

LyondellBasell Industries N.V.  
Form 10-K  
February 29, 2012  
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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**Form 10-K**

(Mark One)

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

For the fiscal year ended December 31, 2011

OR

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number: 001-34726

**LyondellBasell Industries N.V.**

*(Exact name of registrant as specified in its charter)*

**The Netherlands**

*(State or other jurisdiction of incorporation or organization)*

**Weena 737**

**3013 AM Rotterdam**

**The Netherlands**

*(Address of principal executive offices) (Zip Code)*

**98-0646235**

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

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31 30 275 5500

Registrant's telephone number, including area code:

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

Title of Each Class	Name of Each Exchange On Which Registered
Ordinary Shares, 0.04 Par Value	New York Stock Exchange

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

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

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.  Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).  Yes  No

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

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

Large accelerated filer  Accelerated filer   
Non-accelerated filer  (Do not check if a smaller reporting company) Smaller reporting company

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

The aggregate market value of common stock held by non-affiliates of the registrant on June 30, 2011, the last business day of the registrant's most recently completed second fiscal quarter, based on the closing price on that date of \$38.52, was \$12.1 billion. For purposes of this disclosure, in addition to the registrant's executive officers and members of its Supervisory Board, the registrant has included Access Industries, LLC and Apollo Management Holdings, L.P. and their affiliates as affiliates.

The registrant had 573,708,873 shares outstanding at February 24, 2012 (excluding 3,732,854 treasury shares).

**Documents incorporated by reference:**

Portions of the Proxy Statement for the Annual Meeting of Stockholders to be held on May 9, 2012 (Part III)

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

This report contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act). You can identify our forward-looking statements by the words anticipate, estimate, believe, continue, could, intend, may, plan, potential, predict, should, will, expect, objective, projection, forecast, target and similar expressions.

We based the forward-looking statements on our current expectations, estimates and projections about ourselves and the industries in which we operate in general. We caution you these statements are not guarantees of future performance as they involve assumptions that, while made in good faith, may prove to be incorrect, and involve risks and uncertainties 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 outcomes and results may differ materially from what we have expressed or forecast in the forward-looking statements. Any differences could result from a variety of factors, including the following:

if we are unable to comply with the terms of our credit facilities and other financing arrangements, those obligations could be accelerated, which we may not be able to repay;

we may be unable to incur additional indebtedness or obtain financing on terms that we deem acceptable, including for refinancing of our current obligations; higher interest rates and costs of financing would increase our expenses;

our ability to implement business strategies may be negatively affected or restricted by, among other things, governmental regulations or policies;

the cost of raw materials represent a substantial portion of our operating expenses, and energy costs generally follow price trends of crude oil and natural gas; price volatility can significantly affect our results of operations and we may be unable to pass raw material and energy cost increases on to our customers;

industry production capacities and operating rates may lead to periods of oversupply and low profitability;

uncertainties associated with worldwide economies create increased counterparty risks, which could reduce liquidity or cause financial losses resulting from counterparty exposure;

the negative outcome of any legal, tax and environmental proceedings may increase our costs;

we may be required to reduce production or idle certain facilities because of the cyclical and volatile nature of the supply-demand balance in the chemical and refining industries, which would negatively affect our operating results;

we may face operating interruptions due to events beyond our control at any of our facilities, which would negatively impact our operating results, and because the Houston refinery is our only North American refining operation, we would not have the ability to increase production elsewhere to mitigate the impact of any outage at that facility;

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regulations may negatively impact our business by, among other things, restricting our operations, increasing costs of operations or requiring significant capital expenditures;

we face significant competition due to the commodity nature of many of our products and may not be able to protect our market position or otherwise pass on cost increases to our customers;

we rely on continuing technological innovation, and an inability to protect our technology, or others' technological developments could negatively impact our competitive position; and

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we are subject to the risks of doing business at a global level, including fluctuations in exchange rates, wars, terrorist activities, political and economic instability and disruptions and changes in governmental policies, which could cause increased expenses, decreased demand or prices for our products and/or disruptions in operations, all of which could reduce our operating results.

Any of these factors, or a combination of these factors, could materially affect our future results of operations (including those of our joint ventures) and the ultimate accuracy of the forward-looking statements. These forward-looking statements are not guarantees of future performance, and our actual results and future developments (including those of our joint ventures) may differ materially from those projected in the forward-looking statements. Our management cautions against putting undue reliance on forward-looking statements or projecting any future results based on such statements or present or prior earnings levels.

All subsequent written and oral forward looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section and any other cautionary statements that may accompany such forward-looking statements. Except as otherwise required by applicable law, we disclaim any duty to update any forward-looking statements, all of which are expressly qualified by the statements in this section, to reflect events or circumstances after the date of this report. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in the Risk Factors section of this report on page 31.

**PART I**

**Items 1 and 2. Business and Properties**

**CORPORATE STRUCTURE AND OVERVIEW**

LyondellBasell Industries N.V. was incorporated under Dutch law by deed of incorporation dated October 15, 2009. The Company was formed to serve as the new parent holding company for certain subsidiaries of LyondellBasell Industries AF S.C.A. (LyondellBasell AF ). From January 2009 through April 2010, LyondellBasell AF and 93 of its subsidiaries were debtors in jointly administered bankruptcy cases in U.S. Bankruptcy Court for the Southern District of New York. As of April 30, 2010, the date of emergence from bankruptcy proceedings, LyondellBasell AF 's equity interests in its indirect subsidiaries terminated and LyondellBasell Industries N.V. now owns and operates, directly and indirectly, substantially the same business as LyondellBasell AF owned and operated prior to emergence from the bankruptcy cases, including subsidiaries of LyondellBasell AF that were not involved in the bankruptcy cases.

Our Company is the successor to the combination in December 2007 of Lyondell Chemical Company ( Lyondell Chemical ) and Basell AF S.C.A. ( Basell ), which created one of the world 's largest private petrochemical companies with significant worldwide scale and leading product positions.

We are the world 's third largest independent chemical company based on revenues and an industry leader in many of our product lines. We participate globally across the petrochemical value chain with over 50 wholly-owned and joint venture facilities. Our chemicals businesses consist primarily of large processing plants that convert large volumes of liquid and gaseous hydrocarbon feedstock into plastic resins and other chemicals. Our chemical products tend to be basic building blocks for other chemicals and plastics while our plastic products are typically used in large volume applications. Our customers use our plastics and chemicals to manufacture a wide range of products that people use in their everyday lives including food packaging, home furnishings, automotive components, paints and coatings. Our Houston refinery processes crude oil into fuels such as gasoline, diesel and jet fuel.

Our financial performance has historically been closely related to the balance between the supply and demand for the products that we produce. Additional factors that influence our performance include feedstock supply,

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operational efficiency, costs and our differentiated assets and technology. During recent years the U.S. cost of natural gas derived raw materials versus the global cost of crude oil derived raw materials has had a significant influence on regional profitability. Our portfolio includes several differentiated technologies and assets including our propylene oxide technology, flexible feedstock olefins plants in the U.S., joint venture olefins and polyolefins plants with access to low-cost feedstock in Saudi Arabia, polypropylene technology and our Houston refinery capable of processing heavy, high-sulfur crude. As a producer of large volume commodities we have a strong operational focus and continuously strive to differentiate ourselves through safe, reliable and low-cost operations in all our businesses.

## **SEGMENTS**

As of December 31, 2009, we began reporting our results of operations based on five business segments through which our operations are managed. Financial information about our business segments can be found in Note 21, *Segment and Related Information*, to the Consolidated Financial Statements. Our reportable segments include:

*Olefins and Polyolefins Americas* ( O&P Americas ). Our O&P Americas segment produces and markets olefins, including ethylene and ethylene co-products, and polyolefins.

*Olefins and Polyolefins Europe, Asia, International* ( O&P EAI ). Our O&P EAI segment produces and markets olefins, including ethylene and ethylene co-products, polyolefins and polypropylene compounds.

*Intermediates and Derivatives* ( I&D ). Our I&D segment produces and markets propylene oxide ( PO ) and its co-products and derivatives, acetyls, ethanol, ethylene oxide and its derivatives.

*Refining & Oxyfuels*. Our Refining & Oxyfuels segment refines heavy, high-sulfur crude oil in the U.S. Gulf Coast and produces oxyfuels at several of our olefin and PO units.

*Technology*. Our Technology segment develops and licenses chemical and polyolefin process technologies and provides associated engineering and other services. Our Technology segment also develops, manufactures and sells polyolefin catalysts. We market our process technologies and our polyolefin catalysts to external customers and use them for our own manufacturing operations.

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The following chart sets out our business segments key products:

<b>O&amp;P Americas</b>			
<b>and</b>			
<b>O&amp;P EAI</b>	<b>I&amp;D</b>	<b>Refining &amp; Oxyfuels</b>	<b>Technology</b>
Olefins	Propylene oxide, co-products and derivatives	Gasoline	PP process technologies
Ethylene	Propylene oxide (PO)	Ultra low sulfur diesel	Spheripol
Propylene	Styrene monomer (SM)	Jet fuel	Spherizone
Butadiene	Tertiary butyl alcohol (TBA)	Lube oils	Metocene
Polyolefins	Isobutylene	Gasoline blending components	Polyethylene process technologies
Polypropylene (PP)	Tertiary butyl	Methyl tertiary butyl ether (MTBE)	Lupotech
Polyethylene (PE)	hydro-peroxide (TBHP)	Ethyl tertiary butyl ether (ETBE)	Spherilene
High density polyethylene (HDPE)	Propylene glycol (PG)	Alkylate	Hostalen
Low density polyethylene (LDPE)	Propylene glycol ethers (PGE)	Vacuum Gas Oil (VGO)	Polyolefin catalysts
Linear low density polyethylene (LLDPE)*	Butanediol (BDO)	Light crude oil	Avant
Propylene-based compounds, materials and alloys (PP compounds)**	Acetyls		Selected chemical technologies
<i>Catalloy</i> process resins	Vinyl acetate monomer (VAM)		
Polybutene-1 (PB-1)**	Vinyl acetate monomer (VAM)		
	Acetic acid		
	Methanol		
	Ethylene derivatives		
	Ethylene oxide (EO)		
	Ethylene glycol (EG)		
	Ethylene Glycol Ethers		
	Ethanol		
Aromatics			
Benzene			
Toluene			

\* O&P Americas only.

\*\* O&P EAI only.

***Olefins and Polyolefins Segments Generally***

We are a top worldwide producer of olefins, including ethylene and propylene. We are also a top producer of polyolefins, including polyethylene (PE), and the world's largest producer of polypropylene (PP) and PP compounds. We manage our olefin and polyolefin business in two reportable segments, O&P Americas and O&P EAI.

Ethylene is the most significant petrochemical in terms of worldwide production volume and is the key building block for PE and a large number of other chemicals, plastics and synthetics. The production of ethylene results in co-products such as propylene, butadiene and aromatics, which include benzene and toluene. Ethylene and its co-products are fundamental to many segments of the economy, including the production of consumer products, packaging, housing and automotive components and other durable and nondurable goods.

Polyolefins are thermoplastics and comprise approximately two-thirds of worldwide thermoplastics demand. Since their industrial commercialization, thermoplastics have found wide-ranging applications and continue to replace traditional materials such as metal, glass, paper and wood. Our products are used in consumer, automotive and industrial applications ranging from food and beverage packaging to housewares and construction materials. PE is the most widely used thermoplastic, measured on a production capacity basis. We produce HDPE, LDPE, LLDPE and metallocene linear low density polyethylene. PP is the single largest polyolefin product produced worldwide, and we produce homopolymer, impact copolymer, random copolymer and metallocene PP.





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We produce and market several specialty product lines: PP compounds; *Catalloy* process resins; and PB-1, focusing on unique polyolefins and compounds that offer a wide range of performance characteristics. Typical properties of such specialty polyolefins and compounds include impact-stiffness balance, scratch resistance, soft touch and heat sealability. End uses include automotive and industrial products and materials. PP compounds are produced from blends of polyolefins and additives and are sold mainly to the automotive and home appliances industries. We are the only manufacturer of *Catalloy* process resins, which are our proprietary products.

Sales of ethylene accounted for approximately 3% of our total revenues in 2011. Sales of PE (HDPE, LDPE and LLDPE, collectively) accounted for 19% of our total revenues in 2011. Sales of PP, including *Catalloy*, accounted for approximately 15% of our total revenues in 2011.

***Olefins and Polyolefins Americas Segment***

*Overview*

Our O&P Americas segment produces and markets olefins, polyolefins, aromatics, specialty products and ethylene co-products. Based on published data, we are the largest producer of light olefins (ethylene and propylene) and PP and the third largest producer of PE in North America. In addition, we produce specialty products including *Catalloy* resins and other products which are co-products of our olefins operations. In 2011, our O&P Americas segment generated operating revenues of \$10.3 billion (excluding inter-segment revenue).

The following table outlines:

the primary products of our O&P Americas segment;

annual processing capacity as of December 31, 2011, unless otherwise noted; and

the primary uses for those products.

