have historically acquired our refineries at amounts significantly below their replacement costs, whereas our improvements are made at full replacement value. As such, the costs for improving our refinery assets increase over time and are significant in relation to the amounts we paid to acquire our refineries. We plan for these improvements by developing a multi-year capital program that is updated and revised based on changing internal and external factors.

We make improvements to our refineries in order to maintain and enhance their operating reliability, to meet environmental obligations with respect to reducing emissions and removing prohibited elements from the products we produce, or to enhance their profitability. Reliability and environmental improvements generally do not increase the throughput capacities of our refineries. Improvements that enhance refinery profitability may increase throughput capacity, but many of these improvements allow our refineries to process different types of crude oil and to refine crude oil into products with higher market values. Therefore, many of our improvements do not increase throughput capacity significantly.

We hold investments in joint ventures and we invest in these joint ventures or enter into new joint venture arrangements to enhance our operations. In December 2015, we exercised our option to purchase a 50 percent interest in Diamond Pipeline LLC (Diamond Pipeline), which was formed by Plains Pipeline, L.P. (Plains) to construct and operate a 440-mile, 20-inch crude oil pipeline expected to provide capacity of up to 200,000 BPD of domestic sweet crude oil from the Plains Cushing, Oklahoma terminal to our Memphis Refinery, with the ability to connect into the Capline Pipeline. The pipeline is expected to be completed in 2017 for an estimated $925 million, pending receipt of necessary regulatory approvals. We contributed $136 million upon exercise of our option and expect to invest an additional $170 million in 2016.

For 2016, we expect to incur approximately $2.6 billion for capital investments, including capital expenditures, deferred turnaround and catalyst costs, and joint venture investments. This consists of approximately $1.6 billion for stay-in-business capital and $1.0 billion for growth strategies, including our continued investment in Diamond Pipeline. This capital investment estimate excludes potential strategic acquisitions. We continuously evaluate our capital budget and make changes as conditions warrant.

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Contractual Obligations

Our contractual obligations as of December 31, 2015 are summarized below (in millions).

	Payments Due by Period						
	2016	2017	2018	2019	2020	Thereafter	Total
Debt and capital lease obligations (a)	$134	$966	$16	$766	$1,039	$4,517	$7,438
Operating lease obligations	430	283	200	143	100	311	1,467
Purchase obligations	14,975	3,204	2,458	1,197	985	4,535	27,354
Other long-term liabilities	—	172	134	131	125	1,049	1,611
Total	$15,539	$4,625	$2,808	$2,237	$2,249	$10,412	$37,870

(a) Debt obligations exclude amounts related to unamortized discount and fair value adjustments. Capital lease obligations include related interest expense. These items are further described in Note 10 of Notes to Consolidated Financial Statements.

Debt and Capital Lease Obligations

We have an accounts receivable sales facility with a group of third-party entities and financial institutions to sell eligible trade receivables on a revolving basis. In July 2015, we amended our agreement to decrease the facility from $1.5 billion to $1.4 billion and extended the maturity date to July 2016. As of December 31, 2015, the actual availability under the facility fell below the facility borrowing capacity to $1.1 billion primarily due to a decrease in eligible trade receivables as a result of the ongoing decline in the market prices of the finished products that we produce. As of December 31, 2015, the amount of eligible receivables sold was $100 million. All amounts outstanding under this facility are reflected as debt.

Our debt and financing agreements do not have rating agency triggers that would automatically require us to post additional collateral. However, in the event of certain downgrades of our senior unsecured debt by the ratings agencies, the cost of borrowings under some of our bank credit facilities and other arrangements would increase. All of our ratings on our senior unsecured debt are at or above investment grade level as follows:

Rating Agency	Rating
Moody’s Investors Service	Baa2 (stable outlook)
Standard & Poor’s Ratings Services	BBB (stable outlook)
Fitch Ratings	BBB (stable outlook)

We cannot provide assurance that these ratings will remain in effect for any given period of time or that one or more of these ratings will not be lowered or withdrawn entirely by a rating agency. We note that these credit ratings are not recommendations to buy, sell, or hold our securities and may be revised or withdrawn at any time by the rating agency. Each rating should be evaluated independently of any other rating. Any future reduction below investment grade or withdrawal of one or more of our credit ratings could have a material adverse impact on our ability to obtain short- and long-term financing and the cost of such financings.

Operating Lease Obligations

Our operating lease obligations include leases for land, office facilities and equipment, transportation equipment, time charters for ocean-going tankers and coastal vessels, dock facilities, and various facilities and equipment used in the storage, transportation, production, and sale of refinery feedstocks, refined products, and corn inventories. Operating lease obligations include all operating leases that have initial or

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remaining noncancelable terms in excess of one year, and are not reduced by minimum rentals to be received by us under subleases.

Purchase Obligations

A purchase obligation is an enforceable and legally binding agreement to purchase goods or services that specifies significant terms, including (i) fixed or minimum quantities to be purchased, (ii) fixed, minimum, or variable price provisions, and (iii) the approximate timing of the transaction. We have various purchase obligations including industrial gas and chemical supply arrangements (such as hydrogen supply arrangements), crude oil and other feedstock supply arrangements, and various throughput and terminalling agreements. We enter into these contracts to ensure an adequate supply of utilities and feedstock and adequate storage capacity to operate our refineries. Substantially all of our purchase obligations are based on market prices or adjustments based on market indices. Certain of these purchase obligations include fixed or minimum volume requirements, while others are based on our usage requirements. The purchase obligation amounts shown in the table above include both short- and long-term obligations and are based on (a) fixed or minimum quantities to be purchased and (b) fixed or estimated prices to be paid based on current market conditions.

Other Long-term Liabilities

Our other long-term liabilities are described in Note 9 of Notes to Consolidated Financial Statements. For purposes of reflecting amounts for other long-term liabilities in the table above, we made our best estimate of expected payments for each type of liability based on information available as of December 31, 2015.

Summary of Credit Facilities

As of December 31, 2015, we had outstanding borrowings and letters of credit issued under our credit facilities as follows (in millions):

			December 31, 2015		
	Facility Amount	Maturity Date	Borrowings	Letters of Credit	Available
Committed facilities:					
Revolver	$ 3,000	November 2020	$ —	$ 57	$ 2,943
VLP Revolver	$ 750	November 2020	$ 175	$ —	$ 575
Canadian Revolver	C$50	November 2016	C$—	C$10	C$40
Accounts receivable sales facility	$ 1,400	July 2016	$ 100	$ —	$ 992
Letter of credit facilities	$ 275	June 2016 and November 2016	$ —	$ 9	$ 266
Uncommitted facilities:					
Letter of credit facilities	$ 775	N/A	$ —	$ 87	$ 688

Letters of credit issued as of December 31, 2015 expire in 2016 through 2018.

Off-Balance Sheet Arrangements

We have not entered into any transactions, agreements, or other contractual arrangements that would result in off-balance sheet liabilities.

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Other Matters Impacting Liquidity and Capital Resources

Stock Purchase Programs

On July 13, 2015, our board of directors authorized us to purchase an additional $2.5 billion of our outstanding common stock with no expiration date to such authorization. This authorization was in addition to the remaining amount available under a $3 billion program previously authorized. During the third quarter of 2015, we completed our purchases under the $3 billion program. As of December 31, 2015, we had approximately $1.3 billion remaining available under the $2.5 billion program, but we have no obligation to make purchases under this program.

Pension Plan Funding

We plan to contribute approximately $36 million to our pension plans and $20 million to our other postretirement benefit plans during 2016.

Environmental Matters

Our operations are subject to extensive environmental regulations by governmental authorities relating to the discharge of materials into the environment, waste management, pollution prevention measures, GHG emissions, and characteristics and composition of gasolines and distillates. Because environmental laws and regulations are becoming more complex and stringent and new environmental laws and regulations are continuously being enacted or proposed, the level of future expenditures required for environmental matters could increase in the future as previously discussed above in “OUTLOOK.” In addition, any major upgrades in any of our operating facilities could require material additional expenditures to comply with environmental laws and regulations. See Notes 9 and 11 of Notes to Consolidated Financial Statements for a further discussion of our environmental matters.

Tax Matters

The IRS has ongoing tax audits related to our U.S. federal tax returns from 2008 through 2011, and we have received Revenue Agent Reports (RARs) in connection with the audits for tax years 2008 and 2009. We are contesting certain tax positions and assertions included in the RARs and continue to make progress in resolving certain of these matters with the IRS. During 2015, we settled the audits related to our 2004 through 2007 tax years consistent with the recorded amounts of uncertain tax position liabilities associated with those audits. In addition, we expect to settle our audit for tax years 2008 and 2009 within the next 12 months and we believe it will be settled for amounts consistent with the recorded amounts of uncertain tax position liabilities associated with that audit. As a result, we have classified a portion of our uncertain tax position liabilities as a current liability. Our net uncertain tax position liabilities, including related penalties and interest, was $391 million as of December 31, 2015. Should we ultimately settle for amounts consistent with our estimates, we believe that we will have sufficient cash on hand at that time to make such payments.

Cash Held by Our International Subsidiaries

We operate in countries outside the U.S. through subsidiaries incorporated in these countries, and the earnings of these subsidiaries are taxed by the countries in which they are incorporated. We intend to reinvest these earnings indefinitely in our international operations even though we are not restricted from repatriating such earnings to the U.S. in the form of cash dividends. Should we decide to repatriate such earnings, we would incur and pay taxes on the amounts repatriated. In addition, such repatriation could cause us to record deferred tax expense that could significantly impact our results of operations, as further discussed in Note 15 of Notes to Consolidated Financial Statements. We believe, however, that a substantial portion of our international cash can be returned to the U.S. without significant tax consequences through means other than a repatriation of earnings. As of December 31, 2015, $1.7 billion of our cash and temporary cash investments was held by our international subsidiaries.

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Emissions Allowances and Cap-and-Trade
The cost to implement certain provisions of the AB 32 cap-and-trade system and low carbon fuel standard in California and the Quebec cap-and-trade system are significant; however, we are recovering the majority of these costs from our customers. If we are unable to recover these costs from our customers in the future, we believe that we will have sufficient cash on hand to cover these costs.

Concentration of Customers
Our operations have a concentration of customers in the refining industry and customers who are refined product wholesalers and retailers. These concentrations of customers may impact our overall exposure to credit risk, either positively or negatively, in that these customers may be similarly affected by changes in economic or other conditions. However, we believe that our portfolio of accounts receivable is sufficiently diversified to the extent necessary to minimize potential credit risk. Historically, we have not had any significant problems collecting our accounts receivable.

Sources of Liquidity
We believe that we have sufficient funds from operations and, to the extent necessary, from borrowings under our credit facilities, to fund our ongoing operating requirements. We expect that, to the extent necessary, we can raise additional funds from time to time through equity or debt financings in the public and private capital markets or the arrangement of additional credit facilities. However, there can be no assurances regarding the availability of any future financings or additional credit facilities or whether such financings or additional credit facilities can be made available on terms that are acceptable to us.

NEW ACCOUNTING PRONOUNCEMENTS

As discussed in Note 1 of Notes to Consolidated Financial Statements, certain new financial accounting pronouncements will become effective for our financial statements in the future. The adoption of these pronouncements is not expected to have a material effect on our financial statements, except as otherwise disclosed.

CRITICAL ACCOUNTING POLICIES INVOLVING CRITICAL ACCOUNTING ESTIMATES

The preparation of financial statements in accordance with U.S. GAAP requires us to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates. The following summary provides further information about our critical accounting policies that involve critical accounting estimates, and should be read in conjunction with Note 1 of Notes to Consolidated Financial Statements, which summarizes our significant accounting policies. The following accounting policies involve estimates that are considered critical due to the level of subjectivity and judgment involved, as well as the impact on our financial position and results of operations. We believe that all of our estimates are reasonable. Unless otherwise noted, estimates of the sensitivity to earnings that would result from changes in the assumptions used in determining our estimates is not practicable due to the number of assumptions and contingencies involved, and the wide range of possible outcomes.

Lower of Cost or Market Inventory Valuation
Inventories are carried at the lower of cost or market. Cost is principally determined under the LIFO method using the dollar-value LIFO approach. Market value is determined based on the net realizable value of the inventories.

We compare the market value of inventories to their cost on an aggregate basis, excluding materials and supplies. In determining the market value of our inventories, we assume our refinery and ethanol feedstocks

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are converted into refined products, which requires us to make estimates regarding the refined products expected to be produced from those feedstocks and the conversion costs required to convert those feedstocks into refined products. We also estimate the usual and customary transportation costs required to move the inventory from our refineries and ethanol plants to the appropriate points of sale. We then apply an estimated selling price to our inventories. If the aggregate market value is less than cost, we record a lower of cost or market inventory valuation adjustment to reflect our inventories at market value.

The lower of cost or market inventory valuation adjustment for the year ended December 31, 2015 is discussed in Note 6 of Notes to Consolidated Financial Statements.

Property, Plant, and Equipment

Depreciation of property assets used in our refining segment is recorded on a straight-line basis over the estimated useful lives of these assets primarily using the composite method of depreciation. We maintain a separate composite group of property assets for each of our refineries. We estimate the useful life of each group based on an evaluation of the property assets comprising the group, and such evaluations consist of, but are not limited to, the physical inspection of the assets to determine their condition, consideration of the manner in which the assets are maintained, assessment of the need to replace assets, and evaluation of the manner in which improvements impact the useful life of the group. The estimated useful lives of our composite groups range primarily from 25 to 30 years.

Under the composite method of depreciation, the cost of an improvement is added to the composite group to which it relates and is depreciated over that group’s estimated useful life. We design improvements to our refineries in accordance with engineering specifications, design standards, and practices accepted in our industry, and these improvements have design lives consistent with our estimated useful lives. Therefore, we believe the use of the group life to depreciate the cost of improvements made to the group is reasonable because the estimated useful life of each improvement is consistent with that of the group. It should be noted, however, that factors such as competition, regulation, or environmental matters could cause us to change our estimates, thus impacting depreciation expense in the future.

Impairment of Assets

Long-lived assets and equity method investments are tested for recoverability whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. An impairment loss should be recognized if the carrying amount of the asset exceeds its fair value.

In order to test for recoverability, we must make estimates of projected cash flows related to the asset being evaluated, which include, but are not limited to, assumptions about the use or disposition of the asset, its estimated remaining life, and future expenditures necessary to maintain its existing service potential. In order to determine fair value, management must make certain estimates and assumptions including, among other things, an assessment of market conditions, projected cash flows, investment rates, interest/equity rates, and growth rates, that could significantly impact the fair value of the asset being tested for impairment. Our impairment evaluations are based on assumptions that we deem to be reasonable.

Environmental Matters

Our operations are subject to extensive environmental regulations by governmental authorities relating primarily to the discharge of materials into the environment, waste management, and pollution prevention measures. Future legislative action and regulatory initiatives, as discussed in Note 11 of Notes to Consolidated Financial Statements could result in changes to required operating permits, additional remedial actions, or increased capital expenditures and operating costs that cannot be assessed with certainty at this time.

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Accruals for environmental liabilities are based on best estimates of probable undiscounted future costs over a 20-year time period using currently available technology and applying current regulations, as well as our own internal environmental policies. However, environmental liabilities are difficult to assess and estimate due to uncertainties related to the magnitude of possible remediation, the timing of such remediation, and the determination of our obligation in proportion to other parties. Such estimates are subject to change due to many factors, including the identification of new sites requiring remediation, changes in environmental laws and regulations and their interpretation, additional information related to the extent and nature of remediation efforts, and potential improvements in remediation technologies.

The amount of our accruals for environmental matters as of December 31, 2015 and 2014 are included in Note 9 of Notes to Consolidated Financial Statements.

Pension and Other Postretirement Benefit Obligations

We have significant pension and other postretirement benefit liabilities and costs that are developed from actuarial valuations. Inherent in these valuations are key assumptions including discount rates, expected return on plan assets, future compensation increases, and health care cost trend rates. These assumptions are disclosed and described in Note 13 of Notes to Consolidated Financial Statements. Changes in these assumptions are primarily influenced by factors outside of our control. For example, the discount rate assumption represents a yield curve comprised of various long-term bonds that have an average rating of double-A when averaging all available ratings by the recognized rating agencies, while the expected return on plan assets is based on a compounded return calculated assuming an asset allocation that is representative of the asset mix in our pension plans. To determine the expected return on plan assets, we utilized a forward-looking model of asset returns. The historical geometric average return over the 10 years prior to December 31, 2015 was 5.69 percent. The actual return on assets for the years ended December 31, 2015, 2014, and 2013 was 1.46 percent, 7.33 percent, and 19.38 percent, respectively. These assumptions can have a significant effect on the amounts reported in our financial statements. For example, a 0.25 percent decrease in the assumptions related to the discount rate or expected return on plan assets or a 0.25 percent increase in the assumptions related to the health care cost trend rate or rate of compensation increase would have the following effects on the projected benefit obligation as of December 31, 2015 and net periodic benefit cost for the year ending December 31, 2016 (in millions):

	Pension Benefits	Other Postretirement Benefits
Increase in projected benefit obligation resulting from:		
Discount rate decrease	$101	$11
Compensation rate increase	10	n/a
Health care cost trend rate increase	n/a	1
Increase in expense resulting from:		
Discount rate decrease	9	—
Expected return on plan assets decrease	5	n/a
Compensation rate increase	3	n/a
Health care cost trend rate increase	n/a	—

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Beginning in 2016, our net periodic benefit cost will be determined using the spot-rate approach. Under this approach, our net periodic benefit cost will be impacted by the spot rates of the corporate bond yield curve used to calculate our liability discount rate. If the yield curve were to flatten entirely and our liability discount rate remained unchanged, our net periodic benefit cost would increase by $19 million for pension benefits and $3 million for other postretirement benefits in 2016.

See Note 13 of Notes to Consolidated Financial Statements for a further discussion of our pension and other postretirement benefit obligations.

Tax Matters

We record tax liabilities based on our assessment of existing tax laws and regulations. A contingent loss related to an indirect tax (excise/duty, sales/use, gross receipts, and/or value-added tax) claim is recorded if the loss is both probable and estimable. The recording of our tax liabilities requires significant judgments and estimates. Actual tax liabilities can vary from our estimates for a variety of reasons, including different interpretations of tax laws and regulations and different assessments of the amount of tax due. In addition, in determining our income tax provision, we must assess the likelihood that our deferred tax assets, primarily consisting of net operating loss and tax credit carryforwards, will be recovered through future taxable income. Judgment is required in estimating the amount of a valuation allowance, if any, that should be recorded against those deferred income tax assets. If our actual results of operations differ from such estimates or our estimates of future taxable income change, the valuation allowance may need to be revised. See Notes 11 and 15 of Notes to Consolidated Financial Statements for a further discussion of our tax liabilities.

Legal Matters

A variety of claims have been made against us in various lawsuits. We record a liability related to a loss contingency attributable to such legal matters if we determine that it is probable that a loss has been incurred and that the loss is reasonably estimable. The recording of such liabilities requires judgments and estimates, the results of which can vary significantly from actual litigation results due to differing interpretations of relevant law and differing opinions regarding the degree of potential liability and the assessment of reasonable damages.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

COMMODITY PRICE RISK

We are exposed to market risks related to the volatility in the price of crude oil, refined products (primarily gasoline and distillate), grain (primarily corn), and natural gas used in our operations. To reduce the impact of price volatility on our results of operations and cash flows, we use commodity derivative instruments, including swaps, futures, and options to manage the volatility of:

- inventories and firm commitments to purchase inventories generally for amounts by which our current year inventory levels (determined on a LIFO basis) differ from our previous year-end LIFO inventory levels and
- forecasted feedstock and refined product purchases, refined product sales, natural gas purchases, and corn purchases to lock in the price of those forecasted transactions at existing market prices that we deem favorable.

We use the futures markets for the available liquidity, which provides greater flexibility in transacting our price risk activities. We use swaps primarily to manage our price exposure. We also enter into certain commodity derivative instruments for trading purposes to take advantage of existing market conditions related to future results of operations and cash flows.

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Our positions in commodity derivative instruments are monitored and managed on a daily basis by our risk control group to ensure compliance with our stated risk management policy that has been approved by our board of directors.