<b>Product</b>	<b>Annual Capacity</b>	<b>Primary Uses</b>
<b>Olefins:</b>		
Ethylene	9.6 billion pounds	Ethylene is used as a raw material to manufacture polyethylene, EO, ethanol, ethylene dichloride, styrene, VAM and other products
Propylene	5.5 billion pounds(1)	Propylene is used to produce PP, acrylonitrile, PO and other products
Butadiene	1.1 billion pounds	Butadiene is used to manufacture styrene-butadiene rubber and polybutadiene rubber, which are used in the manufacture of tires, hoses, gaskets and other rubber products. Butadiene is also used in the production of paints, adhesives, nylon clothing, carpets, paper coatings and engineered plastics
<b>Aromatics:</b>		
Benzene	195 million gallons	Benzene is used to produce styrene, phenol and cyclohexane. These products are used in the production of nylon, plastics, synthetic rubber and polystyrene. Polystyrene is used in insulation, packaging and drink cups

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<b>Product</b>	<b>Annual Capacity</b>	<b>Primary Uses</b>
Toluene	40 million gallons	Toluene is used as an octane enhancer in gasoline, as a chemical raw material for benzene and/or paraxylene production and as a core ingredient in toluene diisocyanate, a compound used in urethane production
<b>Polyolefins:</b>		
HDPE	3.3 billion pounds	HDPE is used to manufacture grocery, merchandise and trash bags; food containers for items from frozen desserts to margarine; plastic caps and closures; liners for boxes of cereal and crackers; plastic drink cups and toys; dairy crates; bread trays; pails for items from paint to fresh fruits and vegetables; safety equipment, such as hard hats; house wrap for insulation; bottles for household and industrial chemicals and motor oil; milk, water, and juice bottles; large (rotomolded) tanks for storing liquids such as agricultural and lawn care chemicals; and pipe
LDPE	1.3 billion pounds	LDPE is used to manufacture food packaging films; plastic bottles for packaging food and personal care items; dry cleaning bags; ice bags; pallet shrink wrap; heavy-duty bags for mulch and potting soil; boil-in-bags ; coatings on flexible packaging products; and coatings on paper board such as milk cartons. Ethylene vinyl acetate is a specialized form of LDPE used in foamed sheets, bag-in-box bags, vacuum cleaner hoses, medical tubing, clear sheet protectors and flexible binders
LLDPE	1.3 billion pounds	LLDPE is used to manufacture garbage and lawn-leaf bags; industrial can liners; housewares; lids for coffee cans and margarine tubs; dishpans, home plastic storage containers, and kitchen trash containers; large (rotomolded) toys like outdoor gym sets; drip irrigation tubing; insulating resins and compounds used to insulate copper and fiber optic wiring; shrink wrap for multi-packaging canned food, bag-in-box bags, produce bags, and pallet stretch wrap
PP	4.4 billion pounds <sup>(2)</sup>	PP is primarily used to manufacture fibers for carpets, rugs and upholstery; housewares; medical products; automotive interior trim, fascia, running boards, battery cases, and bumpers; toys and sporting goods; fishing tackle boxes; and bottle caps and closures
<b>Specialty Polyolefins:</b>		
<i>Catalloy</i> process resins	600 million pounds	<i>Catalloy</i> process resins are used primarily in modifying polymer properties in film applications and molded products; for specialty films, geomembranes, and roofing materials; in bitumen modification for roofing and asphalt applications; and to manufacture automotive bumpers

(1) Includes (i) refinery-grade material from the Houston refinery and (ii) 1 billion pounds per year of capacity from the product flex unit at the Channelview facility, which can convert ethylene and other light petrochemicals into propylene.

(2) Includes 100% of 1.31 billion pounds of capacity of our Indelpro joint venture (described below).



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See Description of Properties for the locations where we produce the primary products of our O&P Americas segment. Annual processing capacity as of December 31, 2011 was calculated by estimating the average number of days in a typical year that a production unit of a plant is expected to operate, after allowing for downtime for regular maintenance, and multiplying that number by an amount equal to the unit's optimal daily output based on the design raw material mix. Because the processing capacity of a production unit is an estimated amount, actual production volumes may be more or less than the capacities set forth below. Capacities shown include 100% of the capacity of joint venture facilities.

*Sales & Marketing / Customers*

In 2011, no single external O&P Americas segment customer accounted for 10% or more of our total revenues.

We currently produce ethylene at five sites in the U.S. Our ethylene production in the U.S. generally is consumed internally as a raw material in the production of polymers and other derivatives, or is shipped by pipeline to customers. In North America, we produce more ethylene than we consume internally, with the balance of ethylene production being sold to third parties.

We currently produce propylene at six sites in the U.S., which includes production from the Houston refinery's fluid catalytic cracker coproduct stream. We use propylene as a raw material for production of PO, PP and other derivatives.

We have butadiene and aromatics (benzene and toluene) production capabilities at two sites in the U.S. We generally sell our butadiene under multi-year contracts. We generally use the benzene as a raw material for production of styrene. In the U.S., we are a net purchaser of benzene. Our Refining & Oxyfuels business uses toluene to blend into gasoline. The majority of toluene production that is not consumed internally is sold on a spot basis.

We at times purchase ethylene, propylene, benzene and butadiene for resale, when necessary, to satisfy customer demand for these products above our own production levels. Volumes of ethylene, propylene, benzene and butadiene purchased for resale can vary significantly from period to period. However, purchased volumes have not historically had a significant impact on profits.

In the U.S., most of the ethylene and propylene production of our Channelview, Corpus Christi and La Porte facilities is shipped via a pipeline system, which has connections to numerous U.S. Gulf Coast consumers. This pipeline system, some of which is owned and some of which is leased, extends from Corpus Christi to Mont Belvieu to Port Arthur, Texas, as well as into the Lake Charles, Louisiana area. In addition, exchange agreements with other ethylene and co-products producers allow access to customers who are not directly connected to this pipeline system. Ethylene is shipped to our customers by railcar from Clinton or Morris. A pipeline owned and operated by an unrelated party is used to transport ethylene from Morris, Illinois to Tuscola, Illinois. Some propylene is shipped by ocean going vessel. Butadiene, benzene, toluene and other products are distributed by pipeline, rail car, truck, barge or ocean going vessel.

We manufacture PE using a variety of technologies at six sites in the U.S. Our PP and PE production is typically sold to an extensive base of established customers under annual contracts or under customary terms and conditions without formal contracts. We also have a facility in Ohio that produces performance polymer products, which include enhanced grades of PE. We believe that, over a business cycle, average selling prices and profit margins for specialty polymers tend to be higher than average selling prices and profit margins for higher-volume commodity PEs. We produce PP at three sites in North America, one of which is owned by Indelpro, our Mexican joint venture, and one site in South America. We also sell PP into our PP compounds business, which is managed worldwide by our O&P EAI segment.

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The majority of our polyolefin products sold in North America are sold through our sales organization. Polyolefins primarily are distributed in North America by rail car or truck.

*Joint Venture Relationships*

The following table describes our O&P Americas segment's significant manufacturing joint venture relationships.

Name	Location	Other Parties	LyondellBasell Ownership	Product	2011 Capacity (In millions of pounds)
Indelpro	Mexico	Alfa S.A.B. de C.V.	49%	PP	1,310(1)

(1) Represents the joint venture's total capacity and not our proportional capacity.

Indelpro's output is marketed by the joint venture. Indelpro's annual capacity includes 770 million pounds produced from our Spherizone process technology. We receive equity distributions and revenues from technology licensing and catalyst sales from the joint venture. Further, we believe the geographic diversification provides benefits to our Company.

We also have a limited partnership with respect to our LaPorte, Texas olefin facility. The partnership produces ethylene and propylene. Our partnership agreement entitles our partner to 500 million pounds of propylene annually and us to all remaining ethylene and propylene production, as well as other products produced.

*Raw Materials*

Raw material cost is the largest component of the total cost for the production of ethylene and its co-products. The primary raw materials used are heavy liquids and natural gas liquids (NGLs). Heavy liquids include crude oil-based naphtha and gas oil, as well as condensate, a very light crude oil resulting from natural gas production (collectively referred to as heavy liquids). NGLs include ethane, propane and butane. The use of heavy liquid raw materials results in the production of a significant amount of co-products such as propylene, butadiene, benzene and toluene, as well as gasoline blending components, while the use of NGLs results in the production of a smaller amount of co-products.

Historically, facilities using heavy liquids as feedstock have generated higher margins than those using ethane. However, in recent years ethane has had a cost advantage for use as feedstock in the U.S. based on higher crude oil prices relative to NGLs. As a result, a plant's flexibility to consume a wide range of raw materials generally will provide an advantage over plants that are restricted in processing capabilities over a number of years. We have the capability to process significant quantities of either heavy liquids or NGLs. We estimate that in the U.S. we can process up to 85% NGLs. Changes in the raw material feedstock will result in variances in production capacities among products. We believe our raw material flexibility in the U.S. is a key advantage in the production of ethylene and its co-products.

We source our heavy liquids requirements worldwide via a mix of contractual and spot arrangements. Spot market purchases are made in order to maintain raw material flexibility and to take advantage of raw material pricing opportunities. We purchase NGL requirements via long term and spot contractual arrangements from a variety of sources. A portion of the heavy liquids requirements for ethylene production are also obtained from our Refining & Oxyfuels segment. Heavy liquids generally are delivered by ship or barge, and NGLs are generally delivered via pipeline.

In North America, we also purchase large amounts of natural gas to be used primarily as an energy source in our business via market-based contractual arrangements with a variety of sources.

The principal raw materials used by our polyolefin business are ethylene and propylene. During 2011, our North American ethylene and propylene production exceeded the North American raw material requirements of the

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polyolefin business of our O&P Americas segment. However, not all raw material requirements for ethylene and propylene in this region are sourced internally. Our Mexican joint venture, Indelpro, receives the majority of its chemical grade and refinery grade propylene needs from Pemex, the state owned oil company of Mexico, under a long-term contract. We purchase ethylene and propylene on a spot and contract basis to meet our internal and external demands as needed.

The raw materials for polyolefins and *Catalloy* process resins are, in general, commodity chemicals with numerous bulk suppliers and ready availability at competitive prices.

### *Industry Dynamics / Competition*

With respect to olefins and polyolefins, competition is based on price, product quality, product delivery, reliability of supply, product performance and customer service. Industry consolidation in North America has led to fewer, although larger, competitors. Profitability is affected not only by supply and demand for olefins and polyolefins, but also by raw material costs and price competition among producers. Price competition may intensify due to, among other things, the addition of new capacity. In general, demand is a function of worldwide economic growth, which fluctuates. It is not possible to accurately predict the changes in raw material costs, market conditions, capacity utilization and other factors that will affect industry profitability in the future.

Based on published rated production capacities, we were the second largest producer of ethylene in North America as of December 31, 2011. North American ethylene rated capacity at December 31, 2011 was approximately 74 billion pounds per year, with approximately 81% of that North American capacity located along the Gulf Coast. At December 31, 2011, our ethylene rated capacity in the U.S. was approximately 9.6 billion pounds per year, or approximately 13% of total North American ethylene production capacity.

We compete in North America with other large marketers and producers for sales of ethylene and its co-products such as Dow, ExxonMobil, Nova, Shell, INEOS, ChevronPhillips, TPC Group and others.

Based on published data, with respect to PE we believe that we are the third largest producer in North America as of December 31, 2011, with 5.9 billion pounds per year of capacity, or approximately 13% of North American capacity. Our largest competitors for sales of PE in North America are Dow, ExxonMobil, Nova, Chevron Phillips, INEOS and Westlake.

Based on published data regarding PP capacity, we believe that, including our proportionate share of the Indelpro joint venture, we are the largest producer of PP in North America as of December 31, 2011, with a proportionate share capacity of 3.3 billion pounds, or approximately 17% of the total North American capacity. Our largest competitors for sales of PP in North America are ExxonMobil, Total, Braskem, Formosa Plastics and INEOS.

### ***Olefins and Polyolefins Europe, Asia, International Segment***

#### *Overview*

Our O&P EAI segment produces and markets olefins (ethylene and ethylene co-products) and polyolefins. Based on published data, we are the largest producer of PP and PE in Europe and the largest worldwide producer of PP compounds. We also produce significant quantities of other specialty products such as *Catalloy* process resins and PB-1. Our O&P EAI segment manages our worldwide PP compound business (including our facilities in North and South America), our worldwide PB-1 business, and our *Catalloy* process resins produced in Europe and Asia. We have eight joint venture locations in regions with access to low cost feedstocks or access to growing markets. In 2011, our O&P EAI segment generated operating revenues of \$15.1 billion (excluding inter-segment revenue).

We currently produce ethylene and propylene at three sites in Europe and produce butadiene at two sites in Europe. We also produce each of these products at a joint venture site in the Middle East and produce propylene at two other joint venture sites in the Middle East and one joint venture site in Thailand. We produce polyolefins (PP and/or PE) at 19 facilities in the EAI region, including 10 facilities in Europe, four facilities in East Asia, three facilities in the Middle East and two facilities in Australia. Our joint ventures own one of the facilities in Europe, four of the facilities in East Asia and three in the Middle East.

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PP compounds consist of specialty products produced from blends of polyolefins and additives and are sold mainly to the automotive and durable goods industries. We manufacture PP compounds at 16 facilities worldwide (a number of which are the same facilities as the polyolefin facilities described above), consisting of four facilities in Europe, five in East Asia, one in the Middle East, three in North America, two in South America and one in Australia.

We produce *Catalloy* process resins at two sites in the EAI region, including one in The Netherlands and one in Italy. The process is proprietary technology that is not licensed to third parties, and as a result, we are the only manufacturer of *Catalloy* process resins.

We produce PB-1 at one facility in Europe. We believe that we are the largest worldwide producer of PB-1, a family of flexible, strong and durable butene-based polymers. A majority of the current PB-1 we produce is used in pipe applications and for under-floor heating and thermo sanitary systems. PB-1 is being developed to target new opportunities in applications such as easy-open packaging (seal-peel film), construction, fibers and fabrics, compounds, adhesives and coatings.

The following table outlines:

the primary products of our O&P EAI segment;

annual processing capacity as of December 31, 2011, unless otherwise noted; and

the primary uses for those products.

<b>Product</b>	<b>Annual Capacity(1)</b>	<b>Primary Uses</b>
<b>Olefins:</b>		
Ethylene	6.5 billion pounds(2)	Ethylene is used as a raw material to manufacture polyethylene, EO, ethanol, ethylene dichloride, styrene, VAM and other products
Propylene	5.9 billion pounds(2)(3)	Propylene is used to produce PP, acrylonitrile, PO and other products
Butadiene	550 million pounds	Butadiene is used to manufacture styrene-butadiene rubber and polybutadiene rubber, which are used in the manufacture of tires, hoses, gaskets and other rubber products. Butadiene is also used in the production of paints, adhesives, nylon clothing, carpets, paper coatings and engineered plastics
<b>Polyolefins:</b>		
PP	13.1 billion pounds(4)(5)	PP is primarily used to manufacture fibers for carpets, rugs and upholstery; housewares; medical products; automotive interior trim, fascia, running boards, battery cases, and bumpers; toys and sporting goods; and bottle caps and closures



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<b>Product</b>	<b>Annual Capacity(1)</b>	<b>Primary Uses</b>
HDPE	4.5 billion pounds(5)(6)	HDPE is used to manufacture grocery, merchandise and trash bags; food containers for items from frozen desserts to margarine; plastic caps and closures; liners for boxes of cereal and crackers; plastic drink cups and toys; dairy crates; bread trays; pails for items from paint to fresh fruits and vegetables; safety equipment, such as hard hats; house wrap for insulation; bottles for household and industrial chemicals and motor oil; milk, water, and juice bottles; large (rotomolded) tanks for storing liquids such as agricultural and lawn care chemicals; and pipe
LDPE	2.8 billion pounds(5)(7)	LDPE is used to manufacture food packaging films; plastic bottles for packaging food and personal care items; dry cleaning bags; ice bags; pallet shrink wrap; heavy-duty bags for mulch and potting soil; boil-in-bag bags; coatings on flexible packaging products; and coatings on paper board such as milk cartons. Ethylene vinyl acetate is a specialized form of LDPE used in foamed sheets, bag-in-box bags, vacuum cleaner hoses, medical tubing, clear sheet protectors and flexible binders
<b>Specialty Polyolefins:</b> PP compounds	2.5 billion pounds(8)	PP compounds are used to manufacture automotive interior and exterior trims, dashboards, bumpers and under-hood applications; base material for products and parts used in appliances; anti-corrosion coatings for steel piping, wire and cable
<i>Catalloy</i> process resins	600 million pounds	<i>Catalloy</i> process resins are used primarily in modifying polymer properties in film applications and molded products; for specialty films, geomembranes, and roofing materials; in bitumen modification for roofing and asphalt applications; and to manufacture automotive bumpers
PB-1 resins	110 million pounds	PB-1 resins are used in flexible pipes, resins for seal-peel film, film modification, hot melt and polyolefin modification applications, consumer packaging and adhesives

(1) Excludes materials from the Berre refinery where operations were suspended on January 4, 2012. See Refining & Oxyfuels Segment Overview.

(2) Includes 100% of olefin capacity of SEPC (described below) of which we own 25%, which includes 2.2 billion pounds of ethylene and 630 million pounds of propylene.

(3) Includes (i) 100% of the 1.0 billion pounds of capacity of the propane dehydrogenation ( PDH ) plant owned by SPC (described below) of which we own 25%; and (ii) 1.0 billion pounds of capacity from the Al-Waha joint venture (described below), of which we currently own 21%. Includes 660 million pounds of capacity of HMC (described below) of which we own 29%.

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- (4) Includes: (i) 100% of the 1.6 billion pounds of capacity at SPC; (ii) 100% of the 940 million pounds of capacity of SunAllomer (described below) of which we own 50%; (iii) 100% of the 880 million pounds of capacity of Basell Orlen Polyolefins ( BOP ) (described below) of which we own 50%; (iv) 100% of the 1.7 billion pounds of capacity of HMC; (v) 100% of the 1.5 billion pounds of capacity of PolyMirae (described below) of which we own 42%; and (vi) 100% of the 990 million pounds of capacity at Al Waha.
- (5) Includes 100% of 880 million pounds of LDPE capacity and 880 million pounds of HDPE capacity from SEPC.

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(6) Includes 100% of the 710 million pounds of capacity of BOP.

(7) Includes 100% of the 240 million pounds of capacity of BOP.

(8) Includes 100% of the 165 million pounds of capacity of PolyPacific (described below) of which we own 50%, 110 million pounds of capacity of SunAllomer and 80 million pounds of capacity of SPC.

See *Description of Properties* for the locations where we produce the primary products of our O&P EAI segment. Annual processing capacity as of December 31, 2011 was calculated by estimating the average number of days in a typical year that a production unit of a plant is expected to operate, after allowing for downtime for regular maintenance, and multiplying that number by an amount equal to the unit's optimal daily output based on the design raw material mix. Because the processing capacity of a production unit is an estimated amount, actual production volumes may be more or less than the capacities set forth below. Capacities shown include 100% of the capacity of joint venture facilities.

*Sales & Marketing / Customers*

In 2011, no single external O&P EAI segment customer accounted for 10% or more of our total revenues.

We currently produce ethylene at one site in France, two sites in Germany, and one joint venture site in the Middle East. Our ethylene production is generally consumed internally as a raw material in the production of polymers. In Europe, we are essentially balanced in our ethylene supply and demand.

We currently produce propylene at one site in France, two sites in Germany, three joint venture sites in the Middle East and one joint venture site in Thailand. We use propylene as a raw material for production of PO and PP. In Europe, we are a net purchaser of propylene.

We currently produce butadiene at one site in France and one site in Germany. We generally sell our butadiene under multi-year contracts.

We at times purchase ethylene, propylene, benzene and butadiene for resale, when necessary, to satisfy customer demand for these products above production levels. Volumes of ethylene, propylene, benzene and butadiene purchased for resale can vary significantly from period to period. However, purchased volumes for resale have not historically had a significant impact on profits.

European ethylene and propylene production is generally either fully integrated with, or is transported via pipeline to, our PE and PP facilities in Europe.

We produce PP at eight sites in Europe, four sites in East Asia, two sites in Australia and two sites in the Middle East. All of the sites in East Asia and the Middle East and one of the sites in Europe (Poland) are owned by joint ventures.

We manufacture PE at five sites in Europe, including one joint venture facility in Poland, and one joint venture site in the Middle East.

With respect to PP and PE, our production is typically sold to an extensive base of established customers under annual contracts or under customary terms and conditions without formal contracts. We believe that, over a business cycle, average selling prices and profit margins for specialty polymers tend to be higher than average selling prices and profit margins for higher-volume commodity PPs.

For the O&P EAI segment, we typically have marketing arrangements with our joint venture partners to sell and market PP and PE outside the country where such a joint venture facility is located.

Polyolefins primarily are distributed in Europe by rail or truck.

We and our joint ventures manufacture PP compounds at five sites in East Asia (two of which are owned by

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joint ventures), four sites in Europe, three sites in North America, one joint venture site in the Middle East, two sites in South America and one joint venture site in Australia. We manufacture *Catalloy* process resins at one facility in Italy and one facility in The Netherlands. We also manufacture PB-1 at the facility in The Netherlands.

Our regional sales offices are in various locations, including The Netherlands, Hong Kong, China, India and United Arab Emirates. We also operate through a worldwide network of local sales and representative offices in Europe, Asia and Africa. Our joint ventures typically manage their domestic sales and marketing efforts independently, and we typically operate as their agent/distributor for all or a portion of their exports.

*Joint Venture Relationships*

The following table describes our O&P EAI segment's significant manufacturing joint venture relationships.

Name	Location	Other Parties	LyondellBasell Ownership	Product	2011 Capacity(1) (In millions of pounds)
SPC	Al-Jubail Industrial City, Saudi Arabia	Tasnee	25%	PP	1,590
				Propylene	1,015
				PP Compounding	80
SEPC	Al-Jubail Industrial City, Saudi Arabia	Tasnee, Sahara Petrochemical Company	25%	Ethylene	2,200
				Propylene	630
				HDPE	880
				LDPE	880
Al-Waha	Al-Jubail Industrial City, Saudi Arabia	Sahara Petrochemical Company and others	21%(2)	PP	1,650
				Propylene	1,015
HMC	Thailand	PTT and others	29%	PP	990
BOP	Poland	Orlen	50%	PP	880
				HDPE	705
				LDPE	240
PolyPacific	Australia, Malaysia	Mirlex Pty.	50%	PP Compounding	165
SunAllomer	Japan	Showa Denko,	50%	PP	940
		Nippon Oil		PP Compounding	110
Polymirae	South Korea	Daelim, SunAllomer	42%(3)	PP	1,540

(1) Represents the joint venture's total capacity and not our proportional capacity.

(2) Reflects our current ownership percentage. We have an option to increase our ownership percentage to 25%.

(3) Reflects our 35% direct ownership and 7% indirect ownership through SunAllomer.

These joint ventures provide us with additional income streams from cash dividends, licensing revenues, catalyst sales and marketing fees from selling joint venture products, as well as geographical diversification and access to local market skills and expertise. We generally license our polyolefin process technologies and supply catalysts to our joint ventures. Some of our joint ventures source cost advantaged raw materials from their local shareholders.

We market the majority of the PP produced annually by SPC and are currently the exclusive marketer for the PP produced by Al-Waha that is sold outside of Saudi Arabia. We also market all of BOP's PP, HDPE and LDPE sales outside of Poland. Our PolyPacific joint venture markets all of its PP compounds production, and we market a portion of the PP produced by our Asian joint ventures.

*Raw Materials*

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Raw material cost is the largest component of the total cost for the production of ethylene and its co-products. The primary raw materials used in our European olefin facilities are heavy liquids and, for our Saudi joint venture facilities, NGLs, including include ethane, propane and butane. The principal raw materials used by our polyolefin and *Catalloy* process resins businesses are propylene and ethylene. In Europe, we have the capacity to produce

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approximately 50% of the propylene requirements of our European PP business and approximately 90% of the ethylene requirements of our European PE business. European propylene and ethylene requirements that are not produced internally generally are purchased pursuant to long-term contracts with third-party suppliers and are delivered via pipeline. Prices under these third-party contracts are market related and are negotiated monthly, and are generally based on published market indicators, normally with discounts.

In our wholly owned operations in Australia, most of our propylene comes from third-party refinery grade propylene purchased under long-standing arrangements linked to market prices and is processed at our integrated splitters located on each manufacturing site. Some of our EAI joint ventures receive propylene from their local shareholders under long-term contracts. The remaining supply for the joint ventures is purchased from local suppliers under long-term contracts and some spot purchases. Our Saudi joint ventures, Al-Waha, SEPC and SPC, produce their own olefins utilizing cost advantaged Saudi Arabian propane and ethane.

The raw materials for polyolefins are, in general, commodity chemicals with numerous bulk suppliers and ready availability at competitive prices.

A significant portion of the raw materials for our PP compounds are PP and other polymers (including *Catalloy* process resins). Our PP compounding facilities generally receive their PP and other polymers from one of our wholly owned or joint venture facilities via truck or rail car. In addition, there are six sites (two in Europe, one in North America, one in South America, one in Asia and one in the Middle East) that have both PP and PP compounding operations co-located, thereby minimizing product handling. PB-1 raw materials are sourced solely from external supply.

### *Industry Dynamics / Competition*

Our ethylene rated capacity in Europe at December 31, 2011 was approximately 4.3 billion pounds per year, or approximately 7% of the 59 billion pounds per year of total European ethylene production capacity. Based on these published rated production capacities, we are the sixth largest producer of ethylene in Europe. In Europe, key ethylene competitors include INEOS, Total, SABIC, Shell, BASF and ExxonMobil.

Based on published data regarding PP capacity, we believe that we are the largest producer of PP in Europe as of December 31, 2011, with 5.2 billion pounds per year of capacity (which includes our proportionate share of our joint ventures), or approximately 22% of the European capacity for PP. Our largest competitors for sales of PP are Borealis, Total, SABIC, INEOS and Braskem.

Based on published data regarding PE capacity, we believe that we are the largest producer of PE in Europe as of December 31, 2011, with 5.0 billion pounds per year of capacity (which includes our proportionate share of our joint ventures), or approximately 13% of HDPE and LDPE European capacity. Our largest competitors for sales of PE are Borealis, ExxonMobil, Dow, INEOS, SABIC, Total, Polimeri Europe, and Repsol.