The following sensitivity analysis includes all positions at the end of the reporting period with which we have market risk (in millions):

	Derivative Instruments Held For	
	Non-Trading Purposes	Trading Purposes
December 31, 2015:		
Gain (loss) in fair value resulting from:		
10% increase in underlying commodity prices	$(45)	$—
10% decrease in underlying commodity prices	45	5
December 31, 2014:		
Gain (loss) in fair value resulting from:		
10% increase in underlying commodity prices	(127)	(2)
10% decrease in underlying commodity prices	126	7

See Note 20 of Notes to Consolidated Financial Statements for notional volumes associated with these derivative contracts as of December 31, 2015.

COMPLIANCE PROGRAM PRICE RISK

We are exposed to market risk related to the volatility in the price of biofuel credits and GHG emission credits needed to comply with various governmental and regulatory programs. To manage these risks, we enter into contracts to purchase these credits when prices are deemed favorable. Some of these contracts are derivative instruments; however, we elect the normal purchase exception and do not record these contracts at their fair values. As of December 31, 2015, there was an immaterial amount of gain or loss in the fair value of derivative instruments that would result from a 10 percent increase or decrease in the underlying price of the contracts. See Note 20 of Notes to Consolidated Financial Statements for a discussion about these compliance programs.

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INTEREST RATE RISK

The following table provides information about our debt obligations (dollars in millions), the fair values of which are sensitive to changes in interest rates. Principal cash flows and related weighted-average interest rates by expected maturity dates are presented. We had no interest rate derivative instruments outstanding as of December 31, 2015 or 2014.

	December 31, 2015 Expected Maturity Dates							
	2016	2017	2018	2019	2020	There-after	Total (a)	Fair Value
Fixed rate	$—	$950	$—	$750	$850	$4,474	$7,024	$7,467
Average interest rate	— %	6.4 %	— %	9.4 %	6.1 %	6.3 %	6.6 %	
Floating rate	$117	$—	$—	$—	$175	$—	$292	$292
Average interest rate	1.7 %	— %	— %	— %	1.5 %	— %	1.6 %	

	December 31, 2014 Expected Maturity Dates							
	2015	2016	2017	2018	2019	There-after	Total (a)	Fair Value
Fixed rate	$475	$—	$950	$—	$750	$4,074	$6,249	$7,436
Average interest rate	5.2 %	— %	6.4 %	— %	9.4 %	6.9 %	7.0 %	
Floating rate	$126	$—	$—	$—	$—	$—	$126	$126
Average interest rate	2.0 %	— %	— %	— %	— %	— %	2.0 %	

(a) Excludes unamortized discount and fair value adjustments recorded when the debt was acquired in connection with a business combination.

FOREIGN CURRENCY RISK

As of December 31, 2015, we had commitments to purchase $292 million of U.S. dollars. Our market risk was minimal on these contracts, as all of them matured on or before January 31, 2016, resulting in a gain of $10 million in the first quarter of 2016.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for establishing and maintaining adequate "internal control over financial reporting" (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) for Valero. Our management evaluated the effectiveness of Valero's internal control over financial reporting as of December 31, 2015. In its evaluation, management used the criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Management believes that as of December 31, 2015, our internal control over financial reporting was effective based on those criteria.

Our independent registered public accounting firm has issued an attestation report on the effectiveness of our internal control over financial reporting, which begins on page 57 of this report.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Valero Energy Corporation:

We have audited the accompanying consolidated balance sheets of Valero Energy Corporation and subsidiaries (the Company) as of December 31, 2015 and 2014, and the related consolidated statements of income, comprehensive income, equity, and cash flows for each of the years in the three-year period ended December 31, 2015. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Valero Energy Corporation and subsidiaries as of December 31, 2015 and 2014, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2015, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the PCAOB, the Company's 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, and our report dated February 25, 2016 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG LLP

San Antonio, Texas
February 25, 2016

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Valero Energy Corporation:

We have audited Valero Energy Corporation (the Company's) 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 maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States) (the PCAOB). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of 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.

In our opinion, Valero Energy Corporation 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 COSO.

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We also have audited, in accordance with the standards of the PCAOB, the consolidated balance sheets of Valero Energy Corporation and subsidiaries as of December 31, 2015 and 2014, and the related consolidated statements of income, comprehensive income, equity, and cash flows for each of the years in the three-year period ended December 31, 2015, and our report dated February 25, 2016 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP

San Antonio, Texas
February 25, 2016

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VALERO ENERGY CORPORATION
CONSOLIDATED BALANCE SHEETS
(Millions of Dollars, Except Par Value)

	December 31, 2015	2014
ASSETS		
Current assets:		
Cash and temporary cash investments	$4,114	$3,689
Receivables, net	4,464	5,879
Inventories	5,898	6,623
Income taxes receivable	218	97
Deferred income taxes	74	162
Prepaid expenses and other	204	164
Total current assets	14,972	16,614
Property, plant, and equipment, at cost	36,907	35,933
Accumulated depreciation	(10,204)	(9,198)
Property, plant, and equipment, net	26,703	26,735
Deferred charges and other assets, net	2,668	2,201
Total assets	$44,343	$45,550
LIABILITIES AND EQUITY		
Current liabilities:		
Current portion of debt and capital lease obligations	$127	$606
Accounts payable	4,907	6,760
Accrued expenses	554	596
Taxes other than income taxes	1,069	1,209
Income taxes payable	337	433
Deferred income taxes	366	376
Total current liabilities	7,360	9,980
Debt and capital lease obligations, less current portion	7,250	5,780
Deferred income taxes	6,768	6,607
Other long-term liabilities	1,611	1,939
Commitments and contingencies		
Equity:		
Valero Energy Corporation stockholders' equity:		
Common stock, $0.01 par value; 1,200,000,000 shares authorized; 673,501,593 and 673,501,593 shares issued	7	7
Additional paid-in capital	7,064	7,116
Treasury stock, at cost; 200,462,208 and 159,202,872 common shares	(10,799)	(8,125)
Retained earnings	25,188	22,046
Accumulated other comprehensive loss	(933)	(367)
Total Valero Energy Corporation stockholders' equity	20,527	20,677
Noncontrolling interests	827	567
Total equity	21,354	21,244
Total liabilities and equity	$44,343	$45,550

See Notes to Consolidated Financial Statements.

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VALERO ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF INCOME
(Millions of Dollars, Except per Share Amounts)

	Year Ended December 31,		
	2015	2014	2013
Operating revenues (a)	$87,804	$130,844	$138,074
Costs and expenses:			
Cost of sales (excluding the lower of cost or market inventory valuation adjustment)	73,861	118,141	127,316
Lower of cost or market inventory valuation adjustment	790	—	—
Operating expenses	4,243	4,387	4,323
General and administrative expenses	710	724	758
Depreciation and amortization expense	1,842	1,690	1,720
Total costs and expenses	81,446	124,942	134,117
Operating income	6,358	5,902	3,957
Gain on disposition of retained interest in CST Brands, Inc.	—	—	325
Other income, net	46	47	59
Interest and debt expense, net of capitalized interest	(433)	(397)	(365)
Income from continuing operations before income tax expense	5,971	5,552	3,976
Income tax expense	1,870	1,777	1,254
Income from continuing operations	4,101	3,775	2,722
Income (loss) from discontinued operations	—	(64)	6
Net income	4,101	3,711	2,728
Less: Net income attributable to noncontrolling interests	111	81	8
Net income attributable to Valero Energy Corporation stockholders	$3,990	$3,630	$2,720
Net income attributable to Valero Energy Corporation stockholders:			
Continuing operations	$3,990	$3,694	$2,714
Discontinued operations	—	(64)	6
Total	$3,990	$3,630	$2,720
Earnings per common share:			
Continuing operations	$8.00	$7.00	$4.98
Discontinued operations	—	(0.12)	0.01
Total	$8.00	$6.88	$4.99
Weighted-average common shares outstanding (in millions)	497	526	542
Earnings per common share – assuming dilution:			
Continuing operations	$7.99	$6.97	$4.96
Discontinued operations	—	(0.12)	0.01
Total	$7.99	$6.85	$4.97
Weighted-average common shares outstanding – assuming dilution (in millions)	500	530	548
Dividends per common share	$1.70	$1.05	$0.85

Supplemental information:

(a) Includes excise taxes on sales by certain of our international operations	$5,980	$5,901	$5,459

See Notes to Consolidated Financial Statements.

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VALERO ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Millions of Dollars)

	Year Ended December 31,		
	2015	2014	2013
Net income	$4,101	$3,711	$2,728
Other comprehensive income (loss):			
Foreign currency translation adjustment	(606)	(407)	(98)
Net gain (loss) on pension and other postretirement benefits	57	(475)	763
Net gain (loss) on derivative instruments designated and qualifying as cash flow hedges	—	1	(2)
Other comprehensive income (loss) before income tax expense (benefit)	(549)	(881)	663
Income tax expense (benefit) related to items of other comprehensive income (loss)	17	(164)	262
Other comprehensive income (loss)	(566)	(717)	401
Comprehensive income	3,535	2,994	3,129
Less: Comprehensive income attributable to noncontrolling interests	111	81	8
Comprehensive income attributable to Valero Energy Corporation stockholders	$3,424	$2,913	$3,121

See Notes to Consolidated Financial Statements.

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VALERO ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF EQUITY
(Millions of Dollars)

	Valero Energy Corporation Stockholders' Equity							
	Common Stock	Additional Paid-in Capital	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total	Non-controlling Interests	Total Equity
Balance as of December 31, 2012	$7	$7,322	$(6,437)	$17,032	$108	$18,032	$63	$18,095
Net income	—	—	—	2,720	—	2,720	8	2,728
Dividends on common stock	—	—	—	(462)	—	(462)	—	(462)
Stock-based compensation expense	—	64	—	—	—	64	—	64
Tax deduction in excess of stock-based compensation expense	—	47	—	—	—	47	—	47
Transactions in connection with stock-based compensation plans:								
Stock issuances	—	(243)	302	—	—	59	—	59
Stock purchases	—	—	(236)	—	—	(236)	—	(236)
Stock purchases under purchase program	—	—	(692)	—	—	(692)	—	(692)
Separation of retail business	—	(9)	9	(320)	(159)	(479)	—	(479)
Net proceeds from initial public offering of common units of Valero Energy Partners LP	—	—	—	—	—	—	369	369
Contributions from noncontrolling interests	—	—	—	—	—	—	46	46
Other	—	6	—	—	—	6	—	6
Other comprehensive income	—	—	—	—	401	401	—	401
Balance as of December 31, 2013	7	7,187	(7,054)	18,970	350	19,460	486	19,946
Net income	—	—	—	3,630	—	3,630	81	3,711
Dividends on common stock	—	—	—	(554)	—	(554)	—	(554)
Stock-based compensation expense	—	60	—	—	—	60	—	60
Tax deduction in excess of stock-based compensation expense	—	47	—	—	—	47	—	47
Transactions in connection with stock-based compensation plans:								
Stock issuances	—	(178)	225	—	—	47	—	47

Stock purchases	—	—	(128)	—	—	(128)	—	(128)
Stock purchases under purchase program	—	—	(1,168)	—	—	(1,168)	—	(1,168)
Contributions from noncontrolling interests	—	—	—	—	—	—	12	12
Distributions to noncontrolling interests	—	—	—	—	—	—	(12)	(12)
Other comprehensive loss	—	—	—	—	(717)	(717)	—	(717)
Balance as of December 31, 2014	7	7,116	(8,125)	22,046	(367)	20,677	567	21,244
Net income	—	—	—	3,990	—	3,990	111	4,101
Dividends on common stock	—	—	—	(848)	—	(848)	—	(848)
Stock-based compensation expense	—	59	—	—	—	59	—	59
Tax deduction in excess of stock-based compensation expense	—	44	—	—	—	44	—	44
Transactions in connection with stock-based compensation plans:								
Stock issuances	—	(155)	189	—	—	34	—	34
Stock purchases	—	—	(196)	—	—	(196)	—	(196)
Stock purchases under purchase program	—	—	(2,667)	—	—	(2,667)	—	(2,667)
Net proceeds from issuance of Valero Energy Partners LP common units	—	—	—	—	—	—	189	189
Contributions from noncontrolling interests	—	—	—	—	—	—	5	5
Distributions to noncontrolling interests	—	—	—	—	—	—	(45)	(45)
Other comprehensive loss	—	—	—	—	(566)	(566)	—	(566)
Balance as of December 31, 2015	$7	$7,064	$(10,799)	$25,188	$(933)	$20,527	$827	$21,354

See Notes to Consolidated Financial Statements.

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VALERO ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Millions of Dollars)

	Year Ended December 31,		
	2015	2014	2013
Cash flows from operating activities:			
Net income	$4,101	$3,711	$2,728
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization expense	1,842	1,690	1,720
Lower of cost or market inventory valuation adjustment	790	—	—
Aruba Refinery asset retirement expense and other	—	63	—
Gain on disposition of retained interest in CST Brands, Inc.	—	—	(325)
Deferred income tax expense	165	445	501
Changes in current assets and current liabilities	(1,306)	(1,810)	922
Changes in deferred charges and credits and other operating activities, net	19	142	18
Net cash provided by operating activities	5,611	4,241	5,564
Cash flows from investing activities:			
Capital expenditures	(1,618)	(2,153)	(2,121)
Deferred turnaround and catalyst costs	(673)	(649)	(634)
Investments in joint ventures	(141)	(14)	(76)
Other investing activities, net	(55)	(28)	19
Net cash used in investing activities	(2,487)	(2,844)	(2,812)
Cash flows from financing activities:			
Proceeds from debt issuances or borrowings	1,446	28	—
Repayments of debt and capital lease obligations	(513)	(204)	(486)
Proceeds from the exercise of stock options	34	47	59
Purchase of common stock for treasury	(2,838)	(1,296)	(928)
Common stock dividends	(848)	(554)	(462)
Net proceeds from issuance of Valero Energy Partners LP common units	189	—	369
Contributions from noncontrolling interests	5	12	45
Distributions to noncontrolling interests (public unitholders) of Valero Energy Partners LP	(20)	(12)	—
Distribution to other noncontrolling interest	(25)	—	—
Disposition of retail business:			
Proceeds from short-term debt in anticipation of separation	—	—	550
Cash distributed to Valero by CST Brands, Inc.	—	—	500
Cash held and retained by CST Brands, Inc. upon separation	—	—	(315)
Proceeds from short-term debt related to disposition of retained interest	—	—	525
Repayments of short-term debt related to disposition of retained interest	—	—	(58)
Other financing activities, net	25	49	38
Net cash used in financing activities	(2,545)	(1,930)	(163)
Effect of foreign exchange rate changes on cash	(154)	(70)	(20)
Net increase (decrease) in cash and temporary cash investments	425	(603)	2,569
Cash and temporary cash investments at beginning of year	3,689	4,292	1,723
Cash and temporary cash investments at end of year	$4,114	$3,689	$4,292

See Notes to Consolidated Financial Statements.

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

General

As used in this report, the terms “Valero,” “we,” “us,” or “our” may refer to Valero Energy Corporation, one or more of its consolidated subsidiaries, or all of them taken as a whole. We are an independent petroleum refining and marketing company and own 15 refineries with a combined throughput capacity of approximately 3.0 million barrels per day (BPD) as of December 31, 2015. We market branded and unbranded refined products on a wholesale basis in the United States (U.S.), Canada, the Caribbean, the United Kingdom (U.K.), and Ireland through an extensive bulk and rack marketing network and through approximately 7,500 outlets that carry the Valero®, Diamond Shamrock®, Shamrock®, Ultramar®, Beacon®, and Texaco® brand names. We also own 11 ethanol plants in the U.S. that primarily produce ethanol with a combined production capacity of approximately 1.4 billion gallons per year as of December 31, 2015. Our operations are affected by:

- company-specific factors, primarily refinery utilization rates and refinery maintenance turnarounds;
- seasonal factors, such as the demand for refined products during the summer driving season and heating oil during the winter season; and
- industry factors, such as movements in and the level of crude oil prices including the effect of quality differentials between grades of crude oil, the demand for and prices of refined products, industry supply capacity, and competitor refinery maintenance turnarounds.

Reclassifications

Certain amounts reported as of and for the year ended December 31, 2014 have been reclassified to conform to the 2015 presentation.

Significant Accounting Policies

Principles of Consolidation

These financial statements include the accounts of Valero, its subsidiaries, and entities in which Valero has a controlling financial interest. The ownership of noncontrolling investors are recorded as noncontrolling interests. Intercompany balances and transactions have been eliminated in consolidation. Investments in significant noncontrolled entities are accounted for using the equity method.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (GAAP) requires us to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates. On an ongoing basis, we review our estimates based on currently available information. Changes in facts and circumstances may result in revised estimates.

Cash and Temporary Cash Investments

Our temporary cash investments are highly liquid, low-risk debt instruments that have a maturity of three months or less when acquired.

Receivables

Trade receivables are carried at original invoice amount. We maintain an allowance for doubtful accounts, which is adjusted based on management’s assessment of our customers’ historical collection experience, known credit risks, and

industry and economic conditions.

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Inventories
Inventories are carried at the lower of cost or market. The cost of refinery feedstocks purchased for processing, refined products, and grain and ethanol inventories are determined under the last-in, first-out (LIFO) method using the dollar-value LIFO approach, with any increments valued based on average purchase prices during the year. The cost of feedstocks and products purchased for resale and the cost of materials and supplies are determined principally under the weighted-average cost method. Market value is determined based on the net realizable value of the inventories. We compare the market value of inventories to their cost on an aggregate basis, excluding materials and supplies. If the aggregate market value is less than cost, we record a lower of cost or market inventory valuation adjustment to reflect our inventories at market value.

Property, Plant, and Equipment
The cost of property, plant, and equipment (property assets) purchased or constructed, including betterments of property assets, is capitalized. However, the cost of repairs to and normal maintenance of property assets is expensed as incurred. Betterments of property assets are those that extend the useful life, increase the capacity or improve the operating efficiency of the asset, or improve the safety of our operations. The cost of property assets constructed includes interest and certain overhead costs allocable to the construction activities.

Our operations, especially those of our refining segment, are highly capital intensive. Each of our refineries comprises a large base of property assets, consisting of a series of interconnected, highly integrated and interdependent crude oil processing facilities and supporting logistical infrastructure (Units), and these Units are continuously improved. Improvements consist of the addition of new Units and betterments of existing Units. We plan for these improvements by developing a multi-year capital program that is updated and revised based on changing internal and external factors.

Depreciation of property assets used in our refining segment is recorded on a straight-line basis over the estimated useful lives of these assets primarily using the composite method of depreciation. We maintain a separate composite group of property assets for each of our refineries. We estimate the useful life of each group based on an evaluation of the property assets comprising the group, and such evaluations consist of, but are not limited to, the physical inspection of the assets to determine their condition, consideration of the manner in which the assets are maintained, assessment of the need to replace assets, and evaluation of the manner in which improvements impact the useful life of the group. The estimated useful lives of our composite groups range primarily from 25 to 30 years.

Under the composite method of depreciation, the cost of an improvement is added to the composite group to which it relates and is depreciated over that group’s estimated useful life. We design improvements to our refineries in accordance with engineering specifications, design standards, and practices accepted in our industry, and these improvements have design lives consistent with our estimated useful lives. Therefore, we believe the use of the group life to depreciate the cost of improvements made to the group is reasonable because the estimated useful life of each improvement is consistent with that of the group. It should be noted, however, that factors such as competition, regulation, or environmental matters could cause us to change our estimates, thus impacting depreciation expense in the future.

Also under the composite method of depreciation, the historical cost of a minor property asset (net of salvage value) that is retired or replaced is charged to accumulated depreciation and no gain or loss is recognized in

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

income. However, a gain or loss is recognized in income for a major property asset that is retired, replaced, or sold and for an abnormal disposition of a property asset (primarily involuntary conversions). Gains and losses are reflected in depreciation and amortization expense, unless such amounts are reported separately due to materiality.

Depreciation of property assets used in our ethanol segment and our former retail segment (see Note 3) is recorded on a straight-line basis over the estimated useful lives of the related assets. Leasehold improvements are amortized on a straight-line basis over the shorter of the lease term or the estimated useful life of the related asset. Assets acquired under capital leases are amortized on a straight-line basis over (i) the lease term if transfer of ownership does not occur at the end of the lease term or (ii) the estimated useful life of the asset if transfer of ownership does occur at the end of the lease term.