We believe, based on published data, that we are the largest PP compounds producer in the world with 2.3 billion pounds (which includes our proportionate share of joint ventures) of installed annual capacity as of December 31, 2011. Approximately 58% of our PP compounding capacity is in Europe, 20% is in North America, and 22% is in the rest of the world (including the capacity of our joint ventures). Our competitors for sales of PP compounds are Borealis, ExxonMobil, King Fa, Mitsubishi, Mitsui, SABIC, Sumitomo Chemical Co., Ltd., Washington Penn and many other independent companies.

Our 110 million pound PB-1 capacity competes with polybutene producers, of which Mitsui is the largest, and other polymers, plastomers and elastomers.

### *Intermediates and Derivatives Segment*

#### *Overview*

Our I&D segment produces and markets PO and its co-products and derivatives; acetyls; and ethylene oxide and

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its derivatives. PO co-products include SM and C4 chemicals (TBA (most of which is used to make oxyfuels as part of the Refining & Oxyfuels segment), isobutylene and TBHP). PO derivatives include PG, PGE and BDO. We believe that our proprietary PO and acetyls production process technologies provide us with a cost advantaged position for these products and their derivatives. In 2011, our I&D segment generated \$6.4 billion of revenues (excluding inter-segment revenue).

We produce PO through two distinct technologies based on indirect oxidation processes that yield co-products. One process yields TBA as the co-product; the other process yields SM as the co-product. The two technologies are mutually exclusive, necessitating that a manufacturing facility be dedicated either to PO/TBA or to PO/SM. Isobutylene and TBHP are derivatives of TBA. MTBE and ETBE are derivatives of isobutylene and are gasoline blending components reported in our Refining & Oxyfuels segment. PG, PGE and BDO are derivatives of PO. PG collectively refers to mono-propylene glycol (MPG), which includes PG meeting U.S. pharmacopeia standards, and several grades of dipropylene glycol (DPG) and tri-propylene glycol (TPG).

The following table outlines:

the primary products of our I&D segment;

annual processing capacity as of December 31, 2011, unless otherwise noted; and

the primary uses for those products.

<b>Product</b>	<b>Annual Capacity</b>	<b>Primary Uses</b>
<b>Propylene Oxide (PO)</b>	5.2 billion pounds(1)	PO is a key component of polyols, PG, PGE and BDO
<b>PO Co-Products:</b>		
Styrene Monomer (SM)	6.4 billion pounds(2)	SM is used to produce plastics, such as expandable polystyrene for packaging, foam cups and containers, insulation products and durables and engineering resins
TBA Derivative Isobutylene	1.4 billion pounds(3)	Isobutylene is a derivative of TBA used in the manufacture of synthetic rubber as well as fuel and lubricant additives, such as MTBE and ETBE
<b>PO Derivatives:</b>		
Propylene Glycol (PG)	1.2 billion pounds(4)	PG is used to produce unsaturated polyester resins for bathroom fixtures and boat hulls; antifreeze, coolants and aircraft deicers; and cosmetics and cleaners
Propylene Glycol Ethers (PGE)	545 million pounds(5)	PGE are used as solvents for paints, coatings, cleaners and a variety of electronics applications
Butanediol (BDO)	395 million pounds	BDO is used in the manufacture of engineering resins, films, personal care products, pharmaceuticals, coatings, solvents and adhesives
<b>Acetyls:</b>		
Methanol	190 million gallons(6)	Methanol is a raw material used to produce acetic acid, MTBE, formaldehyde and several other products
Acetic Acid	1.2 billion pounds	Acetic acid is a raw material used to produce VAM, terephthalic acid (used to produce polyester for textiles and plastic bottles), industrial solvents and a variety of other chemicals

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Vinyl Acetate Monomer (VAM)

700 million pounds

VAM is used to produce a variety of polymers, products used in adhesives, water-based paint, textile coatings and paper coatings

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<b>Product</b>	<b>Annual Capacity</b>	<b>Primary Uses</b>
<b>Ethylene Derivatives:</b>		
Ethylene Oxide (EO)	800 million pounds EO equivalents; 400 million pounds as pure EO	EO is used to produce surfactants, industrial cleaners, cosmetics, emulsifiers, paint, heat transfer fluids and ethylene glycol
Ethylene Glycol (EG)	700 million pounds	EG is used to produce polyester fibers and film, polyethylene terephthalate resin, heat transfer fluids and automobile antifreeze
Ethylene Glycol Ethers	225 million pounds	Ethylene glycol ethers are used to produce paint and coatings, polishes, solvents and chemical intermediates
Ethanol	50 million gallons	Ethanol is used as a fuel and a fuel additive and in the production of solvents as well as household, medicinal and personal care products

- (1) Includes (i) 100% of the 385 million pounds of capacity of Nihon Oxirane (described below) of which we own 40%; (ii) 1.5 billion pounds of capacity that represents Bayer Corporation's (Bayer) share of PO production from the Channelview PO/SM I plant and the Bayport, Texas PO/TBA plants under the U.S. PO Joint Venture (described below); (iii) 100% of the 690 million pounds of capacity of the Maasvlakte PO/SM plant owned by the European PO Joint Venture, as to which Bayer has the right to 50% of the production; and (iv) 100% of the 600 million pounds of capacity of Ningbo ZRCC (described below) of which we own 27%.
- (2) Includes (i) approximately 700 million pounds of SM production from the Channelview PO/SM II plant that is committed to unrelated equity investors under processing agreements; (ii) 100% of the 830 million pounds of capacity of Nihon Oxirane; (iii) 100% of the 1.5 billion pounds of capacity of the Maasvlakte PO/SM plant; and (iv) 1.3 billion pounds of capacity from Ningbo ZRCC.
- (3) Represents total high-purity isobutylene capacity and purified isobutylene capacity.
- (4) PG capacity includes 100% of the approximately 220 million pounds of capacity of Nihon Oxirane. The capacity stated is MPG capacity. Smaller quantities of DPG and TPG are co-produced with MPG.
- (5) Includes 100% of the 110 million pounds associated with a tolling arrangement with Shiny Chemical Co., Ltd. (Shiny).
- (6) Represents 100% of the methanol capacity at the La Porte, Texas facility, which is owned by La Porte Methanol Company, a partnership owned 85% by us.

See Description of Properties for the locations where we produce the primary products of our I&D segment. Annual processing capacity as of December 31, 2011 was calculated by estimating the average number of days in a typical year that a production unit of a plant is expected to operate, after allowing for downtime for regular maintenance, and multiplying that number by an amount equal to the unit's optimal daily output based on the design raw material mix. Because the processing capacity of a production unit is an estimated amount, actual production volumes may be more or less than the capacities set forth below. Except as indicated, capacities shown include 100% of the capacity of joint venture facilities.

*Sales & Marketing / Customers*

In 2011, no single I&D segment customer or product accounted for 10% or more of our total revenues.

We estimate, based in part on published data, that worldwide demand for PO was approximately 16.5 billion pounds in 2011. Approximately more than 85% of that volume was consumed in the manufacture of three families of PO derivative products: polyols, glycols and glycol ethers. The remainder was consumed in the manufacture of performance products, including BDO and its derivatives.

We produce and deliver our PO and PO co-products through sales agreements, processing agreements and spot sales as well as product exchanges. We have a number of multi-year processing (or tolling) and sales agreements. In addition, Bayer's ownership interest in the U.S. PO Joint Venture, which operates four of the U.S. operating units, represents ownership of an in-kind portion of the PO production. Bayer also has the right to 50% of the production of one of the facilities in The Netherlands. Our PO derivatives are sold through market-based sales contracts and spot sales.

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Production levels at the PO/SM and PO/TBA co-product facilities are primarily determined by the demand for PO and PO derivatives. As a result, production levels of SM and TBA and its derivatives, isobutylene, TBHP, MTBE, and ETBE are based primarily on the demand for PO and PO derivatives and secondarily on the relative market demand for the co-products and the operational flexibility of our facilities in meeting this demand. MTBE and ETBE are reported in our Refining & Oxyfuels segment.

Based on published data, worldwide demand for SM in 2011 is estimated to have been approximately 58 billion pounds. We sell most of our SM production into the North American and European merchant markets and to Asian and South American export markets through long-term sales contracts and processing agreements.

We purchase SM for resale, when necessary, to satisfy customer demand above production levels. Volumes of SM purchases made for resale can vary significantly from period to period. However, purchased volumes have not historically had a significant impact on profits.

Our I&D segment converts most of its TBA, which is produced as a co-product to the PO process, to isobutylene and sells some of the TBA into the market. Over half of the isobutylene from the I&D segment is reacted with methanol or ethanol to produce MTBE and ETBE, which is marketed by the Refining & Oxyfuels segment. The remaining isobutylene is sold as high purity and purity grade isobutylene by the I&D segment.

Sales of our PO, its co-products, and its derivatives are made by us, Nihon Oxirane (a joint venture of which we own 40%) and their affiliates directly, and through distributors and independent agents in the Americas, Europe, the Middle East, Africa and the Asia Pacific region. We have centralized certain sales and order fulfillment functions in regional customer service centers in Houston, Texas; Rotterdam, The Netherlands; and Hong Kong, China. PO, PG and SM are transported by barge, ocean going vessel, pipeline, rail car and tank truck. BDO is primarily transported by tank truck and rail car.

Acetic acid and VAM are manufactured at a facility in La Porte, Texas, and are consumed internally, sold worldwide generally under multi-year contracts and sold on a spot basis. Acetic acid and VAM are shipped by barge, ocean going vessel, pipeline, rail car and tank truck. We have bulk storage arrangements in Europe and South America to serve our customers' requirements in those regions. Sales are made through a direct sales force, agents and distributors.

We estimate, based on published data, that worldwide demand in 2011 for acetic acid and VAM was 23.3 billion pounds and 11.4 billion pounds, respectively.

Methanol is produced at a La Porte, Texas facility owned by La Porte Methanol Company, our 85% owned joint venture with Linde. Each party to the joint venture receives its respective share of the methanol production. Our acetyls business uses the methanol as a raw material for acetic acid and also sells the methanol under annual contracts and on a spot basis to large U.S. customers. The product is shipped by barge and pipeline.

Ethylene oxide ( EO ) or EO equivalents, and EO's primary derivative, ethylene glycol ( EG ), are produced at a wholly owned facility in Bayport, Texas. The Bayport facility also produces other derivatives of EO, principally glycol ethers.

EO and EG typically are sold under multi-year contracts, with market-based pricing. Glycol ethers and ethanolamines are sold primarily into the solvent and distributor markets at market prices. EO is shipped by rail car, and its derivatives are shipped by rail car, truck, isotank or ocean-going vessel.

The vast majority of the ethylene derivative products are sold in North America and Asia, primarily through our sales organizations.

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The following table describes our I&D segment's significant manufacturing joint venture relationships.

Name	Location	Other Parties	LyondellBasell Ownership	Product	2011 Capacity(1) (In millions of pounds)
U.S. PO Joint Venture	Channelview, TX Bayport, TX	Bayer	(2)	Propylene Oxide	1,500(3)
European PO Joint Venture	Rotterdam, The Netherlands	Bayer	50%	Propylene Oxide Styrene Monomer	690 1,480
PO/ SM II LP	Channelview, TX	Nova & Styrolution	(2)	Styrene Monomer	700(3)
Nihon Oxirane	Chiba, Japan	Sumitomo	40%	Propylene Oxide Styrene Monomer Propylene Glycol	385 830 220
Ningbo ZRCC LCC Ltd.	Ningbo, China	ZRCC	27%	Propylene Oxide Styrene Monomer	600 1,300
La Porte Methanol	La Porte, TX	Linde	85%	Methanol	190 million gallons

(1) Unless otherwise noted, represents the joint venture's total capacity and not our proportional capacity.

(2) The parties' rights in the joint ventures are based on off-takes, as opposed to ownership percentages.

(3) Amount of off-take by other parties in the joint venture.

Bayer's ownership interest in the U.S. PO Joint Venture represents its off-take of 1.5 billion pounds of the joint venture's PO production. We take, in-kind, the remaining PO production and all co-product (SM and TBA) production. Lyondell Chemical and Bayer have a separate joint venture, the PO Technology Joint Venture, through which Bayer was granted a non-exclusive and non-transferable right to use certain of our proprietary PO technology in the U.S. PO Joint Venture. Under the terms of operating and logistics agreements, we operate the U.S. PO Joint Venture plants and arrange and coordinate the logistics of PO delivery from the plants. We do not share marketing or product sales with Bayer under the U.S. PO Joint Venture.

Lyondell Chemical and Bayer also have a 50/50 joint venture, the European PO Joint Venture, for the ownership of the Maasvlakte PO/SM plant near Rotterdam, The Netherlands. Each party takes in-kind 50% of the PO and SM production of the European PO Joint Venture.

Lyondell Chemical's PO/SM II plant at the Channelview, Texas complex is a joint venture among Lyondell Chemical, Styrolution and Nova. Lyondell Chemical owns a majority interest in the joint venture and is the operator of the plant. As of December 31, 2011, 700 million pounds of SM capacity was committed to Styrolution and Nova under processing arrangements.