Deferred Charges and Other Assets
"Deferred charges and other assets, net" primarily include the following:

- turnaround costs, which are incurred in connection with planned major maintenance activities at our refineries and ethanol plants and which are deferred when incurred and amortized on a straight-line basis over the period of time estimated to lapse until the next turnaround occurs;
- fixed-bed catalyst costs, representing the cost of catalyst that is changed out at periodic intervals when the quality of the catalyst has deteriorated beyond its prescribed function, which are deferred when incurred and amortized on a straight-line basis over the estimated useful life of the specific catalyst;
- income taxes receivable;
- investments in joint ventures accounted for under the equity method;
- intangible assets; and
- re-imaging costs associated with branded outlets.

Impairment of Assets
Long-lived assets are tested for recoverability whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. A long-lived asset is not recoverable if its carrying amount exceeds the sum of the undiscounted cash flows expected to result from its use and eventual disposition. If a long-lived asset is not recoverable, an impairment loss is recognized for the amount by which the carrying amount of the long-lived asset exceeds its fair value, with fair value determined based on discounted estimated net cash flows or other appropriate methods.

We evaluate our equity method investments for impairment when there is evidence that we may not be able to recover the carrying amount of our investments or the investee is unable to sustain an earnings capacity that justifies the carrying amount. A loss in the value of an investment that is other than a temporary decline is recognized currently in income, and is based on the difference between the estimated current fair value of the investment and its carrying amount.

Environmental Matters
Liabilities for future remediation costs are recorded when environmental assessments and/or remedial efforts are probable and the costs can be reasonably estimated. Other than for assessments, the timing and magnitude of these accruals generally are based on the completion of investigations or other studies or a commitment

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to a formal plan of action. Amounts recorded for environmental liabilities have not been reduced by possible recoveries from third parties and have not been measured on a discounted basis.

Asset Retirement Obligations

We record a liability, which is referred to as an asset retirement obligation, at fair value for the estimated cost to retire a tangible long-lived asset at the time we incur that liability, which is generally when the asset is purchased, constructed, or leased. We record the liability when we have a legal obligation to incur costs to retire the asset and when a reasonable estimate of the fair value of the liability can be made. If a reasonable estimate cannot be made at the time the liability is incurred, we record the liability when sufficient information is available to estimate the liability's fair value.

We have asset retirement obligations with respect to certain of our refinery assets due to various legal obligations to clean and/or dispose of various component parts of each refinery at the time they are retired. However, these component parts can be used for extended and indeterminate periods of time as long as they are properly maintained and/or upgraded. It is our practice and current intent to maintain our refinery assets and continue making improvements to those assets based on technological advances. As a result, we believe that our refineries have indeterminate lives for purposes of estimating asset retirement obligations because dates or ranges of dates upon which we would retire refinery assets cannot reasonably be estimated at this time. When a date or range of dates can reasonably be estimated for the retirement of any component part of a refinery, we estimate the cost of performing the retirement activities and record a liability for the fair value of that cost using established present value techniques.

Foreign Currency Translation

The functional currency of each of our international operations is generally the respective local currency, which includes the Canadian dollar, the Aruban florin, the pound sterling, and the euro. Balance sheet accounts are translated into U.S. dollars using exchange rates in effect as of the balance sheet date. Revenue and expense accounts are translated using the weighted-average exchange rates during the year presented. Foreign currency translation adjustments are recorded as a component of accumulated other comprehensive income.

Revenue Recognition

Revenues for products sold by the refining and ethanol segments and our former retail segment (see Note 3) are recorded upon delivery of the products to our customers, which is the point at which title to the products is transferred, and when payment has either been received or collection is reasonably assured.

We present excise taxes on sales by certain of our international operations on a gross basis with supplemental information regarding the amount of such taxes included in revenues provided in a footnote on the statements of income. All other excise taxes are presented on a net basis.

We enter into certain purchase and sale arrangements with the same counterparty that are deemed to be made in contemplation of one another. We combine these transactions and, as a result, revenues and cost of sales are not recognized in connection with these arrangements. We also enter into refined product exchange transactions to fulfill sales contracts with our customers by accessing refined products in markets where we do not operate our own refineries. These refined product exchanges are accounted for as exchanges of non-monetary assets, and no revenues are recorded on these transactions.

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Product Shipping and Handling Costs
Costs incurred for shipping and handling of products are included in cost of sales.

Environmental Compliance Program Costs
We purchase credits in the open market to meet our obligations under various environmental compliance programs. We purchase biofuel credits (primarily Renewable Identification Numbers (RINs) in the U.S.) to comply with government regulations that require us to blend a certain percentage of biofuels into the products we produce, as further described in Note 20 under “Environmental Compliance Program Price Risk.” To the degree that we are unable to blend biofuels at the required percentage, we must purchase biofuel credits to meet our obligation. We purchase greenhouse gas (GHG) emission credits to comply with government regulations concerning various GHG emission programs, including cap-and-trade systems, as described in Note 20.

The costs of purchased biofuel credits and GHG emission credits are charged to cost of sales as such credits are needed to satisfy our obligation. To the extent we have not purchased enough credits to satisfy our obligation as of the balance sheet date, we charge cost of sales for such deficiency based on the market price of the credits as of the balance sheet date, and we record a liability for our obligation to purchase those credits. See Note 19 for disclosure of our fair value liability.

Stock-Based Compensation
Compensation expense for our share-based compensation plans is based on the fair value of the awards granted and is recognized in income on a straight-line basis over the shorter of (a) the requisite service period of each award or (b) the period from the grant date to the date retirement eligibility is achieved if that date is expected to occur during the nominal vesting period.

Income Taxes
Income taxes are accounted for under the asset and liability method. Under this method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred amounts are measured using enacted tax rates expected to apply to taxable income in the year those temporary differences are expected to be recovered or settled. Deferred tax assets are reduced by unrecognized tax benefits, if such items may be available to offset the unrecognized tax benefit.

We have elected to classify any interest expense and penalties related to the underpayment of income taxes in income tax expense.

Earnings per Common Share
Earnings per common share is computed by dividing net income attributable to Valero stockholders by the weighted-average number of common shares outstanding for the year. Participating share-based payment awards, including shares of restricted stock granted under certain of our stock-based compensation plans, are included in the computation of basic earnings per share using the two-class method. Earnings per common share – assuming dilution reflects the potential dilution arising from our outstanding stock options and nonvested shares granted to employees in connection with our stock-based compensation plans. Potentially dilutive securities are excluded from the computation of earnings per common share – assuming dilution when the effect of including such shares would be antidilutive.

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Financial Instruments
Our financial instruments include cash and temporary cash investments, receivables, payables, debt, capital lease obligations, commodity derivative contracts, and foreign currency derivative contracts. The estimated fair values of these financial instruments approximate their carrying amounts, except for certain debt as discussed in Note 19.

Derivatives and Hedging
All derivative instruments, not designated as normal purchases or sales, are recorded in the balance sheet as either assets or liabilities measured at their fair values. When we enter into a derivative instrument, it is designated as a fair value hedge, a cash flow hedge, an economic hedge, or a trading derivative. The gain or loss on a derivative instrument designated and qualifying as a fair value hedge, as well as the offsetting loss or gain on the hedged item attributable to the hedged risk, are recognized currently in income in the same period. The effective portion of the gain or loss on a derivative instrument designated and qualifying as a cash flow hedge is initially reported as a component of other comprehensive income and is then recorded in income in the period or periods during which the hedged forecasted transaction affects income. The ineffective portion of the gain or loss on the cash flow derivative instrument, if any, is recognized in income as incurred. For our economic hedging relationships (derivative instruments not designated as fair value or cash flow hedges) and for derivative instruments entered into for trading purposes, the derivative instrument is recorded at fair value and changes in the fair value of the derivative instrument are recognized currently in income. The cash flow effects of all of our derivative instruments are reflected in operating activities in the statements of cash flows.

New Accounting Pronouncements
In May 2014, the Accounting Standards Codification (ASC) was amended and a new accounting standard, ASC Topic 606, “Revenue from Contracts with Customers,” was issued to clarify the principles for recognizing revenue. The core principle of the new standard is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard also requires improved interim and annual disclosures that enable the users of financial statements to better understand the nature, amount, timing, and uncertainty of revenues and cash flows arising from contracts with customers. In July 2015, the effective date of the new standard was deferred by one year. As a result, the standard is effective for annual reporting periods beginning after December 15, 2017, including interim reporting periods within those reporting periods, and can be adopted either retrospectively to each prior reporting period presented using a practical expedient, as allowed by the standard, or retrospectively with a cumulative-effect adjustment to retained earnings as of the date of initial application. Early adoption is permitted, but not before the original effective date, which was for annual reporting periods beginning after December 15, 2016, including interim reporting periods within those reporting periods. We are currently evaluating the effect that adopting this standard will have on our financial statements and related disclosures.

In February 2015, the provisions of ASC Topic 810, “Consolidation,” were amended to improve consolidation guidance for certain types of legal entities. The guidance modifies the evaluation of whether limited partnerships and similar legal entities are variable interest entities (VIEs) or voting interest entities, eliminates the presumption that a general partner should consolidate a limited partnership, affects the consolidation analysis of reporting entities that are involved with VIEs, particularly those that have fee arrangements and related party relationships, and provides a scope exception from consolidation guidance

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for certain money market funds. These provisions are effective for annual reporting periods beginning after December 15, 2015, and interim periods within those annual periods, with early adoption permitted. These provisions may also be adopted retrospectively in previously issued financial statements for one or more years with a cumulative-effect adjustment to retained earnings as of the beginning of the first year restated. The adoption of this guidance effective January 1, 2016 will not affect our financial position or results of operations, but will result in additional disclosures.

In April 2015, the provisions of ASC Subtopic 835-30, “Interest–Imputation of Interest,” were amended to simplify the presentation of debt issuance costs. The guidance requires that debt issuance costs related to a note be reported in the balance sheet as a direct deduction from the face amount of that note, consistent with debt discounts, and that amortization of debt issuance costs be reported as interest expense. In August 2015, these provisions were further amended with guidance from the Securities and Exchange Commission staff that they would not object to an entity deferring and presenting debt issuance costs related to line-of-credit arrangements as an asset and subsequently amortizing the deferred debt issuance costs ratably over the term of the line-of-credit arrangement, regardless of whether there are any outstanding borrowings on the line-of-credit arrangement. These provisions are to be applied retrospectively and are effective for annual reporting periods beginning after December 15, 2015, and interim periods within those annual periods, with early adoption permitted. The adoption of this guidance effective January 1, 2016 will not materially affect our financial position or results of operations; however, our debt issuance costs associated with issued debt (other than borrowings on our line-of-credit arrangements) will be reported in the balance sheet as a direct deduction from “debt and capital lease obligations, less current portion” and excluded from “deferred charges and other assets, net.” As of December 31, 2015, debt issuance costs associated with issued debt totaled $42 million. Debt issuance costs associated with borrowings on our line-of-credit arrangements will continue to be reported in the balance sheet as “deferred charges and other assets, net,” and the related amortization will continue to be reported as interest expense.

Also in April 2015, the provisions of ASC Topic 715, “Compensation–Retirement Benefits” were amended to provide a practical expedient for the measurement date of an entity’s defined benefit pension or other postretirement plans. For an entity with a fiscal year-end that does not coincide with a month-end, the guidance provides a practical expedient that allows the entity to measure the defined benefit plan assets and obligations using the month-end that is closest to the entity’s fiscal year-end. For an entity that has a significant event in an interim period that calls for a remeasurement, the guidance allows an entity to remeasure the defined benefit plan assets and obligations using the month-end that is closest to the date of the significant event. These provisions are effective retrospectively for annual reporting periods beginning after December 15, 2015, and interim periods within those annual periods, with early adoption permitted. The adoption of this guidance effective January 1, 2016 will not affect our financial position or results of operations.

In May 2015, the provisions of ASC Topic 820, “Fair Value Measurements,” were amended to remove the requirement to categorize within the fair value hierarchy all investments for which fair value is measured using the net asset value per share practical expedient. The guidance also removes the requirement to make certain disclosures for all investments that are eligible to be measured using the net asset value per share practical expedient and limits those disclosures to investments for which the entity has elected to measure the fair value using that practical expedient. These provisions are to be applied retrospectively and are effective for annual reporting periods beginning after December 15, 2015, and interim periods within those annual periods, with early adoption permitted. The adoption of this guidance effective January 1, 2016 will not affect our financial position or results of operations, but will result in revised disclosures.

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

In July 2015, the provisions of ASC Topic 330, “Inventory” were amended to simplify the measurement of inventory. The guidance does not apply to inventory where the cost of such inventory is measured using the LIFO or the retail inventory methods. The guidance applies to inventory where the cost of such inventory is measured using the first-in, first-out or average cost methods, and it requires the inventory to be measured at the lower of cost and net realizable value rather than the lower of cost or market. Net realizable value is defined as the estimated selling prices in the ordinary course of business, less reasonably predicable costs of completion, disposal, and transportation. These provisions are to be applied prospectively and are effective for annual reporting periods beginning after December 15, 2016, and interim periods within those annual periods, with early adoption permitted. The adoption of this guidance effective January 1, 2017 will not affect our financial position or results of operations.

In September 2015, the provisions of ASC Topic 805, “Business Combinations,” were amended to simplify the accounting and reporting of adjustments made to provisional amounts recognized in a business combination. The amendment requires that an acquirer (i) record, in the same period’s financial statements, the effect on earnings of changes in depreciation, amortization, or other income effects, if any, as a result of the change to the provisional amounts, calculated as if the accounting had been completed at the acquisition date and (ii) present separately on the statement of income or disclose in the notes the portion of the amount recorded in current-period earnings by line item that would have been recorded in previous reporting periods if the adjustment to the provisional amounts had been recognized as of the acquisition date. These provisions are effective for annual reporting periods beginning after December 15, 2015, and interim periods within those annual periods, and should be applied prospectively to adjustments made to provisional amounts that occur after the effective date. Earlier application is permitted for financial statements that have not yet been issued. The adoption of this guidance effective January 1, 2016 will not affect our financial position or results of operations; however, it may result in changes to the manner in which adjustments to provisional amounts recognized in a future business combination, if any, are presented in our financial statements.

In November 2015, the provisions of ASC Topic 740, “Income Taxes,” were amended to simplify the presentation of deferred income taxes. The amendments require that deferred tax liabilities and assets be classified as noncurrent in a classified balance sheet. The amendments are effective for financial statements for annual periods beginning after December 15, 2016, and interim periods within those annual periods, with early adoption permitted as of the beginning of any interim or annual period. The amendments may be applied either prospectively to all deferred tax liabilities and assets or retrospectively to all periods presented. Entities applying the guidance retrospectively should disclose in the first interim and first annual period of adoption the nature of and reason for the change in accounting principle and quantitative information about the effects of the accounting change on prior periods. Effective January 1, 2016, the adoption of this guidance on a retrospective basis will not materially affect our financial position and will not impact our results of operations. Upon adoption, our current deferred income tax assets of $74 million and current deferred income tax liabilities of $366 million as of December 31, 2015 will be reclassified to noncurrent deferred income tax liabilities. Adoption of this guidance simplifies the future presentation of our deferred income tax assets and liabilities.

In January 2016, the provisions of ASC Subtopic 825-10, “Financial Instruments–Overall,” were amended to enhance the reporting model for financial instruments regarding certain aspects of recognition, measurement, presentation, and disclosure. The amendment (i) requires equity investments (except those accounted for under the equity method or that are consolidated) to be measured at fair value with changes

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

in fair value recognized in net income; (ii) simplifies the impairment assessment of equity investments without readily determinable fair values by requiring a qualitative assessment to identify impairment; (iii) eliminates the requirement for an entity to disclose the methods and significant assumptions used to estimate the fair value of financial instruments measured at amortized cost; (iv) requires an entity to use the exit price notion when measuring the fair value of financial instruments for disclosure purposes; and (v) requires separate presentation of financial assets and financial liabilities by measurement category and form of financial asset on the balance sheet or the accompanying notes to the financial statements. These provisions are effective for annual reporting periods beginning after December 15, 2017, and interim periods within those annual periods. The standard is to be applied using a cumulative-effect adjustment to the balance sheet as of the beginning of the fiscal year of adoption. We are currently evaluating the effect that adopting this standard will have on our financial statements and related disclosures.

In February 2016, the ASC was amended and a new accounting standard, ASC Topic 842, “Leases,” was issued to increase the transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. In order to meet that objective, the new standard requires recognition of the assets and liabilities that arise from leases. Accordingly, a lessee will recognize a right-of-use (ROU) asset for its right to use the underlying asset and a lease liability for the corresponding lease obligation. Both the ROU asset and lease liability will initially be measured at the present value of the future minimum lease payments over the lease term. Subsequent measurement, including the presentation of expenses and cash flows, will depend on the classification of the lease as either a finance or an operating lease. Initial costs directly attributable to negotiating and arranging the lease will be included in the ROU asset. Lessees can make an accounting policy election by class of underlying asset not to recognize a ROU asset and corresponding lease liability for leases with a term of 12 months or less. Accounting by lessors will remain largely unchanged from current U.S. GAAP. In transition, lessees and lessors are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. The modified retrospective approach includes a number of optional practical expedients that companies may elect to apply. These practical expedients relate to the identification and classification of leases that commenced before the effective date, initial direct costs for leases that commenced before the effective date, and the ability to use hindsight in evaluating lessee options to extend or terminate a lease or to purchase the underlying asset. The transition guidance also provides specific guidance for sale and leaseback transactions, build-to-suit leases, leveraged leases, and amounts previously recognized in accordance with the business combinations guidance for leases. The new standard is effective for public companies for fiscal years beginning after December 15, 2018, and interim periods within those years, with early adoption permitted. We are currently evaluating the effect that adopting this standard will have on our financial statements and related disclosures.

2. DISCONTINUED OPERATIONS

In May 2014, we abandoned our Aruba Refinery, except for the associated crude oil and refined products terminal assets that we continue to operate. As a result, the refinery’s results of operations have been presented in this report as discontinued operations for the years ended December 31, 2014 and 2013.

The Aruba Refinery resides on land leased from the Government of Aruba (GOA) and our agreements with the GOA require us to dismantle our leasehold improvements under certain conditions. Because of our May 2014 decision to abandon the refining assets, we believe the GOA will require us to dismantle those

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assets. As a result, we recognized an asset retirement obligation of $59 million, which was charged to expense during the second quarter of 2014 and is reflected in discontinued operations. We had not recognized an asset retirement obligation previously due to our belief that we would not be required to dismantle the assets as long as we intended to operate them. During the second quarter of 2014, we also recognized liabilities of $4 million relating to obligations under certain contracts, including a liability for the remaining lease payments for the land on which the refining assets reside. The Aruba Refinery had no operating revenues and a $64 million loss before income taxes for the year ended December 31, 2014. There was no tax benefit recognized for the loss from discontinued operations for the year ended December 31, 2014 as we do not expect to realize this tax benefit. For the year ended December 31, 2013, the refinery had no operating revenues and $6 million of income before income tax expense.

3. SEPARATION OF RETAIL BUSINESS

On May 1, 2013, we completed the separation of our retail business by creating an independent public company named CST Brands, Inc. (CST) and distributing 80 percent of the outstanding shares of CST common stock to our stockholders. Each Valero stockholder received one share of CST common stock for every nine shares of Valero common stock held at the close of business on the record date of April 19, 2013.

In connection with the separation, we received an aggregate of $1.05 billion in cash, consisting of $550 million from the issuance of short-term debt to a third-party financial institution on April 16, 2013 and $500 million distributed to us by CST on May 1, 2013. The cash distributed to us by CST was borrowed by CST on May 1, 2013 under its senior secured credit facility. See Note 10 under “Bank Debt” for further discussion of that credit facility. Also on May 1, 2013, CST issued $550 million of its senior unsecured bonds to us, and we exchanged those bonds with the third-party financial institution in satisfaction of our short-term debt. Immediately prior to May 1, 2013, subsidiaries of CST held $315 million of cash, and CST retained that cash following the distribution on May 1, 2013. We also incurred $30 million in costs during the three months ended June 30, 2013 to effect the separation, which were included in general and administrative expenses.