In addition to the Nihon Oxirane joint venture shown in the table above, we participate in marketing most of the PO capacity from a 440 million pound facility in Rabigh, Saudi Arabia owned by Sumitomo and Saudi Aramco, through NOC Asia Co. Ltd. in which we have a 40% equity interest.

We jointly market all of the PO manufactured by the Ningbo ZRCC joint venture.

We also have a multi-year processing agreement, entered into by Lyondell Chemical and Shiny, whereby we provide the raw materials used to produce PGE at Shiny's PGE plant in Tainan, Taiwan.

*Raw Materials*

The primary raw materials used for the production of PO and its co-products and derivatives are propylene,

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isobutane, mixed butane, ethylene and benzene. The market prices of these raw materials historically have been related to the price of crude oil, NGLs and natural gas, as well as market conditions including supply of, and demand for, the raw materials. These raw materials are received in bulk quantities via pipeline or ocean going vessels.

In the U.S., we obtain a large portion of our propylene, benzene and ethylene raw materials needed for the production of PO and its co-products and derivatives internally from our crackers. Raw materials for the non-U.S. production of PO and its co-products and derivatives primarily are obtained from unrelated parties. We consume a significant portion of our internally-produced PO in the production of PO derivatives.

We consume large volumes of mixed butane for the production of PO and its co-products and derivatives. We have invested in facilities, or entered into processing agreements with unrelated parties, to convert the widely available commodity, normal butane, to isobutane. We also are a large consumer of oxygen for our PO/TBA plants.

The cost of raw materials generally is the largest component of total production cost for PO and its co-products and derivatives. Generally, the raw material requirements for these businesses are purchased at market-based prices from numerous suppliers in the U.S. and Europe with which we have established contractual relationships, as well as in the spot market. The raw materials for these businesses are, in general, commodity chemicals with ready availability at competitive prices. Historically, raw material availability has not been an issue. However, in order to enhance reliability and competitiveness of prices and rates for supplies of raw materials, industrial gas and other utilities, we have long-term agreements and other arrangements for a substantial portion of our production requirements.

The primary raw materials required for the production of acetic acid are carbon monoxide and methanol. We purchase the carbon monoxide from Linde pursuant to a long-term contract under which pricing is based primarily on cost of production. La Porte Methanol Company, our 85%-owned joint venture, supplies all of the methanol requirements for acetyls production. Natural gas is the primary raw material required for the production of methanol.

In addition to ethylene, acetic acid is a primary raw material for the production of VAM. For the production of VAM, we obtain our entire requirements for acetic acid and ethylene from our internal production. In 2011, we used a large percentage of our acetic acid production to produce VAM.

### *Industry Dynamics / Competition*

With respect to PO, its co-products and derivatives, competition is based on a variety of factors, including product quality and price, reliability of supply, technical support, customer service and potential substitute materials. Profitability is affected by the worldwide level of demand along with price competition, which may intensify due to, among other things, new industry capacity. However, demand is also influenced by worldwide economic growth, which fluctuates. The PO demand growth rate also could be impacted by further development of alternative bio-based PO derivatives. It is not possible to predict accurately the changes in raw material costs, market conditions and other factors that will affect industry profitability in the future.

Based on published data regarding PO capacity, we believe that, including our share of Nihon Oxirane, Ningbo ZRCC and the European PO Joint Venture, we are the second largest producer of PO worldwide, with approximately 13% of the total worldwide capacity for PO. Our major worldwide competitors for sales of PO and its derivatives are Dow and Shell.

Based on published data regarding SM capacity, we believe that we are one of the largest producers of SM worldwide, with approximately 5% of the total worldwide capacity for SM as of December 31, 2011. We compete worldwide for sales of SM with many marketers and producers, among which are Styrolution, Cosmar, Americas Styrenics and Shell.

We believe that we are the sixth and eighth largest producer of acetic acid and VAM, respectively, each with approximately 3% and 5% of the total worldwide capacity as of December 31, 2011. Our primary competitors include Celanese and BP for acetic acid and Celanese, Dow and DuPont for VAM.

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***Refining & Oxyfuels Segment***

*Overview*

Our Refining & Oxyfuels segment refines heavy, high-sulfur crude oil in the U.S. Gulf Coast and produces gasoline blending components at several of our olefin and PO sites. In 2011, our Refining & Oxyfuels segment generated operating revenues of \$18.8 billion (excluding inter-segment revenue).

Our Houston refinery, which is located on the Houston Ship Channel in Houston, Texas, has a heavy, high-sulfur crude oil processing capacity of approximately 268,000 barrels per day on a calendar day basis (normal operating basis), or approximately 292,000 barrels per day on a stream day basis (maximum achievable over a 24 hour period). The Houston refinery has a Nelson Complexity Index of 12.1. The Houston refinery is a full conversion refinery designed to refine heavy, high-sulfur crude oil. This crude oil is more viscous and dense than traditional crude oil and contains higher concentrations of sulfur and heavy metals, making it more difficult to refine into gasoline and other high-value fuel products. However, this crude oil has historically been less costly to purchase than light, low-sulfur crude oil. Processing heavy, high-sulfur crude oil in significant quantities requires a refinery with extensive coking, catalytic cracking, hydrotreating and desulfurization capabilities, i.e., a complex refinery. The Houston refinery's refined fuel products include gasoline (including blendstocks for oxygenate blending), jet fuel and ultra low sulfur diesel. The Houston refinery's products also include heating oil, lube oils (industrial lubricants, white oils and process oils), carbon black oil, refinery-grade propylene, petrochemical raw materials, sulfur, residual fuel and petroleum coke.

The Refining & Oxyfuels segment also includes gasoline blending components such as MTBE, ETBE and alkylate. MTBE and ETBE are produced as co-products of the PO and olefin production process at four sites in the United States, France and The Netherlands. We currently have three sites that can produce either MTBE or ETBE with a combined capacity to produce 59,000 barrels per day of MTBE or ETBE; the Company's total capacity for MTBE or ETBE production is 75,000 barrels per day. Alkylate is produced at one facility in Texas.

On January 4, 2012, refinery operations were suspended at our Berre refinery in France. The suspension of operations was in accordance with an agreement executed in the fourth quarter of 2011 by our French entities and union representatives addressing the procedures by which suspension of refinery operations and works council consultations would be governed. Consultations with the relevant works councils are in progress. Additional information about the suspension of operations can be found in Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following table outlines:

the primary products of our Refining & Oxyfuels segment;

capacity as of December 31, 2011, unless otherwise noted; and

the primary uses for those products.

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See Description of Properties for the locations where we produce the primary products of our Refining & Oxyfuels segment.

Key Products	Capacity (1)	Primary Uses
<b>Houston Refinery:</b>		
Gasoline and components	120,000 barrels per day	Automotive fuel
Ultra Low Sulfur Diesel	95,000 barrels per day	Diesel fuel for cars and trucks
Jet Fuel	25,000 barrels per day	Aviation fuel
Lube Oils	4,000 barrels per day	Industrial lube oils, railroad engine additives and white oils for food-grade applications
<b>Gasoline Blending Components:</b>		
MTBE/ ETBE	75,000 barrels per day(2)	MTBE is a high octane gasoline blending component; ETBE is an alternative gasoline blending component based on agriculturally produced ethanol
Alkylate	22,000 barrels per day	Alkylate is a high octane gasoline blending component

(1) Only certain key products for the Houston refinery are identified. Thus, the sum of the capacities in this table will not equal the facility's total capacity. Excludes materials from the Berre refinery.

(2) Represents total combined MTBE and ETBE capacity.  
*Sales & Marketing / Customers*

In 2011, no single Refining & Oxyfuels segment customer or product accounted for 10% or more of our total revenues.

In the U.S., we market and sell gasoline (including blendstocks for oxygenate blending), jet fuel, heating oil, ultra low sulfur diesel fuel, lube oils, coke and sulfur produced at the Houston refinery. These products are sold in large commodity markets. The Houston refinery evaluates and determines its optimal product output mix, based on market prices and conditions. As a result, we are subject to various risks associated with selling commodity products.

Gasoline sales accounted for 7% of our total revenues in 2011. The Houston refinery's products primarily are sold in bulk on the U.S. Gulf Coast to other refiners, marketers, distributors and wholesalers at market-related prices. Diesel fuel is produced to meet ultra low sulfur specifications for the on-road transportation market. Most of the Houston refinery's products are sold under contracts with a term of one year or less or are sold in the spot market. The Houston refinery's products generally are transported to customers via pipelines and terminals owned and operated by other parties. Products also are transported via rail car, barge, truck and ocean going vessel. In addition to sales of refined products produced by the Houston refinery, we also sell refined products purchased or received on exchange from other parties. The exchange arrangements help optimize refinery supply operations and lower transportation costs. To meet market demands, we also from time to time purchase refined products manufactured by others for resale to our customers. However, purchased volumes have not historically had a significant impact on profitability.

MTBE and ETBE are derivatives of TBA, which is a co-product of the PO produced by our I&D segment. As described, production levels of the TBA derivatives MTBE and ETBE depend primarily on the demand for PO and PO derivatives and secondarily on the relative market demand for MTBE and ETBE and the operational flexibility of our multiple production facilities in meeting this demand. Separately, MTBE and alkylate are also produced as derivatives of the ethylene co-products produced by our O&P Americas segment. When necessary, we purchase MTBE for resale to satisfy customer demand for MTBE above our production levels. Volumes of MTBE purchased for resale can vary significantly from period to period. However, purchased volumes have not historically had a significant impact on profitability.

We sell our MTBE and ETBE production under market-based sales agreements and in the spot market. We blend our alkylate into gasoline and also sell alkylate under short-term contracts and in the spot market.





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Substantially all refiners and blenders have discontinued the use of MTBE in the U.S., partly as a result of governmental initiatives to increase use of bio-ethanol in gasoline and to reduce or effectively ban the use of MTBE. However, MTBE/ETBE demand for gasoline blending remains strong within most of the remaining worldwide market. Accordingly, we market MTBE and ETBE produced in the U.S. for use outside of the U.S. Our MTBE/ETBE plants generally have the flexibility to produce either MTBE or ETBE to accommodate market needs.

Japan has opted to use ETBE as a means of meeting its carbon dioxide reduction commitments under the Kyoto Protocol, and we source a significant portion of Japan's bio-fuels needs.

Sales of our MTBE, ETBE and alkylate are made by our marketing and sales personnel, and through distributors and independent agents in the Americas, Europe, the Middle East, Africa and the Asia Pacific region. We have centralized certain sales and order fulfillment functions in regional customer service centers in Houston, Texas; Rotterdam, The Netherlands; and Hong Kong, China. We also have long-term contracts for distribution and logistics to ensure reliable and efficient supply to our customers. MTBE, ETBE and alkylate are transported by barge, ocean going vessel and tank truck.

### *Raw Materials*

We purchase the crude oil used as a raw material for the Houston refinery on the open market on a spot basis and under a number of supply agreements with regional producers.

We purchase our ethanol requirements for the production of ETBE from regional producers and importers in Europe at market-related prices. Additionally, we have entered into a supply contract with a Brazilian ethanol producer to supply a significant portion of the ethanol used for the manufacture of ETBE at our Channelview facility. For further discussion regarding the raw materials requirements for the production of MTBE, ETBE and alkylate, see Intermediates and Derivatives Segment Raw Materials.

### *Industry Dynamics / Competition*

The markets for fuel products tend to be volatile as well as cyclical as a result of changing global economic conditions and prices for crude oil and refined product prices. Crude oil prices are impacted by worldwide economic conditions and political events, the economics of exploration and production, refined products demand and currency fluctuations. Prices and demand for fuel products are influenced by seasonal and short-term factors such as weather and driving patterns, as well as by longer term issues such as the economy, energy conservation and alternative fuels. Industry fuel products supply is dependent on short-term industry operating capabilities and on long-term refining capacity.

With a throughput capacity of approximately 268,000 barrels per day (on a calendar day basis), we believe that our Houston refinery is among North America's largest full conversion refineries capable of processing significant quantities of heavy, high-sulfur crude oil.

In North America, we compete for the purchase of heavy, high-sulfur crude oil based on price and quality. We compete in gasoline and distillate markets as a bulk supplier of fungible products satisfying industry and government specifications. Competition is based on price and location. Our refining competitors are major integrated oil companies, refineries owned or controlled by foreign governments and independent domestic refiners. Based on published data, as of January 2012, there were 148 operable crude oil refineries in the U.S., and total U.S. refinery capacity was approximately 17.7 million barrels per day.

During 2011, the Houston refinery processed an average of approximately 263,000 barrels per day of crude oil, representing approximately 1.5% of all U.S. crude processing capacity.

A crack spread is a benchmark indication of refining margins based on the processing of a specific type of crude oil into an assumed selection of refined products. The Houston refinery generally tracks the Maya 2-1-1 crack

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spread, which represents the difference between the first month futures price of two barrels of Maya crude oil as set by Pemex and one barrel each of U.S. Gulf Coast 87 Octane Conventional Gasoline and U.S. Gulf Coast No. 2 Heating Oil (high-sulfur diesel). While these benchmark refining spreads are generally indicative of the level of profitability at the Houston refinery, there are many other factors specific to each refinery that influence operating results.

We believe that we are the largest producer of MTBE/ETBE worldwide. We compete for sales of MTBE and ETBE with independent MTBE producers worldwide and independent ETBE producers mainly in Europe. The most significant MTBE competitor is SABIC, and the most significant ETBE competitors are Repsol, Total, Neste and Braskem. MTBE and ETBE face competition from products such as ethanol and other octane components. We compete with other refiners and olefin manufacturers for sales of alkylate that we do not internally blend into gasoline.

### ***Technology Segment***

#### *Overview*

Our Technology segment develops and licenses chemical, polyolefin and other process technologies and provides associated engineering and other services. Our Technology segment further develops, manufactures and sells polyolefin catalysts. We market our process technologies and our polyolefin catalysts to external customers and also use them in our own manufacturing operations. In 2011, our Technology segment generated operating revenues of \$376 million (excluding inter-segment revenue).

Our polyolefin process licenses are structured to provide a standard core technology, with individual customer needs met by adding customized modules that provide the required capabilities to produce the defined production grade slate and plant capacity. For licenses involving proven technologies, we typically receive the majority of our license fees in cash at or before the date of customer acceptance rather than ongoing royalties. For these licenses, we generally recognize revenue upon delivery of the process design package and the related license. Each license agreement includes long-term confidentiality provisions to protect the technology. In addition to the basic license agreement, a range of services can also be provided, including project assistance; training; start-up assistance of the plant; and supply of resins from our production for pre-marketing by the licensee. We may also offer marketing and sales services. In addition, licensees generally continue to purchase polyolefin catalysts that are consumed in the production process, generally under long-term catalyst supply agreements with us.

#### *Process Technology Licensing*

We are a leading licensor of polyolefin process technologies.

Our PP licensing portfolio includes our *Spheripol* and *Spherizone* process technologies as well as *Metocene* technology.

Our PE process licensing portfolio comprises the *Lupotech T* (high pressure tubular process for producing LDPE), the *Lupotech A* (autoclave process mainly for producing ethylene vinyl acetate (EVA) copolymers), *Hostalen* (slurry process for producing multimodal HDPE), and *Spherilene* (gas phase process for producing full-density range of LLDPE to HDPE) processes.

In addition, we license a selective portfolio of chemical process technologies in the fields of olefin recovery, olefin conversion, aromatics extraction and acetyls.

Since 2000, we have sold licenses representing approximately 27 million tons of polyolefin capacity, which represents about 40% of worldwide installed capacity. In 2011, we entered into licensing agreements representing approximately one million tons of polyolefin capacity.

Our Technology segment also provides technology services to our licensees. Such services include safety reviews, training and start-up assistance, engineering services for process and product improvements and manufacturing troubleshooting.

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### *PP Process Technology*

We license several PP process technologies, including *Spheripol*, *Spherizone* and *Metocene*.

Our *Spheripol* technology produces homopolymers and random copolymers in a single stage and impact copolymers in a multi-stage process. We believe that the *Spheripol* process is the most widely used PP production process in the world.

The *Spherizone* process was commercialized in 2002 and introduced for licensing in 2004. It is able to produce higher quality PP, novel PP-based polyolefinic resins, and a wider product grade range than other processes at similar operating cost. The *Spherizone* process introduces a single reactor concept, in which bimodality is created within one single reactor operating at different conditions between the different zones inside the reactor. The final product is a result of an intimate mixing of the different property determining phases at a macro molecular level.

*Metocene* PP technology was introduced for licensing in 2006. This add-on technology for the production of specialty PP products is based on using single-site catalyst systems. *Metocene* technology can be adapted to virtually any PP process, and its versatility expands the end use product range of conventional PP. In 2009, Polymirae became the first licensee to commence commercial production of *Metocene*.

### *PE Processes Technology*

The different families of PE (HDPE, LDPE and LLDPE) require specialized process technologies for production, which are available through our broad PE process licensing portfolio. The portfolio includes *Lupotech*, *Spherilene* and *Hostalen* process technologies.

*Lupotech T* is a high pressure, tubular reactor process for the production of LDPE. This high pressure technology does not use a catalyst system typical for low pressure processes, but rather peroxide initiators to polymerize ethylene and optionally VAM for EVA-copolymers. By adjusting the temperature profile along the reactor and adding different peroxide mixtures, process conditions are modified to produce the desired products. The process produces the entire melt flow ratio and density range with competitive investment costs and low utilities and raw material demand.

*Lupotech A* is a high pressure autoclave process using peroxide mixture for polymerization and is mainly utilized for specialty LDPE and for the production of EVA copolymers with high VAM content.

*Spherilene* is a flexible gas-phase process for the production of the entire density range of PE products from LLDPE and MDPE to HDPE. The flexibility of this technology, which is demonstrated by a broad portfolio of grades, enables licensees to effectively manage the continuously dynamic PE markets at low investments costs and very low operating costs.

*Hostalen* is a low-pressure slurry process technology for the production of high-performance multimodal HDPE grades. This is desirable because a different product structure can be produced in each stage of the polymerization process, yielding products that are tailored for demanding processing requirements and sophisticated end use applications such as film, blow molding and pipe applications.

### *Chemical Process Technologies*

We also offer for licensing a select number of chemical processes, including the group of *Trans4m* processes, Aromatics extractions, Glacido and Vacido technology.

The *Trans4m* portfolio of process technologies offers tailored solutions for C4 and higher olefin recovery and conversion. These processes include separation, purification and skeletal isomerization of the C4 and C5 olefin streams for the selective conversion of low-value, mixed olefin streams from crackers to isobutylene, isoamylene,

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butadiene, isoprene, piperylene and dicyclopentadiene (DCPD). This group of processes is complemented by Aromatics extractions technology, which enables us to offer a comprehensive portfolio of processes to upgrade all olefinic streams from steam crackers to higher value products.

*Glacido* is a process technology for manufacturing of acetic acid by carbonylation of methanol. It utilizes a Rhodium-based homogeneous catalyst system. *Vacido* is a fixed-bed tubular process for the production of high-quality VAM, from acetic acid and ethylene. It utilizes a proprietary heterogeneous catalyst system.

*Superflex* technology produces propylene and ethylene, and is based on a fluidized catalytic reactor. The process technology is used for cracking less refined feedstock such as coker or fluid catalytic cracking unit light gasoline as well as mixed C4 to C9 streams.

### *Polyolefin Catalysts*

Under the *Avant* brand, we are a leading manufacturer and supplier of polyolefin catalysts. As a large polyolefin producer, approximately 30% of catalyst sales are inter-company. Polyolefin catalysts are packaged and shipped via road, sea or air to our customers.

We produce catalysts at two facilities in Germany, one facility in Italy and one facility in the U.S. Our polyolefin catalysts, which are consumed during the polyolefin production process and define the processing and mechanical properties of polyolefins, provide enhanced performance for our process technologies and are being developed to enhance performance when used in third-party process technologies. We also supply catalysts for producing sophisticated PEs.

Customers using polyolefin catalysts must make continual purchases, because they are consumed during the polyolefin production process. New licensees often elect to enter into long-term catalyst supply agreements.

### *Sales & Marketing*

In 2011, no single Technology segment customer or product accounted for 10% or more of our total revenues. We market our process technologies and catalysts to external customers and also use them for our own polyolefin manufacturing operations. We have a marketing and sales force dedicated to the Technology segment, including catalyst sales and customer technical support for licensees.

### *Industry Dynamics / Competition*

We believe that competition in the polyolefin process licensing industry is based on the quality and efficiency of the process technology, product performance and product application, complemented by customer service and technical support. Since the formation of Basell in 2000 through December 31, 2011, we have sold licenses representing approximately 27 million tons of capacity based on its six process technologies to polyolefin manufacturers. We estimate that approximately 40% of PP and 30% of PE worldwide licensed capacity from 2003 through 2011 use our technologies. As of December 31, 2011, we estimate that over 200 polyolefin production lines use our licensed process technologies. Our major competitors in PP technologies licensing are Dow Chemical, INEOS, Novolene Technology Holdings and Mitsui Chemicals. Our major competitors in PE technologies licensing are ChevronPhillips, INEOS, Mitsui Chemicals and Univation Technologies.

We are one of the world's largest manufacturers and suppliers of PP catalysts. We also supply catalysts for producing PEs. Our major competitors in the worldwide catalyst business are Dow Chemical, BASF, Mitsui Chemicals, Toho Catalyst and WR Grace.

### *Research and Development*

Our research and development activities are designed to improve our existing products and discover and commercialize new materials, catalysts and processes. These activities focus on product and application development, process development, catalyst development and fundamental polyolefin focused research.

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We have three research and development facilities, each with a specific focus. Our facility in Frankfurt, Germany focuses on PE and metallocene catalysts. Our facility in Ferrara, Italy focuses on PP, PB-1, *Catalloy* process resins and Ziegler-Natta catalysts. Our facility in Cincinnati, Ohio focuses on polyolefin product and application development in North America.

Our financial performance and market position depend in substantial part on our ability to improve our existing products and discover and commercialize new materials, catalysts and processes. Our research and development is organized by core competence communities that manage and provide resources for projects, intellectual property and catalyst manufacturing. These include:

*Catalyst systems:* catalyst research to enhance our polyolefin polymer properties, catalyst and process performance, including Ziegler Natta, chromium and metallocene catalyst.

*Manufacturing platforms:* research to advance process development and pilot plant integration to industrialize technology with improved polymer properties.

*Product and application development:* working directly with customers to provide new products with enhanced properties.

*Processing testing and characterization:* research to increase knowledge on polymers from production to processability.

*Process design and support:* research to reduce production and investment costs while improving processability.

*Chemicals and fuels technologies:* research to develop and improve catalysts for existing chemical processes and improve process unit operations.

We have core research and development projects that focus on initiatives in line with our strategic direction. These projects are closely aligned with our businesses and customers with a goal of commercialization of identified opportunities. Core projects currently include research and development in areas such as:

PP product development with emphasis on *Spherizone* process technology.

Next generation products from existing and in-development processes, using advanced catalyst technologies including metallocenes.

Enhanced catalyst and process opportunities to extend PE technologies.

Enhanced catalysts and process opportunities for selected chemical technologies.

As of December 31, 2011, approximately 827 of our employees are directly engaged in research and development activities.

In addition to our research and development activities, we provide technical support to our customers. Our technical support centers are in Bayreuth, Germany; Cincinnati, Ohio; Geelong, Australia; Lansing, Michigan; and Tarragona, Spain.

In 2011, 2010 and 2009, our research and development expenditures were \$196 million, \$154 million and \$145 million, respectively. A portion of these expenses are related to technical support and customer service and are primarily allocated to the other business segments.



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### **GENERAL**

#### ***Intellectual Property***

We maintain an extensive patent portfolio and continue to file new patent applications in the U.S. and other countries. As of December 31, 2011, we owned approximately 6,200 patents and patent applications worldwide. Our patents and trade secrets cover our processes, products and catalysts and are significant to our competitive position, particularly with regard to propylene oxide, intermediate chemicals, petrochemicals, polymers and our process technologies such as *Spheripol*, *Spherizone*, *Hostalen*, *Spherilene*, *Lupotech*, *Glacido*, *Vacido*, *Isomplus* and *Avant* catalysts. We own globally registered and unregistered trademarks including the LyondellBasell, Lyondell and Equistar trade names. While we believe that our intellectual property provides competitive advantages, we do not regard our businesses as being materially dependent upon any single patent, trade secret or trademark. Some of our heritage production capacity operates under licenses from third parties.

We rely on patent, copyright and trade secret laws of the countries in which we operate to protect our investment in research and development, manufacturing and marketing. Our employees working on these technologies are required to enter into agreements, or are covered by other arrangements such as collective bargaining agreements, providing for confidentiality and the assignment of rights to inventions made by them while employed by us.

#### ***Environmental***

##### ***Regulation***

We are subject to extensive international, national, state, local and environmental laws, regulations, directives, rules and ordinances concerning, and are required to have permits and licenses regulating, emissions to the air, discharges onto land or waters and the generation, handling, storage, transportation, treatment, disposal and remediation of hazardous substances and waste materials.

Under the European Union ( EU ) Integrated Pollution Prevention and Control Directive ( IPPC ), EU Member State governments are to adopt rules and implement an environmental permitting program relating to air, water and waste for individual facilities. The EU countries are at varying stages in their respective implementation of the IPPC permit program. We do not know with certainty what future IPPC permits will require, or the future costs of compliance with the IPPC permit program. The EU also has passed legislation governing the registration, evaluation and authorization of chemicals, known as REACH, pursuant to which we are required to register chemicals and gain authorization for the use of certain substances. As an importer of chemicals and materials from outside the EU, we are subject to additional registration obligations.

We also are subject to environmental laws that may have a significant effect on the nature and scope of cleanup of contamination at current and former operating facilities and at other sites at which hazardous substances generated by our current or former subsidiaries were disposed. Such laws may also have a significant effect on the costs of transportation and storage of raw materials and finished products, and the costs of the storage and disposal of wastewater. In the U.S., the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended and also known as Superfund ( CERCLA ), imposes joint and several liability for the costs of remedial investigations and cleanup actions, as well as damages to natural resources, on entities that generated hazardous substances, arranged for disposal of the hazardous substances, transported to or selected the disposal sites and the past and present owners and operators of such sites. All such responsible parties (or any one of them) can be required to bear all of such costs regardless of fault, the legality of the original disposal or ownership of the disposal site. We are subject to potential liability under CERCLA as an owner or operator of facilities at which hazardous substances have been disposed or as a generator or transporter of hazardous substances disposed at other locations.