We also entered into long-term motor fuel supply agreements with CST in the U.S. and Canada. The nature and significance of our agreements to supply motor fuel to CST through 2028 represents a continuation of activities with CST for accounting purposes. As such, the historical results of operations of our retail business have not been reported as discontinued operations in our statements of income.

On November 14, 2013, we disposed of our 20 percent retained interest in CST by transferring all remaining shares of CST common stock owned by us to a third-party financial institution in exchange for $467 million of our short-term debt and recognized a $325 million nontaxable gain, as further described in Note 10 under “Bank Debt”. Selected historical results of operations of our retail business prior to the separation are disclosed in Note 17. Subsequent to May 1, 2013 and through November 14, 2013, our share of CST’s results of operations was reflected in “other income, net.” Our share of income taxes incurred directly by CST during this period was reported in the equity in earnings from CST, and as such was not included in income taxes in our statements of income.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

We retained certain environmental and other liabilities related to our former retail business and we have indemnified CST for certain self-insurance liabilities related to its employees and property.

4. VALERO ENERGY PARTNERS LP

Description of Operations

In July 2013, we formed Valero Energy Partners LP (VLP), a master limited partnership, to own, operate, develop, and acquire crude oil and refined petroleum products pipelines, terminals, and other transportation and logistics assets. VLP's assets include crude oil and refined petroleum products pipeline and terminal systems in the U.S. Gulf Coast and U.S. Mid-Continent regions that are integral to the operations of nine of our refineries.

Public Equity Offerings and Ownership

On December 16, 2013, VLP completed its initial public offering of 17,250,000 common units at a price of $23.00 per unit. VLP received $369 million in net proceeds from the sale of the units, after deducting underwriting fees, structuring fees, and other offering costs.

Effective November 24, 2015, VLP completed a public offering of 4,250,000 common units at a price of $46.25 per unit and received net proceeds from the offering of $189 million after deducting the underwriting discount and other offering costs. Concurrent with the offering, we contributed $4 million in exchange for 86,735 general partner units to maintain our 2.0 percent general partner interest in VLP.

The ownership of VLP consisted of the following:

	December 31,	
	2015	2014
Valero:		
Limited partner interest	65.7 %	68.6 %
General partner interest	2.0 %	2.0 %
Public:		
Limited partner interest	32.3 %	29.4 %

Relationship and Agreements with Valero

We consolidate the financial statements of VLP into our financial statements and as such, VLP's cash and temporary cash investments are included in our consolidated cash and temporary cash investments. However, VLP's cash and temporary cash investments can be used only to settle its own obligations. VLP's cash and temporary cash investments were $81 million and $237 million as of December 31, 2015 and 2014, respectively. In addition, VLP's partnership capital attributable to the public's ownership interest in VLP of $581 million and $375 million as of December 31, 2015 and 2014, respectively, is reflected in noncontrolling interests.

We have agreements with VLP that establish fees for certain general and administrative services, and operational and maintenance services provided by us. In addition, we have a master transportation services agreement and a master terminal services agreement with VLP under which VLP provides commercial pipeline transportation and terminaling services to us. These transactions, along with our contributions to

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

VLP and transactions under subordinated credit agreements between VLP and us, are eliminated in consolidation.

5. RECEIVABLES

Receivables consisted of the following (in millions):

	December 31,	
	2015	2014
Accounts receivable	$4,105	$5,509
Commodity derivative and foreign currency contract receivables	147	151
Other receivables	247	256
	4,499	5,916
Allowance for doubtful accounts	(35)	(37)
Receivables, net	$4,464	$5,879

Changes in the allowance for doubtful accounts consisted of the following (in millions):

	Year Ended December 31,		
	2015	2014	2013
Balance as of beginning of year	$37	$46	$56
Increase in allowance charged to expense	7	7	13
Accounts charged against the allowance, net of recoveries	(9)	(15)	(23)
Foreign currency translation	—	(1)	—
Balance as of end of year	$35	$37	$46

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

6. INVENTORIES

Inventories consisted of the following (in millions):

	December 31, 2015	2014
Refinery feedstocks	$2,404	$2,269
Refined products and blendstocks	3,774	3,926
Ethanol feedstocks and products	242	195
Materials and supplies	244	233
Inventories, before lower of cost or market inventory valuation reserve	6,664	6,623
Lower of cost or market inventory valuation reserve	(766)	—
Inventories	$5,898	$6,623

The market value of our LIFO inventory held as of December 31, 2015 fell below our historical LIFO inventory costs. As a result, we recorded a lower of cost or market inventory valuation adjustment of $790 million for the year ended December 31, 2015. The income statement effect differs from the balance sheet reserve due to the foreign currency effect of inventories held for our international operations. As of December 31, 2014, the market value of LIFO inventories exceeded their LIFO carrying amounts by approximately $857 million.

During the year ended December 31, 2013, we had net liquidations of LIFO inventory layers that decreased cost of sales by $17 million. As of December 31, 2015 and 2014, our non-LIFO inventories accounted for $668 million and $906 million, respectively, of our total inventories.

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

7. PROPERTY, PLANT, AND EQUIPMENT

Major classes of property, plant, and equipment, which include capital lease assets, consisted of the following (in millions):

	December 31,	
	2015	2014
Land	$400	$396
Crude oil processing facilities	28,278	27,629
Pipeline and terminal facilities	2,456	2,380
Grain processing equipment	792	779
Administrative buildings	789	789
Other	3,019	2,607
Construction in progress	1,173	1,353
Property, plant, and equipment, at cost	36,907	35,933
Accumulated depreciation	(10,204)	(9,198)
Property, plant, and equipment, net	$26,703	$26,735

We have various assets under capital leases that primarily support our refining operations totaling $134 million and $72 million as of December 31, 2015 and 2014, respectively. Accumulated amortization on assets under capital leases was $50 million and $40 million as of December 31, 2015 and 2014, respectively.

Depreciation expense for the years ended December 31, 2015, 2014, and 2013 was $1.3 billion, $1.2 billion, and $1.2 billion, respectively.

8. DEFERRED CHARGES AND OTHER ASSETS

“Deferred charges and other assets, net” consisted of the following (in millions):

	December 31,	
	2015	2014
Deferred turnaround and catalyst costs, net	$1,484	$1,359
Income taxes receivable	266	182
Investments in joint ventures	201	78
Intangible assets, net	156	154
Re-imaging costs, net	154	141
Other	407	287
Deferred charges and other assets, net	$2,668	$2,201

Amortization expense for the deferred charges and other assets shown above was $542 million, $489 million, and $498 million for the years ended December 31, 2015, 2014, and 2013, respectively.

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

9. ACCRUED EXPENSES AND OTHER LONG-TERM LIABILITIES

Accrued expenses and other long-term liabilities consisted of the following (in millions):

	Accrued Expenses December 31,		Other Long-Term Liabilities	
	2015	2014	2015	2014
Defined benefit plan liabilities (see Note 13)	$40	$48	$719	$792
Wage and other employee-related liabilities	292	294	100	104
Uncertain income tax position liabilities (see Note 15) [a]	—	—	148	316
Environmental liabilities	27	26	231	269
Accrued interest expense	96	88	—	—
Asset retirement obligations	19	20	64	71
Other accrued liabilities	80	120	349	387
Accrued expenses and other long-term liabilities	$554	$596	$1,611	$1,939

[a] As of December 31, 2015, our net liability for uncertain tax positions, including related penalties and interest, was $391 million. Of this amount, $438 million was classified as a current liability and reflected in income taxes payable, and $148 million was classified as a long-term liability and reflected in other long-term liabilities as detailed in this table. These liabilities were reduced by a $195 million receivable classified as a long-term asset and reflected in “deferred charges and other assets, net.” As of December 31, 2014, our total liability for uncertain tax positions, including related penalties and interest, was $484 million, with $168 million classified as a current liability and reflected in income taxes payable and the remaining $316 million classified as a long-term liability and reflected in other long-term liabilities as detailed in this table.

During the years ended December 31, 2015, 2014, and 2013, there were no significant changes in our environmental liabilities or asset retirement obligations. See Note 2 for further information regarding the 2014 addition to our asset retirement obligations related to our Aruba Refinery. There are no assets that are legally restricted for purposes of settling our asset retirement obligations.

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

10. DEBT AND CAPITAL LEASE OBLIGATIONS

Debt, at stated values, and capital lease obligations consisted of the following (in millions):

	Final Maturity	December 31, 2015	2014
Bank credit facilities	Various	$175	$—
Senior Notes:			
3.65%	2025	600	—
4.5%	2015	—	400
4.9%	2045	650	—
6.125%	2017	750	750
6.125%	2020	850	850
6.625%	2037	1,500	1,500
6.75%	2037	24	24
7.2%	2017	200	200
7.45%	2097	100	100
7.5%	2032	750	750
8.75%	2030	200	200
9.375%	2019	750	750
10.5%	2039	250	250
Debentures:			
7.65%	2026	100	100
8.75%	2015	—	75
Gulf Opportunity Zone Revenue Bonds, Series 2010, 4.0%	2040	300	300
Accounts receivable sales facility	2016	100	100
Other debt	2016	17	26
Net unamortized discount, including fair value adjustments		(24)	(21)
Total debt		7,292	6,354
Capital lease obligations, including unamortized fair value adjustments		85	32
Total debt and capital lease obligations		7,377	6,386
Less current portion		(127)	(606)
Debt and capital lease obligations, less current portion		$7,250	$5,780

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Credit Facilities

Revolver

In November 2015, we amended and restated our $3 billion revolving credit facility (the Revolver) with a group of financial institution lenders to, among other things, extend the maturity date from November 2018 to November 2020. We have the option to increase the aggregate commitments under the Revolver to $4.5 billion and we may request two additional one-year extensions, subject to certain conditions. The Revolver also provides for the issuance of letters of credit of up to $2.0 billion.

Outstanding borrowings under the Revolver bear interest, at our option, at either (a) the adjusted LIBO rate (as defined in the Revolver) for the applicable interest period in effect from time to time plus the applicable margin or (b) the alternate base rate (as defined in the Revolver) plus the applicable margin. The Revolver also requires payments for customary fees, including facility fees, letter of credit participation fees, and administrative agent fees. The interest rate and facility fees under the Revolver are subject to adjustment based upon the credit ratings assigned to our senior unsecured debt.

During the years ended December 31, 2015, 2014, and 2013, we had no borrowings or repayments under the Revolver.

VLP Revolver

In November 2015, VLP's senior unsecured revolving credit facility agreement (the VLP Revolver) with a group of lenders was amended and restated to, among other things, extend the maturity date from December 2018 to November 2020 and increase the total commitment from $300 million to $750 million. The VLP Revolver is available only to the operations of VLP, and creditors of VLP do not have recourse against Valero. VLP has the option to increase the aggregate commitments under the VLP Revolver to $1.0 billion and we may request two additional one-year extensions, subject to certain conditions. VLP may terminate the VLP Revolver with notice to the lenders of at least three business days prior to termination. The VLP Revolver includes a letter of credit sub-facility of up to $100 million. VLP's obligations under the VLP Revolver are jointly and severally guaranteed by all of VLP's directly owned material subsidiaries. As of December 31, 2015, the only guarantor under the VLP Revolver was Valero Partners Operating Co. LLC.

Outstanding borrowings under the VLP Revolver bear interest, at VLP's option, at either (a) the adjusted LIBO rate (as defined in the VLP Revolver) for the applicable interest period in effect from time to time plus the applicable margin or (b) the alternate base rate (as defined in the VLP Revolver) plus the applicable margin. As of December 31, 2015, the variable rate was 1.5 percent. The VLP Revolver requires payments for customary fees, including commitment fees, letter of credit participation fees, and administrative agent fees. The VLP Revolver contains certain restrictive covenants, including a ratio of total debt to EBITDA (as defined in the VLP Revolver) for the prior four fiscal quarters of not greater than 5.0 to 1.0 as of the last day of each fiscal quarter, and limitations on VLP's ability to pay distributions to its unitholders.

During the year ended December 31, 2015, VLP borrowed $200 million under the VLP Revolver in connection with VLP's acquisition of the Houston and St. Charles Terminal Services Business and repaid $25 million on the VLP Revolver. During the years ended December 31, 2014 and 2013, VLP had no borrowings or repayments under the VLP Revolver. As of December 31, 2015, $175 million was outstanding under the VLP Revolver.

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Canadian Revolver
One of our Canadian subsidiaries has a C$50 million committed revolving credit facility (the Canadian Revolver) under which it may borrow and obtain letters of credit that has a maturity date of November 2016.

During the years ended December 31, 2015, 2014, and 2013, we had no borrowings or repayments under the Canadian Revolver.

Accounts Receivable Sales Facility
We have an accounts receivable sales facility with a group of third-party entities and financial institutions to sell eligible trade receivables on a revolving basis. In July 2015, we amended our agreement to decrease the facility from $1.5 billion to $1.4 billion and extended the maturity date to July 2016. Proceeds from the sale of receivables under this facility are reflected as debt. Under this program, one of our marketing subsidiaries (Valero Marketing) sells eligible receivables, without recourse, to another of our subsidiaries (Valero Capital), whereupon the receivables are no longer owned by Valero Marketing. Valero Capital, in turn, sells an undivided percentage ownership interest in the eligible receivables, without recourse, to the third-party entities and financial institutions. To the extent that Valero Capital retains an ownership interest in the receivables it has purchased from Valero Marketing, such interest is included in our financial statements solely as a result of the consolidation of the financial statements of Valero Capital with those of Valero Energy Corporation; the receivables are not available to satisfy the claims of the creditors of Valero Marketing or Valero Energy Corporation.

As of December 31, 2015 and 2014, $1.3 billion and $1.7 billion, respectively, of our accounts receivable composed the designated pool of accounts receivable included in the program. All amounts outstanding under the accounts receivable sales facility are reflected as debt on our balance sheets and proceeds and repayments are reflected as cash flows from financing activities on the statements of cash flows. During the years ended December 31, 2015, 2014, and 2013, we had no proceeds from or repayments under the accounts receivable sales facility.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Summary of Credit Facilities
We had outstanding borrowings and letters of credit issued under our credit facilities as follows (in millions):

			December 31, 2015		
	Facility Amount	Maturity Date	Borrowings	Letters of Credit	Available
Committed facilities:					
Revolver	$ 3,000	November 2020	$ —	$ 57	$ 2,943
VLP Revolver	$ 750	November 2020	$ 175	$ —	$ 575
Canadian Revolver	C$50	November 2016	C$—	C$10	C$40
Accounts receivable sales facility	$ 1,400	July 2016	$ 100	$ —	$ 992
Letter of credit facilities	$ 275	June 2016 and November 2016	$ —	$ 9	$ 266
Uncommitted facilities:					
Letter of credit facilities	$ 775	N/A	$ —	$ 87	$ 688

In June 2015, one of our committed letter of credit facilities with a borrowing capacity of $300 million expired and was not renewed. The remaining committed letter of credit facility was amended in July 2015 to extend the maturity date to June 2016 and reduce the borrowing capacity from $250 million to $125 million.

In November 2015, we entered into a new committed letter of credit facility with a borrowing capacity of $150 million that matures in November 2016. Also in November 2015, our Canadian Revolver was amended to extend the maturity date to November 2016.

We also have various other uncommitted short-term bank credit facilities for which we are charged letter of credit issuance fees. These uncommitted credit facilities have no commitment fees or compensating balance requirements.

Bank Debt
On March 20, 2013, in anticipation of the separation of our retail business as described in Note 3, CST entered into an $800 million senior secured credit agreement. This credit agreement was retained by CST after the separation from us. Therefore, we have no rights to obtain credit under nor any liabilities in connection with this credit agreement.

On April 16, 2013, also in anticipation of the separation of our retail business, we borrowed $550 million under a short-term debt agreement with a third-party financial institution. On May 1, 2013, CST issued $550 million of its senior unsecured bonds to us, and we exchanged those bonds with the third-party financial institution in satisfaction of our short-term debt.

On October 24, 2013, we borrowed $525 million under a short-term debt agreement with a third-party financial institution in anticipation of liquidating our retained interest in CST. This liquidation was completed on November 14, 2013 by transferring all remaining shares of CST common stock owned by us to the financial institution in exchange for $467 million of our short-term debt, and we paid the remaining

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$58 million of short-term debt in cash. After paying $19 million of fees, we recognized a $325 million nontaxable gain.

Non-Bank Debt
During the year ended December 31, 2015, we issued $600 million of 3.65 percent senior notes due March 15, 2025 and $650 million of 4.9 percent senior notes due March 15, 2045. Proceeds from these debt issuances totaled $1.246 billion. We also incurred $12 million of debt issuance costs. In addition, we made scheduled debt repayments of $400 million related to our 4.5 percent senior notes and $75 million related to our 8.75 percent debentures.

During the year ended December 31, 2014, we made a scheduled debt repayment of $200 million related to our 4.75 percent senior notes.

During the year ended December 31, 2013, we made scheduled debt repayments of $180 million related to our 6.7 percent senior notes and $300 million related to our 4.75 percent senior notes.

Capitalized Interest
For the years ended December 31, 2015, 2014, and 2013, capitalized interest was $71 million, $70 million, and $118 million, respectively.

Other Disclosures
Our credit facilities and other debt arrangements contain various customary restrictive covenants, including cross-default and cross-acceleration clauses.

Principal payments on our debt obligations and future minimum rentals on capital lease obligations as of December 31, 2015 were as follows (in millions):

	Debt	Capital Lease Obligations
2016	$117	$17
2017	950	16
2018	—	16
2019	750	16
2020	1,025	14
Thereafter	4,474	43
Net unamortized discount and fair value adjustments	(24)	—
Less interest expense	—	(37)
Total	$7,292	$85

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

11. COMMITMENTS AND CONTINGENCIES

Operating Leases

We have long-term operating lease commitments for land, office facilities and equipment, transportation equipment, time charters for ocean-going tankers and coastal vessels, dock facilities, and various facilities and equipment used in the storage, transportation, production, and sale of refinery feedstock, refined product and corn inventories.

Certain leases for processing equipment and feedstock and refined product storage facilities provide for various contingent payments based on, among other things, throughput volumes in excess of a base amount. Certain leases for vessels contain renewal options and escalation clauses, which vary by charter, and provisions for the payment of chartering fees, which either vary based on usage or provide for payments, in addition to established minimums, that are contingent on usage. In most cases, we expect that in the normal course of business, our leases will be renewed or replaced by other leases.

As of December 31, 2015, our future minimum rentals for leases having initial or remaining noncancelable lease terms in excess of one year were as follows (in millions):

2016	$430
2017	283
2018	200
2019	143
2020	100
Thereafter	311
Total minimum rental payments	$1,467

Rental expense was as follows (in millions):

	Year Ended December 31,		
	2015	2014	2013
Minimum rental expense	$732	$618	$588
Contingent rental expense	105	43	47
Total rental expense	$837	$661	$635

Purchase Obligations

We have various purchase obligations under certain industrial gas and chemical supply arrangements (such as hydrogen supply arrangements), crude oil and other feedstock supply arrangements, and various throughput and terminalling agreements. We enter into these contracts to ensure an adequate supply of utilities and feedstock and adequate storage capacity to operate our refineries. Substantially all of our purchase obligations are based on market prices or adjustments based on market indices. Certain of these purchase obligations include fixed or minimum volume requirements, while others are based on our usage requirements. None of these obligations are associated with suppliers' financing arrangements. These purchase obligations are not reflected as liabilities.

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Environmental Matters

Hartford Matters

We are involved, together with several other companies, in an environmental cleanup in the Village of Hartford, Illinois (the Village) and recently, one of these companies assumed the ongoing remediation in the Village pursuant to a federal court order. We had previously conducted an initial response in the Village, along with other companies, pursuant to an administrative order issued by the U.S. Environmental Protection Agency (EPA). The parties involved in the initial response may have further claims between themselves for costs already incurred. We also continue to be engaged in site assessment and interim measures at the adjacent shutdown refinery site, which we acquired as part of an acquisition in 2005, and we are in litigation with the Illinois EPA and other potentially responsible parties relating to the remediation of the site. In each of these matters, we have various defenses and rights for contribution from the other responsible parties. We have recorded a liability for our own expected contribution obligations. However, because of the unpredictable nature of these cleanups, the methodology for allocation of liabilities and the state of Illinois' failure to directly sue third parties responsible for historic contamination at the site, it is reasonably possible that we could incur a loss in a range of $0 to $200 million in excess of the amount of our accrual to ultimately resolve these matters. Factors underlying this estimated range are expected to change from time to time, and actual results may vary significantly from this estimate.

Litigation Matters

We are party to claims and legal proceedings arising in the ordinary course of business. We have not recorded a loss contingency liability with respect to some of these matters because we have determined that it is remote that a loss has been incurred. For other matters, we have recorded a loss contingency liability where we have determined that it is probable that a loss has been incurred and that the loss is reasonably estimable. These loss contingency liabilities are not material to our financial position. We re-evaluate and update our loss contingency liabilities as matters progress over time, and we believe that any changes to the recorded liabilities will not be material to our financial position, results of operations, or liquidity.

Tax Matters

We are subject to extensive tax liabilities imposed by multiple jurisdictions, including income taxes, indirect taxes (excise/duty, sales/use, gross receipts, and value-added taxes), payroll taxes, franchise taxes, withholding taxes, and ad valorem taxes. New tax laws and regulations and changes in existing tax laws and regulations are continuously being enacted or proposed that could result in increased expenditures for tax liabilities in the future. Many of these liabilities are subject to periodic audits by the respective taxing authority. Subsequent changes to our tax liabilities as a result of these audits may subject us to interest and penalties.

Self-Insurance

We are self-insured for certain medical and dental, workers' compensation, automobile liability, general liability, and property liability claims up to applicable retention limits. Liabilities are accrued for self-insured claims, or when estimated losses exceed coverage limits, and when sufficient information is available to reasonably estimate the amount of the loss. These liabilities are included in accrued expenses and other long-term liabilities.

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12. EQUITY

Share Activity
Activity in the number of shares of common stock and treasury stock was as follows (in millions):

	Common Stock	Treasury Stock
Balance as of December 31, 2012	673	(121)
Transactions in connection with stock-based compensation plans:		
Stock issuances	—	6
Stock purchases	—	(6)
Stock purchases under purchase program	—	(17)
Balance as of December 31, 2013	673	(138)
Transactions in connection with stock-based compensation plans:		
Stock issuances	—	4
Stock purchases	—	(2)
Stock purchases under purchase program	—	(23)
Balance as of December 31, 2014	673	(159)
Transactions in connection with stock-based compensation plans:		
Stock issuances	—	4
Stock purchases	—	(3)
Stock purchases under purchase program	—	(42)
Balance as of December 31, 2015	673	(200)

Preferred Stock
We have 20 million shares of preferred stock authorized with a par value of $0.01 per share. No shares of preferred stock were outstanding as of December 31, 2015 or 2014.

Treasury Stock
We purchase shares of our common stock as authorized under our common stock purchase program (described below) and to meet our obligations under employee stock-based compensation plans.

On February 28, 2008, our board of directors approved a $3 billion common stock purchase program, which was in addition to a $6 billion program previously authorized. This additional $3 billion program had no expiration date. We completed the $6 billion program during 2013 and the $3 billion program during 2015. On July 13, 2015, our board of directors authorized us to purchase an additional $2.5 billion of our outstanding common stock with no expiration date. During the years ended December 31, 2015, 2014, and 2013, we purchased $2.7 billion, $1.2 billion, and $692 million, respectively, of our common stock under our programs. As of December 31, 2015, we have approvals under the $2.5 billion program to purchase approximately $1.3 billion of our common stock.

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Common Stock Dividends
On January 21, 2016, our board of directors declared a quarterly cash dividend of $0.60 per common share payable March 3, 2016 to holders of record at the close of business on February 9, 2016.

Income Tax Effects Related to Components of Other Comprehensive Income (Loss)
The tax effects allocated to each component of other comprehensive income (loss) were as follows (in millions):

	Before-Tax Amount	Tax Expense (Benefit)	Net Amount
Year Ended December 31, 2015:			
Foreign currency translation adjustment	$(606)	$—	$(606)
Pension and other postretirement benefits:			
Gain (loss) arising during the year related to:			
Net actuarial gain	50	15	35
Prior service cost	(22)	(8)	(14)
Amounts reclassified into income related to:			
Net actuarial loss	62	22	40
Prior service credit	(40)	(14)	(26)
Curtailment and settlement	7	2	5
Net gain on pension and other postretirement benefits	57	17	40
Other comprehensive loss	$(549)	$17	$(566)

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	Before-Tax Amount	Tax Expense (Benefit)	Net Amount
Year Ended December 31, 2014:			
Foreign currency translation adjustment	$(407)	$—	$(407)
Pension and other postretirement benefits:			
Loss arising during the year related to:			
Net actuarial loss	(471)	(162)	(309)
Prior service cost	(1)	(1)	—
Amounts reclassified into income related to:			
Net actuarial loss	34	12	22
Prior service credit	(40)	(14)	(26)
Curtailment and settlement	3	—	3
Net loss on pension and other postretirement benefits	(475)	(165)	(310)
Derivative instruments designated and qualifying as cash flow hedges:			
Net loss arising during the year	(1)	—	(1)
Net loss reclassified into income	2	1	1
Net gain on cash flow hedges	1	1	—
Other comprehensive loss	$(881)	$(164)	$(717)
Year Ended December 31, 2013:			
Foreign currency translation adjustment	$(98)	$—	$(98)
Pension and other postretirement benefits:			
Gain arising during the year related to:			
Net actuarial gain	367	125	242
Plan amendments	371	130	241
Amounts reclassified into income related to:			
Net actuarial loss	57	20	37
Prior service credit	(33)	(12)	(21)
Settlement	1	—	1
Net gain on pension and other postretirement benefits	763	263	500
Derivative instruments designated and qualifying as cash flow hedges:			
Net loss arising during the year	(4)	(2)	(2)
Net loss reclassified into income	2	1	1
Net loss on cash flow hedges	(2)	(1)	(1)
Other comprehensive income	$663	$262	$401

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Accumulated Other Comprehensive Income (Loss)
Changes in accumulated other comprehensive income (loss) by component, net of tax, were as follows (in millions):

	Foreign Currency Translation Adjustment	Defined Benefit Plan Items	Gains and (Losses) on Cash Flow Hedges	Total
Balance as of December 31, 2012	$665	$(558)	$1	$108
Other comprehensive income (loss) before reclassifications	(98)	483	(2)	383
Amounts reclassified from accumulated other comprehensive income (loss)	—	17	1	18
Net other comprehensive income (loss)	(98)	500	(1)	401
Separation of retail business	(159)	—	—	(159)
Balance as of December 31, 2013	408	(58)	—	350
Other comprehensive loss before reclassifications	(407)	(309)	(1)	(717)
Amounts reclassified from accumulated other comprehensive income (loss)	—	(1)	1	—
Net other comprehensive loss	(407)	(310)	—	(717)
Balance as of December 31, 2014	1	(368)	—	(367)
Other comprehensive income (loss) before reclassifications	(606)	21	—	(585)
Amounts reclassified from accumulated other comprehensive income (loss)	—	19	—	19
Net other comprehensive income (loss)	(606)	40	—	(566)
Balance as of December 31, 2015	$(605)	$(328)	$—	$(933)

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Gains (losses) reclassified out of accumulated other comprehensive income (loss) and into net income were as follows (in millions):

Details about Accumulated Other Comprehensive Income (Loss) Components	Year Ended December 31, 2015	2014	2013	Affected Line Item in the Statement of Income
Amortization of items related to defined benefit pension plans:				
Net actuarial loss	$(62)	$(34)	$(57)	(a)
Prior service credit	40	40	33	(a)
Curtailment and settlement	(7)	(3)	(1)	(a)
	(29)	3	(25)	Total before tax
	10	(2)	8	Tax (expense) benefit
	$(19)	$1	$(17)	Net of tax
Losses on cash flow hedges:				
Commodity contracts	$—	$(2)	$(2)	Cost of sales
	—	(2)	(2)	Total before tax
	—	1	1	Tax benefit
	$—	$(1)	$(1)	Net of tax
Total reclassifications for the year	$(19)	$—	$(18)	Net of tax

(a) These accumulated other comprehensive income (loss) components are included in the computation of net periodic benefit cost, as further discussed in Note 13. Net periodic benefit cost is reflected in operating expenses and general and administrative expenses.

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VALERO ENERGY CORPORATION
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13. EMPLOYEE BENEFIT PLANS

Defined Benefit Plans

We have defined benefit pension plans, some of which are subject to collective bargaining agreements, that cover most of our employees. These plans provide eligible employees with retirement income based primarily on years of service and compensation during specific periods under final average pay and cash balance formulas. We fund our pension plans as required by local regulations. In the U.S., all qualified pension plans are subject to the Employee Retirement Income Security Act (ERISA) minimum funding standard. We typically do not fund or fully fund U.S. nonqualified and certain international pension plans that are not subject to funding requirements because contributions to these pension plans may be less economic and investment returns may be less attractive than our other investment alternatives.

In February 2013, we announced changes to certain of our U.S. qualified pension plans that cover the majority of our U.S. employees who work in our refining segment and corporate operations. Benefits under our primary pension plan changed from a final average pay formula to a cash balance formula with staged effective dates that commenced either on July 1, 2013 or January 1, 2015 depending on the age and service of the affected employees. All final average pay benefits were frozen as of December 31, 2014, with all future benefits to be earned under the new cash balance formula. These plan amendments resulted in a $328 million decrease to pension liabilities and a related increase to other comprehensive income during the year ended December 31, 2013. The benefit of this remeasurement will be amortized into income through 2025.

We also provide health care and life insurance benefits for certain retired employees through our postretirement benefit plans. Most of our employees become eligible for these benefits if, while still working for us, they reach normal retirement age or take early retirement. These plans are unfunded, and retired employees share the cost with us. Individuals who became our employees as a result of an acquisition became eligible for other postretirement benefits under our plans as determined by the terms of the relevant acquisition agreement.

In October 2013, we announced changes to our U.S. retiree health care plans to utilize more efficient insurance products for Medicare eligible retirees. These plan changes resulted in a $43 million decrease to our benefit obligations for other postretirement benefit plans and a related increase to other comprehensive income during the year ended December 31, 2013.

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The changes in benefit obligation related to all of our defined benefit plans, the changes in fair value of plan assets[(a)], and the funded status of our defined benefit plans as of and for the years ended were as follows (in millions):

	Pension Plans		Other Postretirement Benefit Plans	
	December 31,		December 31,	
	2015	2014	2015	2014
Changes in benefit obligation:				
Benefit obligation as of beginning of year	$2,450	$1,914	$361	$324
Service cost	109	120	8	7
Interest cost	98	91	14	15
Participant contributions	—	—	8	7
Plan amendments	22	2	—	—
Benefits paid	(169)	(109)	(27)	(30)
Actuarial (gain) loss	(138)	440	(26)	37
Other	(7)	(8)	(2)	1
Benefit obligation as of end of year	$2,365	$2,450	$336	$361
Changes in plan assets[(a)]:				
Fair value of plan assets as of beginning of year	$1,978	$1,909	$—	$—
Actual return on plan assets	19	139	—	—
Valero contributions	126	46	18	20
Participant contributions	—	—	8	7
Benefits paid	(169)	(109)	(27)	(30)
Other	(7)	(7)	1	3
Fair value of plan assets as of end of year	$1,947	$1,978	$—	$—
Reconciliation of funded status[(a)]:				
Fair value of plan assets as of end of year	$1,947	$1,978	$—	$—
Less benefit obligation as of end of year	2,365	2,450	336	361
Funded status as of end of year	$(418)	$(472)	$(336)	$(361)
Accumulated benefit obligation	$2,240	$2,354	n/a	n/a

(a) Plan assets include only the assets associated with pension plans subject to legal minimum funding standards. Plan assets associated with U.S. nonqualified pension plans are not included here because they are not protected from our creditors and therefore cannot be reflected as a reduction from our obligations under the pension plans. As a result, the reconciliation of funded status does not reflect the effect of plan assets that exist for all of our defined benefit plans. See Note 19 for the assets associated with certain U.S. nonqualified pension plans.

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Amounts recognized in our balance sheet for our pension and other postretirement benefits plans as of December 31, 2015 and 2014 include (in millions):

	Pension Plans		Other Postretirement Benefit Plans	
	2015	2014	2015	2014
Deferred charges and other assets, net	$5	$7	$—	$—
Accrued expenses	(20)	(28)	(20)	(20)
Other long-term liabilities	(403)	(451)	(316)	(341)
	$(418)	$(472)	$(336)	$(361)

The accumulated benefit obligations for certain of our pension plans exceed the fair values of the assets of those plans. For those plans, the table below presents the total projected benefit obligation, accumulated benefit obligation, and fair value of the plan assets (in millions).

	December 31,	
	2015	2014
Projected benefit obligation	$2,169	$2,288
Accumulated benefit obligation	2,070	2,217
Fair value of plan assets	1,747	1,812

Benefit payments that we expect to pay, including amounts related to expected future services that we expect to receive are as follows for the years ending December 31 (in millions):

	Pension Benefits	Other Postretirement Benefits
2016	$131	$20
2017	132	21
2018	141	22
2019	190	22
2020	166	22
2021-2025	913	112

We plan to contribute approximately $36 million to our pension plans and $20 million to our other postretirement benefit plans during 2016.

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The components of net periodic benefit cost related to our defined benefit plans were as follows (in millions):

	Pension Plans			Other Postretirement Benefit Plans		
	Year Ended December 31,			Year Ended December 31,		
	2015	2014	2013	2015	2014	2013
Components of net periodic benefit cost:						
Service cost	$109	$120	$137	$8	$7	$12
Interest cost	98	91	86	14	15	18
Expected return on plan assets	(133)	(133)	(131)	—	—	—
Amortization of:						
Prior service credit	(22)	(22)	(19)	(18)	(18)	(14)
Net actuarial (gain) loss	62	35	57	—	(1)	—
Special charges (credits)	7	3	(5)	—	—	—
Net periodic benefit cost	$121	$94	$125	$4	$3	$16

Amortization of prior service credit shown in the above table was based on a straight-line amortization of the cost over the average remaining service period of employees expected to receive benefits under each respective plan. Amortization of the net actuarial (gain) loss shown in the above table was based on the straight-line amortization of the excess of the unrecognized loss over 10 percent of the greater of the projected benefit obligation or market-related value of plan assets (smoothed asset value) over the average remaining service period of active employees expected to receive benefits under each respective plan.

Pre-tax amounts recognized in other comprehensive income were as follows (in millions):

	Pension Plans			Other Postretirement Benefit Plans		
	Year Ended December 31,			Year Ended December 31,		
	2015	2014	2013	2015	2014	2013
Net gain (loss) arising during the year:						
Net actuarial gain (loss)	$24	$(434)	$290	$26	$(37)	$77
Prior service cost	(22)	(1)	—	—	—	—
Remeasurement due to plan amendments	—	—	328	—	—	43
Net (gain) loss reclassified into income:						
Net actuarial (gain) loss	62	35	57	—	(1)	—
Prior service credit	(22)	(22)	(19)	(18)	(18)	(14)
Curtailment and settlement loss	7	3	1	—	—	—
Total changes in other comprehensive income (loss)	$49	$(419)	$657	$8	$(56)	$106

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The pre-tax amounts in accumulated other comprehensive income as of December 31, 2015 and 2014 that have not yet been recognized as components of net periodic benefit cost were as follows (in millions):

	Pension Plans		Other Postretirement Benefit Plans	
	2015	2014	2015	2014
Prior service credit	$(166)	$(210)	$(75)	$(92)
Net actuarial (gain) loss	783	876	(31)	(6)
Total	$617	$666	$(106)	$(98)

The following pre-tax amounts included in accumulated other comprehensive income as of December 31, 2015 are expected to be recognized as components of net periodic benefit cost during the year ending December 31, 2016 (in millions):

	Pension Plans	Other Postretirement Benefit Plans
Amortization of prior service credit	$(20)	$(16)
Amortization of net actuarial (gain) loss	49	(1)
Total	$29	$(17)

The weighted-average assumptions used to determine the benefit obligations as of December 31, 2015 and 2014 were as follows:

	Pension Plans		Other Postretirement Benefit Plans	
	2015	2014	2015	2014
Discount rate	4.45 %	4.10 %	4.53 %	4.13 %
Rate of compensation increase	3.79 %	3.78 %	— %	— %

The discount rate assumption used to determine the benefit obligations as of December 31, 2015 and 2014 for the majority of our pension plans and other postretirement benefit plans was based on the Aon Hewitt AA Only Above Median yield curve and considered the timing of the projected cash outflows under our plans. This curve was designed by Aon Hewitt to provide a means for plan sponsors to value the liabilities of their pension plans or postretirement benefit plans. It is a hypothetical double-A yield curve represented by a series of annualized individual discount rates with maturities from one-half year to 99 years. Each bond issue underlying the curve is required to have an average rating of double-A when averaging all available ratings by Moody’s Investor Services, Standard and Poor’s Ratings Service, and Fitch Ratings. Only the bonds representing the 50 percent highest yielding issuances among those with average ratings of double-A are included in this yield curve.

We based our December 31, 2015, 2014, and 2013 discount rate assumption on the Aon Hewitt AA Only Above Median yield curve because we believe it is representative of the types of bonds we would use to

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

settle our pension and other postretirement benefit plan liabilities as of those dates. We believe that the yields associated with the bonds used to develop this yield curve reflect the current level of interest rates.

The weighted-average assumptions used to determine the net periodic benefit cost for the years ended December 31, 2015, 2014, and 2013 were as follows:

	Pension Plans			Other Postretirement Benefit Plans		
	2015	2014	2013	2015	2014	2013
Discount rate	4.10 %	4.92 %	4.33 %	4.13 %	4.88 %	4.19 %
Expected long-term rate of return on plan assets	7.29 %	7.61 %	7.62 %	— %	— %	— %
Rate of compensation increase	3.78 %	3.81 %	3.73 %	— %	— %	— %

The assumed health care cost trend rates as of December 31, 2015 and 2014 were as follows:

	2015	2014
Health care cost trend rate assumed for the next year	7.29 %	7.36 %
Rate to which the cost trend rate was assumed to decline (the ultimate trend rate)	5.00 %	5.00 %
Year that the rate reaches the ultimate trend rate	2026	2020

Assumed health care cost trend rates impact the amounts reported for retiree health care plans. A one percentage-point change in assumed health care cost trend rates would have the following effects on other postretirement benefits (in millions):

	1% Increase	1% Decrease
Effect on total of service and interest cost components	$—	$—
Effect on accumulated postretirement benefit obligation	3	(2)

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VALERO ENERGY CORPORATION
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The tables below present the fair values of the assets of our pension plans (in millions) as of December 31, 2015 and 2014 by level of the fair value hierarchy. Assets categorized in Level 1 of the hierarchy are measured at fair value using a market approach based on quotations from national securities exchanges. Assets categorized in Level 2 of the hierarchy are measured at net asset value as a practical expedient for fair value. As previously noted, we do not fund or fully fund U.S. nonqualified and certain international pension plans that are not subject to funding requirements, and we do not fund our other postretirement benefit plans.

	Fair Value Measurements Using			Total as of December 31, 2015
	Level 1	Level 2	Level 3	
Equity securities:				
U.S. companies[(a)]	$503	$—	$—	$503
International companies	158	—	—	158
Preferred stock	2	—	—	2
Mutual funds:				
International growth	89	—	—	89
Index funds[(b)]	202	—	—	202
Corporate debt instruments	—	279	—	279
Government securities:				
U.S. Treasury securities	57	—	—	57
Other government securities	—	101	—	101
Common collective trusts	—	403	—	403
Private fund	—	37	—	37
Insurance contracts	—	19	—	19
Interest and dividends receivable	5	—	—	5
Cash and cash equivalents	49	43	—	92
Total	$1,065	$882	$—	$1,947

See notes on page 98.

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	Fair Value Measurements Using			Total as of December 31, 2014
	Level 1	Level 2	Level 3	
Equity securities:				
U.S. companies[a]	$541	$—	$—	$541
International companies	144	—	—	144
Preferred stock	1	1	—	2
Mutual funds:				
International growth	119	—	—	119
Index funds[b]	199	—	—	199
Corporate debt instruments	—	263	—	263
Government securities:				
U.S. Treasury securities	71	—	—	71
Other government securities	—	100	—	100
Common collective trusts	—	379	—	379
Private fund	—	40	—	40
Insurance contracts	—	18	—	18
Interest and dividends receivable	5	—	—	5
Cash and cash equivalents	75	22	—	97
Total	$1,155	$823	$—	$1,978

(a) Equity securities are held in a wide range of industrial sectors, including consumer goods, information technology, healthcare, industrials, and financial services.
(b) This class includes primarily investments in approximately 60 percent equities and 40 percent bonds.