Under the EU Environmental Liability Directive, EU Member States can require the remediation of soil and groundwater contamination in certain circumstances, under the polluter pays principle. The scope of events and circumstances that could trigger remediation requirements and the level of remediation required vary from Member State to Member State.



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Under the U.S. Resource Conservation and Recovery Act of 1976 ( RCRA ), various U.S. state and non-U.S. government regulations regulate the handling, transporting and disposal of hazardous and non-hazardous waste. Our manufacturing sites have, and may in the future, handle on-site waste disposal, subjecting us to these laws and regulations.

### *Capital Expenditures*

In some cases, compliance with environmental, health and safety laws and regulations can only be achieved by capital expenditures. Regulatory-related capital expenditures at our facilities were \$125 million, \$121 million and \$250 million in 2011, 2010 and 2009, respectively, and we estimate such expenditures to be approximately \$204 million in 2012 and \$210 million in 2013.

Our regulatory-related capital expenditures in 2011 primarily relate to projects designed to reduce and control emissions from our plant operations in both the U.S. and Europe.

Stricter environmental, safety and health laws, regulations and enforcement policies could result in increased environmental capital expenditures by us above current estimates.

### *Employee Relations*

As of December 31, 2011, we had approximately 14,000 full-time and part-time employees. Of these, approximately 5,800 were in North America, approximately 6,800 were in Europe and approximately 1,400 were in other locations.

As of December 31, 2011, approximately 900 of our employees in North America are represented by labor unions. The vast majority of our employees in Europe and South America are subject to staff council or works council coverage or collective bargaining agreements.

In addition to our own employees, we use the services of contractors in the routine conduct of our businesses.

We believe our relations with our employees are good.

### *Description of Properties*

Our principal manufacturing facilities as of December 31, 2011 are set forth below, and are identified by the principal segment or segments using the facility. The facilities are wholly owned, except as otherwise noted.

<b>Location</b>	<b>Segment</b>	<b>Principal Products</b>
<b>Americas</b>		
Bayport (Pasadena), Texas	I&D	Ethylene Oxide (EO), EG and other EO derivatives
Bayport (Pasadena), Texas(1)	I&D	Propylene Oxide (PO), Propylene Glycol (PG), Propylene Glycol Ethers (PGE), Tertiary-Butyl-Alcohol (TBA) and Isobutylene
Bayport (Pasadena), Texas	O&P Americas	PP and <i>Catalloy</i> process resins
Channelview, Texas(2)	O&P Americas	Ethylene, Propylene, Butadiene, Benzene and Toluene
Channelview, Texas(1)(3)	Refining & Oxyfuels I&D	Alkylate and MTBE IPA, PO, BDO, SM and Isobutylene
Chocolate Bayou, Texas	Refining & Oxyfuels O&P Americas	ETBE
Clinton, Iowa	O&P Americas	PE (HDPE) Ethylene and Propylene

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Corpus Christi, Texas	O&P Americas	PE (LDPE and HDPE) Ethylene, Propylene, Butadiene and Benzene Polyolefin catalysts PP PP compounds Performance polymers Gasoline, Diesel, Jet Fuel and Lube Oils PP compounds Ethylene and Propylene PE (LDPE and LLDPE) VAM, acetic acid and methanol PP and <i>Catalloy</i> process resins PP compounds PE (HDPE) PE (LDPE and LLDPE) Denatured Alcohol PP compounds PP PP compounds Ethanol and PE (powders) PE (HDPE)
Edison, New Jersey	Technology	
Ensenada, Argentina	O&P Americas	
Ensenada, Argentina	O&P EAI	
Fairport Harbor, Ohio	O&P Americas	
Houston, Texas	Refining & Oxyfuels	
Jackson, Tennessee	O&P EAI	
La Porte, Texas(4)	O&P Americas	
La Porte, Texas(4)(5)	I&D	
Lake Charles, Louisiana	O&P Americas	
Mansfield, Texas	O&P EAI	
Matagorda, Texas	O&P Americas	
Morris, Illinois	O&P Americas	
Newark, New Jersey	O&P Americas	
Pindamonhangaba, Brazil	O&P EAI	
Tampico, Mexico(6)	O&P Americas	
Tampico, Mexico(6)	O&P EAI	
Tuscola, Illinois	O&P Americas	
Victoria, Texas	O&P Americas	
<b>Europe</b>		
Aubette, France	O&P EAI	Ethylene, Propylene and Butadiene PP and PE (LDPE) PP compounds Naphtha, vacuum gas oil (VGO), liquefied petroleum gas (LPG), gasoline, diesel, jet fuel, bitumen and heating oil.
Bayreuth, Germany	O&P EAI	
Berre l Etang, France(7)	Refining & Oxyfuels	
Botlek, Rotterdam, The Netherlands	I&D Refining & Oxyfuels	PO, PG, PGE, TBA, Isobutylene and BDO MTBE and ETBE PP PP PP and <i>Catalloy</i> process resins Polyolefin catalysts PO, PG and TBA MTBE and ETBE PE (HDPE) Polyolefin catalysts PP and PP compounds Polyolefin catalysts PO and SM
Brindisi, Italy	O&P EAI	
Carrington, U.K.	O&P EAI	
Ferrara, Italy	O&P EAI	
Fos-sur-Mer, France	Technology I&D Refining & Oxyfuels	
Frankfurt, Germany	O&P EAI Technology	
Knapsack, Germany	O&P EAI	
Ludwigshafen, Germany	Technology	
Maasvlakte (near Rotterdam), The Netherlands(8)	I&D	
Milton Keynes, U.K.	O&P EAI	PP compounds <i>Catalloy</i> process resins and PB-1 Ethylene, Propylene PE (HDPE) PP and PE (HDPE and LDPE)
Moerdijk, The Netherlands	O&P EAI	
Münchsmünster, Germany (9)	O&P EAI	
Plock, Poland(10)	O&P EAI	

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Tarragona, Spain(11)	O&P EAI	PP and PP compounds
Terni, Italy(12)	O&P EAI	PP
Wesseling, Germany(13)	O&P EAI	Ethylene, Propylene and Butadiene PP and PE (HDPE and LDPE)
<b>Asia Pacific</b>		
Chiba, Japan(14)	I&D	PO, PG and SM
Clyde, Australia	O&P EAI	PP
Geelong, Australia	O&P EAI	PP
Guangzhou, China(15)	O&P EAI	PP compounds
Kawasaki, Japan(16)	O&P EAI	PP
Map Ta Phut, Thailand(17)	O&P EAI	Propylene and PP
Ningbo, China(18)	I&D	PO and SM
Oita, Japan(16)	O&P EAI	PP and PP compounds
Port Klang, Malaysia(19)	O&P EAI	PP compounds
Rayong, Thailand(20)	O&P EAI	PP compounds
Suzhou, China	O&P EAI	PP compounds
Victoria, Australia(19)	O&P EAI	PP compounds
Yeocheon, Korea(21)	O&P EAI	PP
<b>Middle East</b>		
Jubail, Saudi Arabia(22)	O&P EAI	Propylene, PP and PP compounds
Jubail, Saudi Arabia(23)	O&P EAI	Propylene and PP
Jubail, Saudi Arabia(24)	O&P EAI	Ethylene and PE (LDPE and HDPE)

The facility is located on leased land.

- (1) The Bayport PO/TBA plants and the Channelview PO/SM I plant are held by the U.S. PO Joint Venture between Bayer and Lyondell Chemical. These plants are located on land leased by the U.S. PO Joint Venture.
- (2) The Channelview facility has two ethylene processing units. Equistar Chemicals, LP also operates a styrene maleic anhydride unit and a polybutadiene unit, which are owned by an unrelated party and are located within the Channelview facility on property leased from Equistar Chemicals, LP.
- (3) Unrelated equity investors hold a minority interest in the PO/SM II plant at the Channelview facility.
- (4) The La Porte facilities are on contiguous property.
- (5) The La Porte I&D facility is owned by La Porte Methanol Company, a partnership owned 85% by us.
- (6) The Tampico PP facility is owned by Indelpro, a joint venture owned 51% by an unrelated party. The Tampico PP compounding plant is wholly owned by us.
- (7) On January 4, 2012, refinery operations were suspended at our Berre refinery.
- (8) The Maasvlakte plant is owned by the European PO Joint Venture and is located on land leased by the European PO Joint Venture.

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- (9) The Münchsmünster facility was rebuilt in 2010 following a fire in 2005.
- (10) The Plock facility is owned by our BOP joint venture and is located on land owned by PKN/Orlen.
- (11) The Tarragona PP facility is located on leased land; the compounds facility is located on co-owned land.
- (12) We ceased production at the Terni, Italy site in July 2010.
- (13) There are two steam crackers at the Wesseling, Germany site.
- (14) The PO/SM plant and the PG plant are owned by our Nihon Oxirane joint venture.
- (15) The Guangzhou facility commenced production in 2008.
- (16) The Kawasaki and Oita plants are owned by our SunAllomer joint venture.
- (17) The Map Ta Phut plant is owned by our HMC joint venture.

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- (18) The Ningbo facility is owned by our ZRCC joint venture.
- (19) The Port Klang and Victoria plants are owned by our PolyPacific Pty. joint venture.
- (20) The Rayong plant is owned 95% by Basell Asia Pacific Thailand and 5% by our HMC joint venture.
- (21) The Yeochan plant is owned by our PolyMirae joint venture.
- (22) The Jubail PP and PDH manufacturing plant is owned by our SPC joint venture.
- (23) The Jubail *Spherizone* PP and PDH manufacturing plant is owned by our Al-Waha joint venture.
- (24) The Jubail integrated PE manufacturing complex is owned by our SEPC joint venture.
- Other Locations and Properties*

Our corporate seat is in Rotterdam, The Netherlands. We have administrative offices in Rotterdam, The Netherlands and Houston, Texas. We maintain research facilities in Lansing, Michigan; Cincinnati, Ohio; Ferrara, Italy and Frankfurt, Germany. Our Asia Pacific headquarters are in Hong Kong. We also have technical support centers in Bayreuth, Germany; Geelong, Australia; Lansing, Michigan and Tarragona, Spain. We have various sales facilities worldwide.

Depending on location and market needs, our production facilities can receive primary raw materials by pipeline, rail car, truck, barge or ocean going vessel and can deliver finished products by pipeline, rail car, truck, barge, isotank, ocean going vessel or in drums. We charter ocean going vessels, own and charter barges, and lease isotanks and own and lease rail cars for the dedicated movement of products between plants, products to customers or terminals, or raw materials to plants, as necessary. We also have barge docking facilities and related terminal equipment for loading and unloading raw materials and products.

We use extensive pipeline systems in the United States and in Europe, some of which we own and some of which we lease, that connect to our manufacturing and storage facilities. We lease liquid and bulk storage and warehouse facilities at terminals in the Americas, Europe and the Asia Pacific region. We own storage capacity for NGLs, ethylene, propylene and other hydrocarbons within a salt dome in Mont Belvieu, Texas, and operate additional ethylene and propylene storage facilities with related brine facilities on leased property in Markham, Texas.

***Website Access to SEC Reports***

Our Internet website address is <http://www.lyondellbasell.com>. Information contained on our Internet website is not part of this report on Form 10-K.

Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to these reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 are available on our website, free of charge, as soon as reasonably practicable after such reports are filed with, or furnished to, the U.S. Securities and Exchange Commission. Alternatively, you may access these reports at the SEC's website at <http://www.sec.gov>.

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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 Annual Report on Form 10-K. Each of these risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our common stock.

#### ***Economic downturns and disruptions in financial markets can adversely affect our business and results of operations.***

Our results of operations can be materially affected by adverse conditions in the financial markets and depressed economic conditions generally. Economic downturns in the businesses and geographic areas in which we sell our products substantially reduce demand for our products and result in decreased sales volumes. Recessionary environments adversely affect our business because demand for our products is reduced, particularly from our customers in industrial markets generally and the automotive and housing industries specifically.

#### ***Deteriorating sovereign debt conditions in Europe and the related euro crisis could have a material adverse effect on our business, prospects, operating results, financial condition and cash flows.***

The recent escalation of the European sovereign debt crisis has negatively impacted the capital markets in Europe and caused the value of the euro to deteriorate. These conditions have resulted in reduced consumer confidence and spending in many countries in Europe, particularly southern Europe. A significant portion of our revenues and earnings are derived from our business in Europe, including southern Europe. In addition, most of our European transactions and assets, including cash reserves and receivables, are denominated in euros.

If the European sovereign debt crisis continues or further deteriorates, there will likely be a continued negative effect on our European business, as well as the businesses of our European customers, suppliers and partners. In addition, if the crisis ultimately leads to a significant devaluation of the euro, the value of our financial assets that are denominated in euros would be significantly reduced when translated to U.S. dollars for financial reporting purposes. Any of these conditions could ultimately harm our overall business, prospects, operating results, financial condition and cash flows.