The investment policies and strategies for the assets of our pension plans incorporate a well-diversified approach that is expected to earn long-term returns from capital appreciation and a growing stream of current income. This approach recognizes that assets are exposed to risk and the market value of the pension plans' assets may fluctuate from year to year. Risk tolerance is determined based on our financial ability to withstand risk within the investment program and the willingness to accept return volatility. In line with the investment return objective and risk parameters, the pension plans' mix of assets includes a diversified portfolio of equity and fixed-income investments. Equity securities include international stocks and a blend of U.S. growth and value stocks of various sizes of capitalization. Fixed income securities include bonds and notes issued by the U.S. government and its agencies, corporate bonds, and mortgage-backed securities. The aggregate asset allocation is reviewed on an annual basis. As of December 31, 2015, the target allocations for plan assets are 70 percent equity securities and 30 percent fixed income investments.

The expected long-term rate of return on plan assets is based on a forward-looking expected asset return model. This model derives an expected rate of return based on the target asset allocation of a plan's assets. The underlying assumptions regarding expected rates of return for each asset class reflect Aon Hewitt's best expectations for these asset classes. The model reflects the positive effect of periodic rebalancing among diversified asset classes. We select an expected asset return that is supported by this model.

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VALERO ENERGY CORPORATION
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Defined Contribution Plans
We have defined contribution plans that cover most of our employees. Our contributions to these plans are based on employees' compensation and/or a partial match of employee contributions to the plans. Our contributions to these defined contribution plans were $65 million, $61 million, and $62 million for the years ended December 31, 2015, 2014, and 2013, respectively.

14. STOCK-BASED COMPENSATION

Overview
Under our 2011 Omnibus Stock Incentive Plan (the OSIP), various stock and stock-based awards may be granted to employees and non-employee directors. Awards available under the OSIP include options to purchase shares of common stock, performance awards that vest upon the achievement of an objective performance goal, stock appreciation rights, restricted stock that vests over a period determined by our compensation committee, and dividend equivalent rights (DERs). The OSIP was approved by our stockholders on April 28, 2011. As of December 31, 2015, 12,109,301 shares of our common stock remained available to be awarded under the OSIP.

We also maintain other stock-based compensation plans under which previously granted equity awards remain outstanding. No additional grants may be awarded under these plans.

The following table reflects activity related to our stock-based compensation arrangements (in millions):

	Year Ended December 31,		
	2015	2014	2013
Stock-based compensation expense:			
Restricted stock	$47	$43	$49
Performance awards	11	15	11
Stock options	1	2	4
Total stock-based compensation expense	$59	$60	$64
Tax benefit recognized on stock-based compensation expense	$21	$21	$22
Tax benefit realized for tax deductions resulting from exercises and vestings	66	64	66
Effect of tax deductions in excess of recognized stock-based compensation expense reported as a financing cash flow	44	47	47

Each of our significant stock-based compensation arrangements is discussed below.

Restricted Stock
Restricted stock is granted to employees and non-employee directors. Restricted stock granted to employees vests in accordance with individual written agreements between the participants and us, usually in equal annual installments over a period of three years beginning one year after the date of grant. Restricted stock granted to our non-employee directors vests in equal annual installments over a period of three years beginning one year after the date of grant. The fair value of each restricted stock per share is equal to the

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

market price of our common stock. A summary of the status of our restricted stock awards is presented in the table below.

	Number of Shares	Weighted-Average Grant-Date Fair Value Per Share
Nonvested shares as of January 1, 2015	1,758,150	$41.96
Granted	829,213	70.07
Vested	(1,016,862)	41.72
Forfeited	(19,061)	41.42
Nonvested shares as of December 31, 2015	1,551,440	57.15

As of December 31, 2015, there was $55 million of unrecognized compensation cost related to outstanding unvested restricted stock awards, which is expected to be recognized over a weighted-average period of approximately two years.

The following table reflects activity related to our restricted stock (in millions, except per share data):

	Year Ended December 31,		
	2015	2014	2013
Weighted-average grant-date fair value per share of restricted stock granted	$70.07	$49.40	$39.55
Fair value of restricted stock vested	69	60	74

Performance Awards

Performance awards are issued to certain of our key employees and represent rights to receive shares of our common stock upon the achievement by us of an objective performance measure. The objective performance measure is our total shareholder return, which is ranked among the total shareholder returns of a defined peer group of companies. Our ranking determines the rate at which the performance awards convert into our common shares. Conversion rates can range from zero to 200 percent.

Performance awards vest in equal one-third increments (tranches) on an annual basis. Our compensation committee establishes the peer group of companies for each tranche of awards at the beginning of the one-year vesting period for that tranche. Therefore, performance awards are not considered to be granted for accounting purposes until our compensation committee establishes the peer group of companies for each tranche of awards. The fair value of each tranche of awards is determined at the grant date principally using a Monte Carlo simulation model.

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VALERO ENERGY CORPORATION
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A summary of the status of our performance awards is presented below.

	Nonvested Awards	Weighted-Average Grant-Date Fair Value Per Share
Awards outstanding as of January 1, 2015	614,390	$42.06
Granted	183,299	88.97
Vested	(388,561)	38.77
Forfeited	(703)	48.57
Awards outstanding as of December 31, 2015	408,425	66.23

As of December 31, 2015, there was $16 million of unrecognized compensation cost related to outstanding unvested performance awards, which will be recognized during 2016.

Performance awards converted during the year ended December 31, 2015 were as follows:

	Vested Awards Converted	Actual Conversion Rate	Number of Shares Issued
2011 awards	213,299	166.7%	355,576
2012 awards	96,845	200.0%	193,690
2013 awards	78,417	200.0%	156,834
Total	388,561		706,100

15. INCOME TAXES

Income Tax Expense
Income from continuing operations before income tax expense was as follows (in millions):

	Year Ended December 31,		
	2015	2014	2013
U.S. operations	$5,327	$4,677	$3,531
International operations	644	875	445
Income from continuing operations before income tax expense	$5,971	$5,552	$3,976

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VALERO ENERGY CORPORATION
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The following is a reconciliation of income tax expense computed by applying statutory income tax rates as reflected in the table below to actual income tax expense related to continuing operations (in millions):

	Year Ended December 31, 2015		
	U.S.	International	Total
Income tax expense at statutory rates	$1,864	$92	$1,956
U.S. state and Canadian provincial tax expense, net of federal income tax effect	45	73	118
Permanent differences:			
Manufacturing deduction	(102)	—	(102)
Other	(18)	(5)	(23)
Change in tax law	—	(17)	(17)
Tax effects of income associated with noncontrolling interests	(39)	—	(39)
Other, net	(25)	2	(23)
Income tax expense	$1,725	$145	$1,870

	Year Ended December 31, 2014		
	U.S.	International	Total
Income tax expense at statutory rates	$1,637	$145	$1,782
U.S. state and Canadian provincial tax expense, net of federal income tax effect	62	71	133
Permanent differences:			
Manufacturing deduction	(74)	—	(74)
Other	(16)	1	(15)
Tax effects of income associated with noncontrolling interests	(28)	—	(28)
Other, net	(22)	1	(21)
Income tax expense	$1,559	$218	$1,777

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

	Year Ended December 31, 2013		
	U.S.	International	Total
Income tax expense at statutory rates	$1,236	$84	$1,320
U.S. state and Canadian provincial tax expense, net of federal income tax effect	62	24	86
Permanent differences:			
Manufacturing deduction	(36)	—	(36)
Nontaxable gain on disposition (See Notes 3 and 10)	(114)	—	(114)
Other	10	(1)	9
Change in tax law	(10)	(22)	(32)
Tax effects of income associated with noncontrolling interests	(3)	—	(3)
Other, net	44	(20)	24
Income tax expense	$1,189	$65	$1,254

Statutory income tax rates applicable to the countries in which we operate were as follows:

	Year Ended December 31,		
	2015	2014	2013
U.S.	35 %	35 %	35 %
Canada	15 %	15 %	15 %
U.K.	20 %	21 %	23 %
Ireland	13 %	13 %	13 %
Aruba	7 %	7 %	7 %

There was no income tax expense or benefit related to discontinued operations for the years ended December 31, 2015, 2014, and 2013.

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Components of income tax expense related to continuing operations were as follows (in millions):

	Year Ended December 31, 2015		
	U. S.	International	Total
Current:			
Country	$1,513	$64	$1,577
U.S. state / Canadian provincial	85	43	128
Total current	1,598	107	1,705
Deferred:			
Country	143	8	151
U.S. state / Canadian provincial	(16)	30	14
Total deferred	127	38	165
Income tax expense	$1,725	$145	$1,870

	Year Ended December 31, 2014		
	U. S.	International	Total
Current:			
Country	$1,196	$53	$1,249
U.S. state / Canadian provincial	59	24	83
Total current	1,255	77	1,332
Deferred:			
Country	268	94	362
U.S. state / Canadian provincial	36	47	83
Total deferred	304	141	445
Income tax expense	$1,559	$218	$1,777

	Year Ended December 31, 2013		
	U. S.	International	Total
Current:			
Country	$635	$53	$688
U.S. state / Canadian provincial	36	29	65
Total current	671	82	753
Deferred:			
Country	459	(12)	447
U.S. state / Canadian provincial	59	(5)	54
Total deferred	518	(17)	501
Income tax expense	$1,189	$65	$1,254

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Deferred Income Tax Assets and Liabilities

The tax effects of significant temporary differences representing deferred income tax assets and liabilities were as follows (in millions):

	December 31, 2015	2014
Deferred income tax assets:		
Tax credit carryforwards	$33	$37
Net operating losses (NOLs)	423	436
Inventories	72	160
Compensation and employee benefit liabilities	331	358
Environmental liabilities	80	92
Other	139	178
Total deferred income tax assets	1,078	1,261
Less: Valuation allowance	(435)	(393)
Net deferred income tax assets	643	868
Deferred income tax liabilities:		
Property, plant, and equipment	6,725	6,682
Deferred turnaround costs	394	356
Inventories	287	426
Investments	226	152
Other	71	73
Total deferred income tax liabilities	7,703	7,689
Net deferred income tax liabilities	$7,060	$6,821

We had the following income tax credit and loss carryforwards as of December 31, 2015 (in millions):

	Amount	Expiration
U.S. state income tax credits	$51	2016 through 2027
U.S. state NOLs (gross amount)	7,302	2016 through 2035
International NOLs	1,465	Unlimited

We have recorded a valuation allowance as of December 31, 2015 and 2014 due to uncertainties related to our ability to utilize some of our deferred income tax assets, primarily consisting of certain U.S. state income tax credits and NOLs, and international NOLs, before they expire. The valuation allowance is based on our estimates of taxable income in the various jurisdictions in which we operate and the period over which deferred income tax assets will be recoverable. During 2015, the valuation allowance increased by $42 million, primarily due to increases in U.S. state NOLs. The realization of net deferred income tax assets recorded as of December 31, 2015 is primarily dependent upon our ability to generate future taxable income in certain U.S. states and international jurisdictions.

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Should we ultimately recognize tax benefits related to the valuation allowance for deferred income tax assets as of December 31, 2015, such amounts will be allocated as follows (in millions):

Income tax benefit	$429
Additional paid-in capital	6
Total	$435

Deferred income taxes have not been provided on the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and the respective tax bases of our international subsidiaries based on the determination that such differences are essentially permanent in duration in that the earnings of these subsidiaries are expected to be indefinitely reinvested in the international operations. As of December 31, 2015, the cumulative undistributed earnings of these subsidiaries were approximately $3.2 billion. If those earnings were not considered indefinitely reinvested, deferred income taxes would have been recorded after consideration of U.S. foreign tax credits. It is not practicable to estimate the amount of additional tax that might be payable on those earnings, if distributed.

Unrecognized Tax Benefits

The following is a reconciliation of the change in unrecognized tax benefits, excluding related penalties, interest (net of the U.S. federal and state income tax effects), and the U.S. federal income tax effect of state unrecognized tax benefits (in millions):

	Year Ended December 31,		
	2015	2014	2013
Balance as of beginning of year	$989	$950	$341
Additions based on tax positions related to the current year	36	35	64
Additions for tax positions related to prior years	83	118	576
Reductions for tax positions related to prior years	(82)	(67)	(26)
Reductions for tax positions related to the lapse of applicable statute of limitations	(3)	(1)	(4)
Settlements	(59)	(46)	(1)
Balance as of end of year	$964	$989	$950

As of December 31, 2015, the balance in unrecognized tax benefits includes $570 million of tax refunds that we intend to claim by amending various of our income tax returns for 2005 through 2015. We intend to propose that incentive payments received from the U.S. federal government for blending biofuels into refined products be excluded from taxable income during these periods. However, due to the complexity of this matter and uncertainties with respect to the interpretation of the Internal Revenue Code, we concluded that the refund claims included in the reconciliation below cannot be recognized in our financial statements. As a result, these amounts are not included in our uncertain tax position liabilities as of December 31, 2015, 2014, and 2013 even though they are reflected in the table above.

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The following is a reconciliation of unrecognized tax benefits reflected in the table above to our uncertain tax position liabilities as of December 31, 2015 and 2014 that are reflected in Note 9 (in millions):

	December 31,	
	2015	2014
Unrecognized tax benefits	$964	$989
Tax refund claim not recognized in our financial statements	(570)	(554)
Reduction of deferred tax asset	(28)	—
Penalties, interest (net of U.S. federal and state income tax effect), and the U.S. federal income tax effect of state unrecognized tax benefits	25	49
Uncertain tax position liabilities	$391	$484

As of December 31, 2015 and 2014, there were $757 million and $768 million, respectively, of unrecognized tax benefits that if recognized would affect our annual effective tax rate.

During the years ended December 31, 2015, 2014, and 2013, we recognized $5 million, $2 million, and $12 million, respectively, in penalties and interest, which are reflected within income tax expense. Accrued penalties and interest totaled $117 million and $141 million as of December 31, 2015 and 2014, respectively, excluding the U.S. federal and state income tax effects related to interest.

During the next 12 months, it is reasonably possible that tax audit resolutions could reduce unrecognized tax benefits, excluding interest, by approximately $370 million, either because the tax positions are sustained on audit or because we agree to their disallowance. We do not expect these reductions to have a significant impact on our financial statements because such reductions would not significantly affect our annual effective rate.

Tax Returns Under Audit

As of December 31, 2015, our tax years for 2008 through 2011 were under audit by the IRS. The IRS has proposed adjustments to our taxable income for certain open years. We are protesting the proposed adjustments and do not expect that the ultimate disposition of these adjustments will result in a material change to our financial position, results of operations, or liquidity. We are continuing to work with the IRS to resolve these matters and we believe that they will be resolved for amounts consistent with recorded amounts of unrecognized tax benefits associated with these matters.

During the year ended December 31, 2015, we settled the audits related to our 2004 through 2007 tax years consistent with the recorded amounts of uncertain tax position liabilities associated with those audits.

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16. EARNINGS PER COMMON SHARE

Earnings per common share from continuing operations were computed as follows (dollars and shares in millions, except per share amounts):

	Year Ended December 31,					
	2015		2014		2013	
	Participating Securities	Common Stock	Participating Securities	Common Stock	Participating Securities	Common Stock
Earnings per common share from continuing operations:						
Net income attributable to Valero stockholders from continuing operations		$3,990		$3,694		$2,714
Less dividends paid:						
Common stock		845		552		460
Participating securities		3		2		2
Undistributed earnings		$3,142		$3,140		$2,252
Weighted-average common shares outstanding	2	497	2	526	3	542
Earnings per common share from continuing operations:						
Distributed earnings	$1.70	$1.70	$1.05	$1.05	$0.85	$0.85
Undistributed earnings	6.30	6.30	5.95	5.95	4.13	4.13
Total earnings per common share from continuing operations	$8.00	$8.00	$7.00	$7.00	$4.98	$4.98
Earnings per common share from continuing operations – assuming dilution:						
Net income attributable to Valero stockholders from continuing operations		$3,990		$3,694		$2,714
Weighted-average common shares outstanding		497		526		542
Common equivalent shares:						
Stock options		2		2		4
Performance awards and nonvested restricted stock		1		2		2
Weighted-average common shares outstanding – assuming dilution		500		530		548
Earnings per common share from continuing operations –		$7.99		$6.97		$4.96

assuming dilution

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17. SEGMENT INFORMATION

We have two reportable segments, refining and ethanol, as of December 31, 2015. Prior to May 1, 2013, we also had a retail segment. As discussed in Note 3, we completed the separation of our retail business, CST, on May 1, 2013. Segment activity related to our retail business prior to the separation is reflected in the retail segment results below. Motor fuel sales to CST, which were eliminated in consolidation prior to the separation, are reported as refining segment operating revenues from external customers after May 1, 2013.

Our refining segment includes refining and marketing operations in the U.S., Canada, the U.K., Aruba, and Ireland. Our ethanol segment includes ethanol and marketing operations in the U.S. The retail segment included company-operated convenience stores in the U.S. and Canada; filling stations, truckstop facilities, cardlock facilities, and home heating oil operations in Canada; and credit card operations in the U.S. Operations that are not included in any of the reportable segments are included in the corporate category.

The reportable segments are strategic business units that offer different products and services. They are managed separately as each business requires unique technology and marketing strategies. Performance is evaluated based on operating income. Intersegment sales are generally derived from transactions made at prevailing market rates.

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The following table reflects activity related to continuing operations (in millions):

	Refining	Ethanol	Retail	Corporate	Total
Year ended December 31, 2015:					
Total segment revenues	$84,521	$3,434	$—	$—	$87,955
Intersegment elimination	—	(151)	—	—	(151)
Operating revenues from external customers	$84,521	$3,283	$—	$—	$87,804
Lower of cost or market inventory valuation adjustment	$740	$50	$—	$—	$790
Depreciation and amortization expense	1,745	50	—	47	1,842
Operating income (loss)	6,973	142	—	(757)	6,358
Total expenditures for long-lived assets	2,254	67	—	29	2,350
Year ended December 31, 2014:					
Total segment revenues	$126,004	$4,940	$—	$—	$130,944
Intersegment elimination	—	(100)	—	—	(100)
Operating revenues from external customers	$126,004	$4,840	$—	$—	$130,844
Depreciation and amortization expense	$1,597	$49	$—	$44	$1,690
Operating income (loss)	5,884	786	—	(768)	5,902
Total expenditures for long-lived assets	2,730	42	—	30	2,802
Year ended December 31, 2013:					
Total segment revenues	$131,940	$5,242	$3,896	$—	$141,078
Intersegment elimination	(2,876)	(128)	—	—	(3,004)
Operating revenues from external customers	$129,064	$5,114	$3,896	$—	$138,074
Depreciation and amortization expense	$1,566	$45	$41	$68	$1,720
Operating income (loss)	4,211	491	81	(826)	3,957
Total expenditures for long-lived assets	2,595	33	62	65	2,755

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Our principal products include conventional and CARB gasolines, RBOB (reformulated gasoline blendstock for oxygenate blending), ultra-low-sulfur diesel, and gasoline blendstocks. We also produce a substantial slate of middle distillates, jet fuel, and petrochemicals, in addition to lube oils and asphalt. Other product revenues include such products as gas oils, No. 6 fuel oil, and petroleum coke. Operating revenues from external customers for our principal products were as follows (in millions):

	Year Ended December 31,		
	2015	2014	2013
Refining:			
Gasolines and blendstocks	$38,983	$56,846	$57,806
Distillates	38,093	57,521	56,921
Petrochemicals	1,824	3,759	4,281
Lubes and asphalts	874	1,397	1,643
Other product revenues	4,747	6,481	8,413
Total refining operating revenues	84,521	126,004	129,064
Ethanol:			
Ethanol	2,628	4,192	4,245
Distillers grains	655	648	869
Total ethanol operating revenues	3,283	4,840	5,114
Retail:			
Fuel sales (gasoline and diesel)	—	—	3,226
Merchandise sales and other	—	—	524
Home heating oil	—	—	146
Total retail operating revenues	—	—	3,896
Total operating revenues	$87,804	$130,844	$138,074

Operating revenues by geographic area are shown in the table below (in millions). The geographic area is based on location of customer and no customer accounted for 10 percent or more of our operating revenues.

	Year Ended December 31,		
	2015	2014	2013
U.S.	$60,319	$91,499	$100,418
Canada	6,841	10,410	9,974
U.K. and Ireland	11,232	14,182	13,675
Other countries	9,412	14,753	14,007
Total operating revenues	$87,804	$130,844	$138,074

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Long-lived assets include property, plant, and equipment and certain long-lived assets included in "deferred charges and other assets, net." Geographic information by country for long-lived assets consisted of the following (in millions):

	December 31,	
	2015	2014
U.S.	$25,210	$24,653
Canada	1,824	2,161
U.K.	1,131	1,199
Aruba	57	59
Ireland	20	22
Total long-lived assets	$28,242	$28,094

Total assets by reportable segment were as follows (in millions):

	December 31,	
	2015	2014
Refining	$38,142	$40,103
Ethanol	1,016	954
Corporate	5,185	4,493
Total assets	$44,343	$45,550

In March 2014, we purchased an idled corn ethanol plant in Mount Vernon, Indiana for $34 million from a wholly owned subsidiary of Aventine Renewable Energy Holdings, Inc. We resumed production at that plant during the third quarter of 2014. In the fourth quarter of 2014, an independent appraisal of the assets acquired and liabilities assumed and certain other evaluations of the fair values related to the Mount Vernon plant were completed and finalized. The purchase price of the Mount Vernon plant was allocated based on the fair values of the assets acquired and the liabilities assumed at the date of acquisition resulting from this final appraisal and other evaluations. There were no significant adjustments made to the preliminary purchase price allocation.

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18. SUPPLEMENTAL CASH FLOW INFORMATION

In order to determine net cash provided by operating activities, net income is adjusted by, among other things, changes in current assets and current liabilities as follows (in millions):

	Year Ended December 31,		
	2015	2014	2013
Decrease (increase) in current assets:			
Receivables, net	$1,294	$2,753	$(753)
Inventories	(222)	(1,014)	(13)
Income taxes receivable	(104)	(23)	10
Prepaid expenses and other	(45)	(32)	2
Increase (decrease) in current liabilities:			
Accounts payable	(1,787)	(3,149)	977
Accrued expenses	(40)	38	53
Taxes other than income taxes	(74)	(64)	337
Income taxes payable	(328)	(319)	309
Changes in current assets and current liabilities	$(1,306)	$(1,810)	$922

The above changes in current assets and current liabilities differ from changes between amounts reflected in the applicable balance sheets for the respective periods for the following reasons:

- the amounts shown above exclude changes in cash and temporary cash investments, deferred income taxes, and current portion of debt and capital lease obligations, as well as the effect of certain noncash investing and financing activities discussed below;
- the amounts shown above for the year ended December 31, 2013 exclude the change in current assets and current liabilities resulting from the separation of our retail business as described in Note 3;
- amounts accrued for capital expenditures and deferred turnaround and catalyst costs are reflected in investing activities when such amounts are paid;
- amounts accrued for common stock purchases in the open market that are not settled as of the balance sheet date are reflected in financing activities when the purchases are settled and paid; and
- certain differences between balance sheet changes and the changes reflected above result from translating foreign currency denominated balances at the applicable exchange rates as of each balance sheet date.

Noncash investing and financing activities for the year ended December 31, 2015 included the recognition of a capital lease asset and related obligation associated with an agreement for storage tanks near one of our refineries. Noncash financing activities for the year ended December 31, 2015 also included an accrual of $25 million for the purchase of 347,438 shares of our common stock, which was settled in early January 2016.

There were no significant noncash investing activities for the years ended December 31, 2014 and 2013.

There were no significant noncash financing activities for the year ended December 31, 2014. Noncash financing activities for the year ended December 31, 2013 included the exchange of CST’s senior unsecured

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bonds and the exchange of all of our remaining shares of CST common stock with third-party financial institutions in satisfaction of our short-term debt agreements as described in Note 10.

Cash flows related to interest and income taxes paid were as follows (in millions):

	Year Ended December 31,		
	2015	2014	2013
Interest paid in excess of amount capitalized	$416	$392	$361
Income taxes paid, net	2,093	1,624	387

Cash flows related to the discontinued operations of the Aruba Refinery were immaterial for the years ended December 31, 2014 and 2013.

19. FAIR VALUE MEASUREMENTS

General

U.S. GAAP requires or permits certain assets and liabilities to be measured at fair value on a recurring or nonrecurring basis in our balance sheets, and those assets and liabilities are presented below under “Recurring Fair Value Measurements” and “Nonrecurring Fair Value Measurements.” Assets and liabilities measured at fair value on a recurring basis, such as derivative financial instruments, are measured at fair value at the end of each reporting period. Assets and liabilities measured at fair value on a nonrecurring basis, such as the impairment of property, plant and equipment, are measured at fair value in particular circumstances.

U.S. GAAP also requires the disclosure of the fair values of financial instruments when an option to elect fair value accounting has been provided, but such election has not been made. A debt obligation is an example of such a financial instrument. The disclosure of the fair values of financial instruments not recognized at fair value in our balance sheet is presented below under “Other Financial Instruments.”

U.S. GAAP provides a framework for measuring fair value and establishes a three-level fair value hierarchy that prioritizes inputs to valuation techniques based on the degree to which objective prices in external active markets are available to measure fair value. Following is a description of each of the levels of the fair value hierarchy.

- Level 1 - Observable inputs, such as unadjusted quoted prices in active markets for identical assets or liabilities.
- Level 2 - Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.
- Level 3 - Unobservable inputs for the asset or liability. Unobservable inputs reflect our own assumptions about what market participants would use to price the asset or liability. The inputs are developed based on the best information available in the circumstances, which might include occasional market quotes or sales of similar instruments or our own financial data such as internally developed pricing models, discounted cash flow methodologies, as well as instruments for which the fair value determination requires significant judgment.

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Recurring Fair Value Measurements
The tables below present information (in millions) about our assets and liabilities recognized at their fair values in our balance sheets categorized according to the fair value hierarchy of the inputs utilized by us to determine the fair values as of December 31, 2015 and 2014.

We have elected to offset the fair value amounts recognized for multiple similar derivative contracts executed with the same counterparty, including any related cash collateral assets or obligations as shown below; however, fair value amounts by hierarchy level are presented on a gross basis in the tables below. We have no derivative contracts that are subject to master netting arrangements that are reflected gross on the balance sheet.

	December 31, 2015							
	Fair Value Hierarchy			Total Gross Fair Value	Effect of Counter-party Netting	Effect of Cash Collateral Netting	Net Carrying Value on Balance Sheet	Cash Collateral Paid or Received Not Offset
	Level 1	Level 2	Level 3					
Assets:								
Commodity derivative contracts	$649	$33	$—	$682	$(557)	$(12)	$113	$—
Foreign currency contracts	3	—	—	3	n/a	n/a	3	n/a
Investments of certain benefit plans	64	—	11	75	n/a	n/a	75	n/a
Total	$716	$33	$11	$760	$(557)	$(12)	$191	
Liabilities:								
Commodity derivative contracts	$522	$35	$—	$557	$(557)	$—	$—	$(31)
Environmental credit obligations	—	2	—	2	n/a	n/a	2	n/a
Physical purchase contracts	—	6	—	6	n/a	n/a	6	n/a
Total	$522	$43	$—	$565	$(557)	$—	$8	

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	December 31, 2014							
	Fair Value Hierarchy			Total Gross Fair Value	Effect of Counter-party Netting	Effect of Cash Collateral Netting	Net Carrying Value on Balance Sheet	Cash Collateral Paid or Received Not Offset
	Level 1	Level 2	Level 3					
Assets:								
Commodity derivative contracts	$3,096	$36	$—	$3,132	$(2,907)	$(99)	$126	$—
Physical purchase contracts	—	1	—	1	n/a	n/a	1	n/a
Investments of certain benefit plans	97	—	11	108	n/a	n/a	108	n/a
Total	$3,193	$37	$11	$3,241	$(2,907)	$(99)	$235	
Liabilities:								
Commodity derivative contracts	$2,886	$34	$—	$2,920	$(2,907)	$(13)	$—	$(25)
Environmental credit obligations	—	14	—	14	n/a	n/a	14	n/a
Physical purchase contracts	—	5	—	5	n/a	n/a	5	n/a
Total	$2,886	$53	$—	$2,939	$(2,907)	$(13)	$19	

A description of our assets and liabilities recognized at fair value along with the valuation methods and inputs we used to develop their fair value measurements are as follows:

- Commodity derivative contracts consist primarily of exchange-traded futures and swaps, and as disclosed in Note 20, some of these contracts are designated as hedging instruments. These contracts are measured at fair value using the market approach. Exchange-traded futures are valued based on quoted prices from the exchange and are categorized in Level 1 of the fair value hierarchy. Swaps are priced using third-party broker quotes, industry pricing services, and exchange-traded curves, with appropriate consideration of counterparty credit risk, but because they have contractual terms that are not identical to exchange-traded futures instruments with a comparable market price, these financial instruments are categorized in Level 2 of the fair value hierarchy.
- Physical purchase contracts represent the fair value of fixed-price corn purchase contracts. The fair values of these purchase contracts are measured using a market approach based on quoted prices from the commodity exchange or an independent pricing service and are categorized in Level 2 of the fair value hierarchy.
- Investments of certain benefit plans consist of investment securities held by trusts for the purpose of satisfying a portion of our obligations under certain U.S. nonqualified benefit plans. The assets categorized in Level 1 of the fair value hierarchy are measured at fair value using a market approach based on quoted prices from national securities exchanges. The assets categorized in Level 3 of the fair value hierarchy represent insurance contracts, the fair value of which is provided by the insurer.
- Foreign currency contracts consist of foreign currency exchange and purchase contracts entered into for our international operations to manage our exposure to exchange rate fluctuations on transactions denominated in currencies other than the local (functional) currencies of those operations. These

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contracts are valued based on quoted prices from the exchange and are categorized in Level 1 of the fair value hierarchy.

- Environmental credit obligations represent our liability for the purchase of (i) biofuel credits (primarily RINs in the U.S.) needed to satisfy our obligation to blend biofuels into the products we produce and (ii) emission credits under the California Global Warming Solutions Act (the California cap-and-trade system, also known as AB 32) and Quebec's Regulation respecting the cap-and-trade system for greenhouse gas emission allowances (the Quebec cap-and-trade system), (collectively, the cap-and-trade systems). To the degree we are unable to blend biofuels (such as ethanol and biodiesel) at percentages required under the biofuel programs, we must purchase biofuel credits to comply with these programs. Under the cap-and-trade systems, we must purchase emission credits to comply with these systems. These programs are further described in Note 20 under "Environmental Compliance Program Price Risk." The liability for environmental credits is based on our deficit for such credits as of the balance sheet date, if any, after considering any credits acquired or under contract, and is equal to the product of the credits deficit and the market price of these credits as of the balance sheet date. The environmental credit obligations are categorized in Level 2 of the fair value hierarchy and are measured at fair value using the market approach based on quoted prices from an independent pricing service.

There were no transfers between Level 1 and Level 2 for assets and liabilities held as of December 31, 2015 and 2014 that were measured at fair value on a recurring basis.

There was no activity during the years ended December 31, 2015, 2014, and 2013 related to the fair value amounts categorized in Level 3 as of December 31, 2015, 2014, and 2013.

Nonrecurring Fair Value Measurements

There were no assets or liabilities that were measured at fair value on a nonrecurring basis as of December 31, 2015 and 2014.

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Other Financial Instruments
Financial instruments that we recognize in our balance sheets at their carrying amounts are shown in the table below along with their associated fair values (in millions):

	December 31, 2015		December 31, 2014	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Financial assets:				
Cash and temporary cash investments	$4,114	$4,114	$3,689	$3,689
Financial liabilities:				
Debt (excluding capital leases)	7,292	7,759	6,354	7,562

The methods and significant assumptions used to estimate the fair value of these financial instruments are as follows:

- The fair value of cash and temporary cash investments approximates the carrying value due to the low level of credit risk of these assets combined with their short maturities and market interest rates (Level 1).
- The fair value of debt is determined primarily using the market approach based on quoted prices provided by third-party brokers and vendor pricing services (Level 2).

20. PRICE RISK MANAGEMENT ACTIVITIES

We are exposed to market risks related to the volatility in the price of commodities, interest rates, and foreign currency exchange rates. We enter into derivative instruments to manage some of these risks, including derivative instruments related to the various commodities we purchase or produce, interest rate swaps, and foreign currency exchange and purchase contracts, as described below under “Risk Management Activities by Type of Risk.” These derivative instruments are recorded as either assets or liabilities measured at their fair values (see Note 19), as summarized below under “Fair Values of Derivative Instruments.” In addition, the effect of these derivative instruments on our income is summarized below under “Effect of Derivative Instruments on Income and Other Comprehensive Income.”

When we enter into a derivative instrument, it is designated as a fair value hedge, a cash flow hedge, an economic hedge, or a trading derivative. The gain or loss on a derivative instrument designated and qualifying as a fair value hedge, as well as the offsetting loss or gain on the hedged item attributable to the hedged risk, is recognized currently in income in the same period. The effective portion of the gain or loss on a derivative instrument designated and qualifying as a cash flow hedge is initially reported as a component of other comprehensive income and is then recorded into income in the period or periods during which the hedged forecasted transaction affects income. The ineffective portion of the gain or loss on the cash flow derivative instrument, if any, is recognized in income as incurred. For our economic hedges (derivative instruments not designated as fair value or cash flow hedges) and for derivative instruments entered into by us for trading purposes, the derivative instrument is recorded at fair value and changes in the fair value of the derivative instrument are recognized currently in income. The cash flow effects of all of our derivative instruments are reflected in operating activities in our statements of cash flows for all periods presented.

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We are also exposed to market risk related to the volatility in the price of credits needed to comply with various governmental and regulatory programs. To manage this risk, we enter into contracts to purchase these credits when prices are deemed favorable. Some of these contracts are derivative instruments; however, we elect the normal purchase exception and do not record these contracts at their fair values.

Risk Management Activities by Type of Risk
Commodity Price Risk
We are exposed to market risks related to the volatility in the price of crude oil, refined products (primarily gasoline and distillate), grain (primarily corn), soybean oil, and natural gas used in our operations. To reduce the impact of price volatility on our results of operations and cash flows, we use commodity derivative instruments, including futures, swaps, and options. We use the futures markets for the available liquidity, which provides greater flexibility in transacting our hedging and trading operations. We use swaps primarily to manage our price exposure. Our positions in commodity derivative instruments are monitored and managed on a daily basis by our risk control group to ensure compliance with our stated risk management policy that has been approved by our board of directors.

For risk management purposes, we use fair value hedges, cash flow hedges, and economic hedges. In addition to the use of derivative instruments to manage commodity price risk, we also enter into certain commodity derivative instruments for trading purposes. Our objective for entering into each type of hedge or trading derivative is described below.

- Fair Value Hedges – Fair value hedges are used, from time to time, to hedge price volatility in certain refining inventories and firm commitments to purchase inventories. The level of activity for our fair value hedges is based on the level of our operating inventories, and generally represents the amount by which our inventories exceed our previous year-end LIFO inventory levels. As of December 31, 2015, we had no outstanding commodity derivative instruments that were entered into as fair value hedges.

- Cash Flow Hedges – Cash flow hedges are used, from time to time, to hedge price volatility in certain forecasted feedstock and refined product purchases, refined product sales, and natural gas purchases. The objective of our cash flow hedges is to lock in the price of forecasted feedstock, refined product, or natural gas purchases or refined product sales at existing market prices that we deem favorable. As of December 31, 2015, we had no outstanding commodity derivative instruments that were entered into as cash flow hedges.

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VALERO ENERGY CORPORATION
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- Economic Hedges – Economic hedges represent commodity derivative instruments that are not designated as fair value or cash flow hedges and are used to manage price volatility in certain (i) feedstock and refined product inventories, (ii) forecasted feedstock and product purchases, and product sales, and (iii) fixed-price purchase contracts. Our objective for entering into economic hedges is consistent with the objectives discussed above for fair value hedges and cash flow hedges. However, the economic hedges are not designated as a fair value hedge or a cash flow hedge for accounting purposes, usually due to the difficulty of establishing the required documentation at the date that the derivative instrument is entered into that would qualify as hedging instruments for accounting purposes.

As of December 31, 2015, we had the following outstanding commodity derivative instruments that were used as economic hedges, as well as commodity derivative instruments related to the physical purchase of corn at a fixed price. The information presents the notional volume of outstanding contracts by type of instrument and year of maturity (volumes in thousands of barrels, except those identified as natural gas contracts that are presented in billions of British thermal units, corn contracts that are presented in thousands of bushels, and soybean oil contracts that are presented in thousands of pounds).

	Notional Contract Volumes by Year of Maturity	
Derivative Instrument	2016	2017
Crude oil and refined products:		
Swaps – long	11,727	—
Swaps – short	11,559	—
Futures – long	73,746	—
Futures – short	85,999	—
Corn:		
Futures – long	19,345	10
Futures – short	39,995	75
Physical contracts – long	18,336	65
Soybean oil:		
Futures – long	83,340	—
Futures – short	128,760	—

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

- Trading Derivatives – Our objective for entering into commodity derivative instruments for trading purposes is to take advantage of existing market conditions related to future results of operations and cash flows.

As of December 31, 2015, we had the following outstanding commodity derivative instruments that were entered into for trading purposes. The information presents the notional volume of outstanding contracts by type of instrument and year of maturity (volumes in thousands of barrels, except those identified as natural gas contracts that are presented in billions of British thermal units).

	Notional Contract Volumes by Year of Maturity	
Derivative Instrument	2016	2017
Crude oil and refined products:		
Swaps – long	7,739	—
Swaps – short	7,739	—
Futures – long	38,732	500
Futures – short	39,279	—
Options – long	10,800	—
Options – short	12,400	—
Natural gas:		
Futures – long	1,400	—

Interest Rate Risk
Our primary market risk exposure for changes in interest rates relates to our debt obligations. We manage our exposure to changing interest rates through the use of a combination of fixed-rate and floating-rate debt. In addition, at times we have used interest rate swap agreements to manage our fixed to floating interest rate position by converting certain fixed-rate debt to floating-rate debt. We had no interest rate derivative instruments outstanding as of December 31, 2015 and 2014, or during the years ended December 31, 2015, 2014, or 2013.

Foreign Currency Risk
We are exposed to exchange rate fluctuations on transactions entered into by our international operations that are denominated in currencies other than the local (functional) currencies of these operations. To manage our exposure to these exchange rate fluctuations, we use foreign currency exchange and purchase contracts. These contracts are not designated as hedging instruments for accounting purposes, and therefore they are classified as economic hedges. As of December 31, 2015, we had commitments to purchase $292 million of U.S. dollars. These commitments matured on or before January 31, 2016 resulting in a gain of $10 million in the first quarter of 2016.

Environmental Compliance Program Price Risk
We are exposed to market risk related to the volatility in the price of credits needed to comply with various governmental and regulatory environmental compliance programs. Certain of these programs require us to blend biofuels into the products we produce, and we are subject to such programs in most of the countries

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

in which we operate. These countries set annual quotas for the percentage of biofuels that must be blended into the motor fuels consumed in these countries. As a producer of motor fuels from petroleum, we are obligated to blend biofuels into the products we produce at a rate that is at least equal to the applicable quota. To the degree we are unable to blend at the applicable rate, we must purchase biofuel credits (primarily RINs in the U.S.). We are exposed to the volatility in the market price of these credits, and we manage that risk by purchasing biofuel credits when prices are deemed favorable. For the years ended December 31, 2015, 2014, and 2013, the cost of meeting our obligations under these compliance programs was $440 million, $372 million, and $517 million, respectively. These amounts are reflected in cost of sales.

Effective January 1, 2015, we became subject to additional requirements under GHG emission programs, including the cap-and-trade systems, as discussed in Note 19. Under these cap-and-trade systems, we purchase various GHG emission credits available on the open market. Therefore, we are exposed to the volatility in the market price of these credits. The cost to implement certain provisions of the cap-and-trade systems are significant; however, we have recovered the majority of these costs from our customers for the year ended December 31, 2015 and expect to continue to recover the majority of these costs in the future. For the years ended December 31, 2015, 2014, and 2013, the net cost of meeting our obligations under these compliance programs was immaterial.

Fair Values of Derivative Instruments
The following tables provide information about the fair values of our derivative instruments as of December 31, 2015 and 2014 (in millions) and the line items in the balance sheets in which the fair values are reflected. See Note 19 for additional information related to the fair values of our derivative instruments.

As indicated in Note 19, we net fair value amounts recognized for multiple similar derivative contracts executed with the same counterparty under master netting arrangements, including cash collateral assets and obligations. The tables below, however, are presented on a gross asset and gross liability basis, which results in the reflection of certain assets in liability accounts and certain liabilities in asset accounts.

	Balance Sheet Location	December 31, 2015	
		Asset Derivatives	Liability Derivatives
Derivatives not designated as hedging instruments			
Commodity contracts:			
Futures	Receivables, net	$648	$522
Swaps	Receivables, net	30	33
Options	Receivables, net	4	2
Physical purchase contracts	Inventories	—	6
Foreign currency contracts	Receivables, net	3	—
Total		$685	$563

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

	Balance Sheet Location	December 31, 2014	
		Asset Derivatives	Liability Derivatives
Derivatives not designated as hedging instruments			
Commodity contracts:			
Futures	Receivables, net	$3,096	$2,886
Swaps	Receivables, net	34	31
Options	Receivables, net	2	3
Physical purchase contracts	Inventories	1	5
Total		$3,133	$2,925

Market and Counterparty Risk
Our price risk management activities involve the receipt or payment of fixed price commitments into the future. These transactions give rise to market risk, which is the risk that future changes in market conditions may make an instrument less valuable. We closely monitor and manage our exposure to market risk on a daily basis in accordance with policies approved by our board of directors. Market risks are monitored by our risk control group to ensure compliance with our stated risk management policy. We do not require any collateral or other security to support derivative instruments into which we enter. We also do not have any derivative instruments that require us to maintain a minimum investment-grade credit rating.

Effect of Derivative Instruments on Income and Other Comprehensive Income
The following tables provide information about the gain or loss recognized in income and other comprehensive income (OCI) on our derivative instruments and the line items in the financial statements in which such gains and losses are reflected (in millions).

Derivatives in Fair Value Hedging Relationships	Location of Gain (Loss) Recognized in Income on Derivatives	Year Ended December 31,		
		2015	2014	2013
Commodity contracts:				
Loss recognized in income on derivatives	Cost of sales	$—	$(42)	$(12)
Gain recognized in income on hedged item	Cost of sales	—	42	18
Gain recognized in income on derivatives (ineffective portion)	Cost of sales	—	—	6

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

For fair value hedges, no component of the derivative instruments' gains or losses was excluded from the assessment of hedge effectiveness for the years ended December 31, 2015, 2014, and 2013. There were no amounts recognized in income for hedged firm commitments that no longer qualified as fair value hedges during the years ended December 31, 2015, 2014, and 2013.

Derivatives in Cash Flow Hedging Relationships	Location of Gain (Loss) Recognized in Income on Derivatives	Year Ended December 31, 2015	2014	2013
Commodity contracts:				
Loss recognized in OCI on derivatives (effective portion)		$—	$(1)	$(4)
Loss reclassified from accumulated OCI into income (effective portion)	Cost of sales	—	(2)	(2)
Gain (loss) recognized in income on derivatives (ineffective portion)	Cost of sales	—	(1)	21

For cash flow hedges, no component of the derivative instruments' gains or losses was excluded from the assessment of hedge effectiveness for the years ended December 31, 2015, 2014, and 2013. There were no cumulative after-tax gains or losses on cash flow hedges remaining in accumulated other comprehensive income as of December 31, 2015. For the years ended December 31, 2015, 2014, and 2013, there were no amounts reclassified from accumulated other comprehensive income into income as a result of the discontinuance of cash flow hedge accounting.

Derivatives Designated as Economic Hedges and Other Derivative Instruments	Location of Gain Recognized in Income on Derivatives	Year Ended December 31, 2015	2014	2013
Commodity contracts	Cost of sales	$377	$693	$193
Foreign currency contracts	Cost of sales	49	40	14

Trading Derivatives	Location of Gain (Loss) Recognized in Income on Derivatives	Year Ended December 31, 2015	2014	2013
Commodity contracts	Cost of sales	$45	$38	$21
RINs fixed-price contracts	Cost of sales	—	—	(20)

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VALERO ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

21. QUARTERLY FINANCIAL DATA (Unaudited)

The following table summarizes quarterly financial data for the years ended December 31, 2015 and 2014 (in millions, except per share amounts).

	2015 Quarter Ended			
	March 31	June 30	September 30	December 31 (a)
Operating revenues	$21,330	$25,118	$22,579	$18,777
Operating income	1,495	2,078	2,139	646
Net income	968	1,365	1,373	395
Net income attributable to Valero Energy Corporation stockholders	964	1,351	1,377	298
Earnings per common share	1.87	2.67	2.79	0.62
Earnings per common share – assuming dilution	1.87	2.66	2.79	0.62

	2014 Quarter Ended			
	March 31	June 30	September 30	December 31
Operating revenues	33,663	34,914	34,408	27,859
Operating income	1,351	1,085	1,670	1,796
Net income	836	593	1,062	1,220
Net income attributable to Valero Energy Corporation stockholders	828	588	1,059	1,155
Earnings per common share	1.55	1.11	2.01	2.22
Earnings per common share – assuming dilution	1.54	1.10	2.00	2.22

(a) Operating income for the quarter ended December 31, 2015 reflects a noncash lower of cost or market inventory valuation adjustment of $790 million, as described in Note 6.

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ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE
None.

ITEM 9A. CONTROLS AND PROCEDURES
Disclosure Controls and Procedures. Our management has evaluated, with the participation of our principal executive officer and principal financial officer, the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934) as of the end of the period covered by this report, and has concluded that our disclosure controls and procedures were effective as of December 31, 2015.
Internal Control over Financial Reporting.
(a) Management's Report on Internal Control over Financial Reporting.
The management report on Valero's internal control over financial reporting required by Item 9A appears in Item 8 on page 55 of this report, and is incorporated herein by reference.
(b) Attestation Report of the Independent Registered Public Accounting Firm.
KPMG LLP's report on Valero's internal control over financial reporting appears in Item 8 beginning on page 57 of this report, and is incorporated herein by reference.
(c) Changes in Internal Control over Financial Reporting.
There has been no change in our internal control over financial reporting that occurred during our last fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION
None.

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PART III

ITEMS 10-14.
The information required by Items 10 through 14 of Form 10-K is incorporated herein by reference to the definitive proxy statement for our 2016 annual meeting of stockholders. We will file the proxy statement with the SEC on or before March 31, 2016.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES
(a) 1. Financial Statements. The following consolidated financial statements of Valero Energy Corporation and its subsidiaries are included in Part II, Item 8 of this Form 10-K:

	Page
Management's report on internal control over financial reporting	55
Reports of independent registered public accounting firm	56
Consolidated balance sheets as of December 31, 2015 and 2014	59
Consolidated statements of income for the years ended December 31, 2015, 2014, and 2013	60
Consolidated statements of comprehensive income for the years ended December 31, 2015, 2014, and 2013	61
Consolidated statements of equity for the years ended December 31, 2015, 2014, and 2013	62
Consolidated statements of cash flows for the years ended December 31, 2015, 2014, and 2013	63
Notes to consolidated financial statements	64

2. Financial Statement Schedules and Other Financial Information. No financial statement schedules are submitted because either they are inapplicable or because the required information is included in the consolidated financial statements or notes thereto.
3. Exhibits. Filed as part of this Form 10-K are the following exhibits:

3.01	--	Amended and Restated Certificate of Incorporation of Valero Energy Corporation, formerly known as Valero Refining and Marketing Company–incorporated by reference to Exhibit 3.1 to Valero's Registration Statement on Form S-1 (SEC File No. 333-27013) filed May 13, 1997.
3.02	--	Certificate of Amendment (July 31, 1997) to Restated Certificate of Incorporation of Valero Energy Corporation–incorporated by reference to Exhibit 3.02 to Valero's Annual Report on Form 10-K for the year ended December 31, 2003 (SEC File No. 1-13175).
3.03	--	Certificate of Merger of Ultramar Diamond Shamrock Corporation with and into Valero Energy Corporation dated December 31, 2001–incorporated by reference to Exhibit 3.03 to Valero's Annual Report on Form 10-K for the year ended December 31, 2003 (SEC File No. 1-13175).
3.04	--	Amendment (effective December 31, 2001) to Restated Certificate of Incorporation of Valero Energy Corporation–incorporated by reference to Exhibit 3.1 to Valero's Current Report on Form 8-K dated December 31, 2001, and filed January 11, 2002 (SEC File No. 1-13175).
3.05	--	Second Certificate of Amendment (effective September 17, 2004) to Restated Certificate of Incorporation of Valero Energy Corporation–incorporated by reference to Exhibit 3.04 to Valero's Quarterly Report on Form 10-Q for the quarter ended September 30, 2004 (SEC File No. 1-13175).

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3.06	--	Certificate of Merger of Premcor Inc. with and into Valero Energy Corporation effective September 1, 2005–incorporated by reference to Exhibit 2.01 to Valero's Quarterly Report on Form 10-Q for the quarter ended September 30, 2005 (SEC File No. 1-13175).
3.07	--	Third Certificate of Amendment (effective December 2, 2005) to Restated Certificate of Incorporation of Valero Energy Corporation–incorporated by reference to Exhibit 3.07 to Valero's Annual Report on Form 10-K for the year ended December 31, 2005 (SEC File No. 1-13175).
3.08	--	Fourth Certificate of Amendment (effective May 24, 2011) to Restated Certificate of Incorporation of Valero Energy Corporation–incorporated by reference to Exhibit 4.8 to Valero's Current Report on Form 8-K dated and filed May 24, 2011 (SEC File No. 1-13175).
3.09	--	Amended and Restated Bylaws of Valero Energy Corporation–incorporated by reference to Exhibit 3.01 to Valero's Current Report on Form 8-K dated January 21, 2016 and filed January 26, 2016 (SEC File No. 1-13175).
4.01	--	Indenture dated as of December 12, 1997 between Valero Energy Corporation and The Bank of New York–incorporated by reference to Exhibit 3.4 to Valero's Registration Statement on Form S-3 (SEC File No. 333-56599) filed June 11, 1998.
4.02	--	First Supplemental Indenture dated as of June 28, 2000 between Valero Energy Corporation and The Bank of New York (including Form of 7 3/4% Senior Deferrable Note due 2005)–incorporated by reference to Exhibit 4.6 to Valero's Current Report on Form 8-K dated June 28, 2000, and filed June 30, 2000 (SEC File No. 1-13175).
4.03	--	Indenture (Senior Indenture) dated as of June 18, 2004 between Valero Energy Corporation and Bank of New York–incorporated by reference to Exhibit 4.7 to Valero's Registration Statement on Form S-3 (SEC File No. 333-116668) filed June 21, 2004.
4.04	--	Form of Indenture related to subordinated debt securities–incorporated by reference to Exhibit 4.8 to Valero's Registration Statement on Form S-3 (SEC File No. 333-116668) filed June 21, 2004.
4.05	--	Specimen Certificate of Common Stock–incorporated by reference to Exhibit 4.1 to Valero's Registration Statement on Form S-3 (SEC File No. 333-116668) filed June 21, 2004.
+10.01	--	Valero Energy Corporation Annual Bonus Plan, amended and restated as of July 29, 2009–incorporated by reference to Exhibit 10.01 to Valero's Current Report on Form 8-K dated July 29, 2009, and filed August 4, 2009 (SEC File No. 1-13175).
+10.02	--	Valero Energy Corporation Annual Incentive Plan for Named Executive Officers–incorporated by reference to Exhibit 10.01 to Valero's Current Report on Form 8-K dated February 22, 2012, and filed February 27, 2012 (SEC File No. 1-13175).
+10.03	--	Valero Energy Corporation 2005 Omnibus Stock Incentive Plan, amended and restated as of October 1, 2005–incorporated by reference to Exhibit 10.02 to Valero's Annual Report on Form 10-K for the year ended December 31, 2009 (SEC File No. 1-13175).
*+10.04	--	Valero Energy Corporation 2011 Omnibus Stock Incentive Plan, amended and restated February 25, 2016.

+10.05	--	Valero Energy Corporation Deferred Compensation Plan, amended and restated as of January 1, 2008–incorporated by reference to Exhibit 10.04 to Valero's Annual Report on Form 10-K for the year ended December 31, 2008 (SEC File No. 1-13175).
*+10.06	--	Form of Elective Deferral Agreement pursuant to the Valero Energy Corporation Deferred Compensation Plan.
*+10.07	--	Form of Investment Election Form pursuant to the Valero Energy Corporation Deferred Compensation Plan.
*+10.08	--	Form of Distribution Election Form pursuant to the Valero Energy Corporation Deferred Compensation Plan.

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+10.09	--	Valero Energy Corporation Amended and Restated Supplemental Executive Retirement Plan, amended and restated as of November 10, 2008–incorporated by reference to Exhibit 10.08 to Valero's Annual Report on Form 10-K for the year ended December 31, 2008 (SEC File No. 1-13175).
+10.10	--	Valero Energy Corporation Excess Pension Plan, as amended and restated effective December 31, 2011–incorporated by reference to Exhibit 10.10 to Valero's Annual Report on Form 10-K for the year ended December 31, 2011 (SEC File No. 1-13175).
+10.11	--	Form of Indemnity Agreement between Valero Energy Corporation (formerly known as Valero Refining and Marketing Company) and certain officers and directors–incorporated by reference to Exhibit 10.8 to Valero's Registration Statement on Form S-1 (SEC File No. 333-27013) filed May 13, 1997.
*+10.12	--	Schedule of Indemnity Agreements.
+10.13	--	Form of Change of Control Severance Agreement (Tier I) between Valero Energy Corporation and executive officer–incorporated by reference to Exhibit 10.15 to Valero's Annual Report on Form 10-K for the year ended December 31, 2011 (SEC File No. 1-13175).
*+10.14	--	Schedule of Change of Control Severance Agreements (Tier I).
+10.15	--	Form of Change of Control Severance Agreement (Tier II) between Valero Energy Corporation and executive officer–incorporated by reference to Exhibit 10.16 to Valero's Annual Report on Form 10-K for the year ended December 31, 2013 (SEC File No. 1-13175).
*+10.16	--	Schedule of Change of Control Severance Agreements (Tier II).
+10.17	--	Form of Amendment to Change of Control Severance Agreements (to eliminate excise tax gross-up benefit)–incorporated by reference to Exhibit 10.17 to Valero's Annual Report on Form 10-K for the year ended December 31, 2012 (SEC File No. 1-13175).
*+10.18	--	Schedule of Amendments to Change of Control Severance Agreements.
+10.19	--	Form of Performance Share Award Agreement pursuant to the Valero Energy Corporation 2011 Omnibus Stock Incentive Plan–incorporated by reference to Exhibit 10.19 to Valero's Annual Report on Form 10-K for the year ended December 31, 2013 (SEC File No. 1-13175).
+10.20	--	Form of Performance Share Award Agreement (with Dividend Equivalent Award) pursuant to the Valero Energy Corporation 2011 Omnibus Stock Incentive Plan–incorporated by reference to Exhibit 10.20 to Valero's Annual Report on Form 10-K for the year ended December 31, 2014 (SEC File No. 1-13175).
+10.21	--	Form of Stock Option Agreement pursuant to the Valero Energy Corporation 2011 Omnibus Stock Incentive Plan–incorporated by reference to Exhibit 10.21 to Valero's Annual Report on Form 10-K for the year ended December 31, 2011 (SEC File No. 1-13175).
+10.22	--	Form of Performance Stock Option Agreement pursuant to the Valero Energy Corporation 2011 Omnibus Stock Incentive Plan–incorporated by reference to Exhibit 10.21 to Valero's Annual Report on Form 10-K for the year ended December 31, 2012 (SEC File No. 1-13175).
+10.23	--	

		Form of Restricted Stock Agreement pursuant to the Valero Energy Corporation 2011 Omnibus Stock Incentive Plan–incorporated by reference to Exhibit 10.25 to Valero's Annual Report on Form 10-K for the year ended December 31, 2012 (SEC File No. 1-13175).
10.24	--	$3,000,000,000 5-Year Third Amended and Restated Revolving Credit Agreement, dated as of November 12, 2015, among Valero Energy Corporation, as Borrower; JPMorgan Chase Bank, N.A., as Administrative Agent; and the lenders named therein–incorporated by reference to Exhibit 10.1 to Valero's Current Report on Form 8-K dated November 12, 2015, and filed November 13, 2015 (SEC File No. 1-13175).
*12.01	--	Statements of Computations of Ratios of Earnings to Fixed Charges.

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14.01	--	Code of Ethics for Senior Financial Officers–incorporated by reference to Exhibit 14.01 to Valero's Annual Report on Form 10-K for the year ended December 31, 2003 (SEC File No. 1-13175).
*21.01	--	Valero Energy Corporation subsidiaries.
*23.01	--	Consent of KPMG LLP dated February 25, 2016.
*24.01	--	Power of Attorney dated February 25, 2016 (on the signature page of this Form 10-K).
*31.01	--	Rule 13a-14(a) Certification (under Section 302 of the Sarbanes-Oxley Act of 2002) of principal executive officer.
*31.02	--	Rule 13a-14(a) Certification (under Section 302 of the Sarbanes-Oxley Act of 2002) of principal financial officer.
**32.01	--	Section 1350 Certifications (under Section 906 of the Sarbanes-Oxley Act of 2002).
99.01	--	Audit Committee Pre-Approval Policy–incorporated by reference to Exhibit 99.01 to Valero's Annual Report on Form 10-K for the year ended December 31, 2014 (SEC File No. 1-13175).
***101	--	Interactive Data Files

* Filed herewith.
** Furnished herewith.
*** Submitted electronically herewith.
+Identifies management contracts or compensatory plans or arrangements required to be filed as an exhibit hereto.
Pursuant to paragraph 601(b)(4)(iii)(A) of Regulation S-K, the registrant has omitted from the foregoing listing of exhibits, and hereby agrees to furnish to the SEC upon its request, copies of certain instruments, each relating to debt not exceeding 10 percent of the total assets of the registrant and its subsidiaries on a consolidated basis.

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SIGNATURE

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

VALERO ENERGY CORPORATION
(Registrant)

By: /s/ Joseph W. Gorder
(Joseph W. Gorder)
Chairman of the Board, President,
and Chief Executive Officer

Date: February 25, 2016

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POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Joseph W. Gorder, Michael S. Ciskowski, and Jay D. Browning, or any of them, each with power to act without the other, his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any or all subsequent amendments and supplements to this Annual Report on Form 10-K, and to file the same, or cause to be filed the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto each said attorney-in-fact and agent full power to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby qualifying and confirming all that said attorney-in-fact and agent or his substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Joseph W. Gorder (Joseph W. Gorder)	Chairman of the Board, President, and Chief Executive Officer (Principal Executive Officer)	February 25, 2016
/s/ Michael S. Ciskowski (Michael S. Ciskowski)	Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	February 25, 2016
/s/ Jerry D. Choate (Jerry D. Choate)	Director	February 25, 2016
/s/ Deborah P. Majoras (Deborah P. Majoras)	Director	February 25, 2016
/s/ Donald L. Nickles (Donald L. Nickles)	Director	February 25, 2016
/s/ Philip J. Pfeiffer (Philip J. Pfeiffer)	Director	February 25, 2016
/s/ Robert A. Profusek (Robert A. Profusek)	Director	February 25, 2016
/s/ Susan Kaufman Purcell (Susan Kaufman Purcell)	Director	February 25, 2016
/s/ Stephen M. Waters (Stephen M. Waters)	Director	February 25, 2016
/s/ Randall J. Weisenburger (Randall J. Weisenburger)	Director	February 25, 2016
/s/ Rayford Wilkins, Jr. (Rayford Wilkins, Jr.)	Director	February 25, 2016

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