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### ***The cyclical and volatility of the industries in which we participate may cause significant fluctuations in our operating results.***

Our business operations are subject to the cyclical and volatile nature of the supply-demand balance in the chemical and refining industries. Our future operating results are expected to continue to be affected by this cyclical and volatility. The chemical and refining industries historically have experienced alternating periods of capacity shortages, causing prices and profit margins to increase, followed by periods of excess capacity, resulting in oversupply, declining capacity utilization rates and declining prices and profit margins.

In addition to changes in the supply and demand for products, changes in energy prices and other worldwide economic conditions can cause volatility. These factors result in significant fluctuations in profits and cash flow from period to period and over business cycles.

In addition, new capacity additions in Asia, the Middle East and North America may lead to periods of oversupply and lower profitability. The timing and extent of any changes to currently prevailing market conditions is uncertain and supply and demand may be unbalanced at any time. As a consequence, we are unable to accurately predict the extent or duration of future industry cycles or their effect on our business, financial condition or results of operations. We can give no assurances as to any predictions we may make with respect to the timing, extent or duration of future industry cycles.

### ***Costs and limitations on supply of raw materials and energy may result in increased operating expenses.***

The costs of raw materials and energy represent a substantial portion of our operating expenses. Energy costs generally follow price trends of crude oil and natural gas. These price trends may be highly volatile and cyclical. In the past, raw material and energy costs have experienced significant fluctuations that adversely affected our business segments' results of operations. For example, we continue to benefit from the favorable ratio of U.S. natural gas prices to crude oil prices. However, if the price of crude oil decreases relative to U.S. natural gas prices, this may have a negative result on our results of operations. Moreover, fluctuations in currency exchange rates can add to this volatility.

We are not always able to pass raw material and energy cost increases on to our customers. When we do have the ability to pass on the cost increases, we are not always able to do so quickly enough to avoid adverse impacts on our results of operations.

Cost increases for raw materials also may increase working capital needs, which could reduce our liquidity and cash flow. Even if we increase our sales prices to reflect rising raw material and energy costs, demand for products may decrease as customers reduce their consumption or use substitute products, which may have an adverse impact on our results of operations. In addition, producers in natural gas cost-advantaged regions, such as the Middle East and North America, benefit from the lower prices of natural gas and NGLs. Competition from producers in these regions may cause us to reduce exports from Europe and elsewhere. Any such reductions may increase competition for product sales within Europe and other markets, which can result in lower margins in those regions. Additionally, there are a limited number of suppliers for some of our raw materials and utilities and, in some cases, the supplies are specific to the particular geographic region in which a facility is located.

It is also common in the chemical and refining industries for a facility to have a sole, dedicated source for its utilities, such as steam, electricity and gas. Having a sole or limited number of suppliers may limit our negotiating power, particularly in the case of rising raw material costs. Any new supply agreements we enter into may not have terms as favorable as those contained in our current supply agreements.

If our raw material or utility supplies were disrupted, our businesses may incur increased costs to procure alternative supplies or incur excessive downtime, which would have a direct negative impact on plant operations. For example, hurricanes have in the past negatively affected crude oil and natural gas supplies, as well as supplies of other raw materials, utilities (such as electricity and steam), and industrial gases, contributing to increases in operating costs and, in some cases, disrupting production and causing lost profit opportunities. In addition, hurricane-related disruption of vessel, barge, rail, truck and pipeline traffic in the U.S. Gulf Coast area would negatively affect shipments of raw materials and product.

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With increased volatility in raw material costs, our suppliers could impose more onerous terms on us, resulting in shorter payment cycles and increasing our working capital requirements.

### ***We sell products in highly competitive global markets and face significant price pressures.***

We sell our products in highly competitive global markets. Due to the commodity nature of many of our products, competition in these markets is based primarily on price and, to a lesser extent, on product performance, product quality, product deliverability, reliability of supply and customer service. Generally, we are not able to protect our market position for these products by product differentiation and may not be able to pass on cost increases to our customers.

In addition, we face increased competition from companies that may have greater financial resources and different cost structures or strategic goals than us. These include large integrated oil companies (some of which also have chemical businesses), government-owned businesses, and companies that receive subsidies or other government incentives to produce certain products in a specified geographic region. Increased competition from these companies, especially in our olefin and refining businesses, could limit our ability to increase product sales prices in response to raw material and other cost increases, or could cause us to reduce product sales prices to compete effectively, which could reduce our profitability. Competitors that have greater financial resources than us may be able to invest significant capital into their businesses, including expenditures for research and development.

In addition, specialty products we produce may become commoditized over time. Increased competition could result in lower prices or lower sales volumes, which would have a negative impact on our results of operations.

### ***Our ability to source raw materials, including crude oil, may be adversely affected by political instability, civil disturbances or other governmental actions.***

We obtain a substantial portion of our principal raw materials from sources in North Africa, the Middle East, and South America that may be less politically stable than other areas in which we conduct business, such as Europe or the U.S. Political instability, civil disturbances and actions by governments in these areas are likely to substantially increase the price and decrease the supply of feedstocks necessary for our operations, which will have a material adverse effect on our results of operations.

Recently, increased incidents of civil unrest, including demonstrations which have been marked by violence, have occurred in some countries in North Africa and the Middle East. Some political regimes in these countries are threatened or have changed as a result of such unrest. Political instability and civil unrest could continue to spread in the region and involve other areas. Such unrest, if it continues to spread or grow in intensity, could lead to civil wars, regional conflict, or regime changes resulting in governments that are hostile to countries in which we conduct substantial business, such as Europe, the U.S., or their respective allies.

### ***Interruptions of operations at our facilities may result in liabilities or lower operating results.***

We own and operate large-scale facilities. Our operating results are dependent on the continued operation of our various production facilities and the ability to complete construction and maintenance projects on schedule. Interruptions at our facilities may materially reduce the productivity and profitability of a particular manufacturing facility, or our business as a whole, during and after the period of such operational difficulties. In the past, we had to shut down plants on the U.S. Gulf Coast, including the temporary shutdown of our Houston refinery, as a result of hurricanes striking the Texas coast.

In addition, because the Houston refinery is our only North American refining operation, an outage at the refinery could have a particularly negative impact on our operating results. Unlike our chemical and polymer production facilities, which may have sufficient excess capacity to mitigate the negative impact of lost production at other facilities, we do not have the ability to increase refining production elsewhere in the U.S.



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Although we take precautions to enhance the safety of our operations and minimize the risk of disruptions, our operations are subject to hazards inherent in chemical manufacturing and refining and the related storage and transportation of raw materials, products and wastes. These potential hazards include:

pipeline leaks and ruptures;

explosions;

fires;

severe weather and natural disasters;

mechanical failure;

unscheduled downtimes;

supplier disruptions;

labor shortages or other labor difficulties;

transportation interruptions;

transportation accidents;

remediation complications;

chemical and oil spills;

discharges or releases of toxic or hazardous substances or gases;

storage tank leaks;

other environmental risks; and

terrorist acts.

Some of these hazards may cause severe damage to or destruction of property and equipment and may result in suspension of operations or the shutdown of affected facilities.

***Our operations are subject to risks inherent in chemical and refining businesses, and we could be subject to liabilities for which we are not fully insured or that are not otherwise mitigated.***

We maintain property, business interruption, product, general liability, casualty and other types of insurance, including pollution and legal liability, that we believe are in accordance with customary industry practices. However, we are not fully insured against all potential hazards incident to our business, including losses resulting from natural disasters, war risks or terrorist acts. Changes in insurance market conditions have caused, and may in the future cause, premiums and deductibles for certain insurance policies to increase substantially and, in some instances, for certain insurance to become unavailable or available only for reduced amounts of coverage. If we were to incur a significant liability for which we were not fully insured, we might not be able to finance the amount of the uninsured liability on terms acceptable to us or at all, and might be obligated to divert a significant portion of our cash flow from normal business operations.

Further, because a part of our business involves licensing polyolefin process technology, our licensees are exposed to similar risks involved in the manufacture and marketing of polyolefins. Hazardous incidents involving our licensees, if they do result or are perceived to result from use of our technologies, may harm our reputation,

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threaten our relationships with other licensees and/or lead to customer attrition and financial losses. Our policy of covering these risks through contractual limitations of liability and indemnities and through insurance may not always be effective. As a result, our financial condition and results of operation would be adversely affected, and other companies with competing technologies may have the opportunity to secure a competitive advantage.

***Certain activities related to a former project raise compliance issues under U.S. law.***

We have identified an agreement related to a former project in Kazakhstan under which a payment was made that raises compliance concerns under the U.S. Foreign Corrupt Practices Act (the "FCPA"). We have engaged outside counsel to investigate these activities, under the oversight of the Audit Committee of the Supervisory Board, and to evaluate internal controls and compliance policies and procedures. We made a voluntary disclosure of these matters to the U.S. Department of Justice and are cooperating fully with that agency. We cannot predict the ultimate outcome of these matters at this time since our investigations are ongoing. In this respect, we may not have conducted business in compliance with the FCPA and may not have had policies and procedures in place adequate to ensure compliance. Therefore, we cannot reasonably estimate a range of liability for any potential penalty resulting from these matters. Violations of these laws could result in criminal and civil liabilities and other forms of penalties or sanctions that could be material to us.

***Our operations could be adversely affected by labor relations.***

The vast majority of our employees located in Europe and South America are represented by labor unions and works councils. Approximately 900 of our employees located in North America are represented by labor unions. Of the represented North American employees, approximately 50% include our employees that are subject to a collective bargaining agreement between Houston Refining LP and the United Steelworkers Union, which agreement will expire on January 31, 2015.

Our operations have been in the past, and may be in the future, significantly and adversely affected by strikes, work stoppages and other labor disputes.

***We cannot predict with certainty the extent of future costs under environmental, health and safety and other laws and regulations, and cannot guarantee they will not be material.***

We may face liability arising out of the normal course of business, including alleged personal injury or property damage due to exposure to chemicals or other hazardous substances at our current or former facilities or chemicals that we manufacture, handle or own. In addition, because our products are components of a variety of other end-use products, we, along with other members of the chemical industry, are subject to potential claims related to those end-use products. Any substantial increase in the success of these types of claims could negatively affect our operating results.

We (together with the industries in which we operate) are subject to extensive national, regional, state and local environmental laws, regulations, directives, rules and ordinances concerning

emissions to the air;

discharges onto land or surface waters or into groundwater; and

the generation, handling, storage, transportation, treatment, disposal and remediation of hazardous substances and waste materials. Many of these laws and regulations provide for substantial fines and potential criminal sanctions for violations. Some of these laws and regulations are subject to varying and conflicting interpretations. In addition, some of these laws and regulations require us to meet specific financial responsibility requirements. Any substantial liability for environmental damage could have a material adverse effect on our financial condition, results of operations and cash flows.

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Although we have compliance programs and other processes intended to ensure compliance with all such regulations, we are subject to the risk that our compliance with such regulations could be challenged. Non-compliance with certain of these regulations could result in the incurrence of additional costs, penalties or assessments that could be material.

***Our industry is subject to extensive regulation. Existing or future regulations may restrict our operations, increase our costs of operations or require us to make additional capital expenditures and failure to comply with regulations may cause us to incur significant expenses or affect our ability to operate.***

We are subject to extensive government regulation in the form of national, state and local laws and regulations. These laws and regulations govern all aspects of the operation of our facilities and the transportation and sales of our products. We generally expect that regulatory controls worldwide will become increasingly more demanding and expensive, but cannot accurately predict future developments.

In addition, we are required by various governmental and quasi-governmental agencies to obtain permits, licenses and certificates with respect to our operations. These permits and licenses are subject to renewal, modification and in some circumstances, revocation. Further, the permits and licenses are often difficult, time consuming and costly to obtain and could contain conditions that limit our operations.

Our failure to comply with regulatory requirements or obtain or maintain necessary permits, licenses and authorizations for the conduct of our business could result in fines or penalties, which may be significant. Additionally, any such failure could restrict or otherwise prohibit certain aspects of our operations, which could adversely affect our results of operations.

***We may incur substantial costs to comply with climate change legislation and regulatory initiatives.***

There has been a broad range of proposed or promulgated state, national and international laws focusing on greenhouse gas ( GHG ) reduction. These proposed or promulgated laws apply or could apply in countries where we have interests or may have interests in the future. Laws in this field continue to evolve and, while they are likely to be increasingly widespread and stringent, at this stage it is not possible to accurately estimate either a timetable for implementation or our future compliance costs relating to implementation. Within the framework of EU emissions trading, we were allocated certain allowances of carbon dioxide per year for the affected plants of our European sites for the 2005 to 2007 period. For the second trading period (2008 to 2012), a number of our plants are included in the Europe-wide trading system. We expect to incur additional costs as a result of the existing emissions trading scheme and could incur additional costs in relation to any future carbon or other greenhouse gas emission trading schemes. The costs could be higher to the extent that we decide to sell credits that we need in the future.

In the U.S., the Environmental Protection Agency (the EPA ) has promulgated federal GHG regulations under the Clean Air Act affecting certain sources. The EPA has issued mandatory GHG reporting requirements which could lead to further obligations. The recent EPA action could be a precursor to further federal regulation of carbon dioxide emissions and other greenhouse gases, and may affect the outcome of other climate change lawsuits pending in U.S. federal courts in a manner unfavorable to our industry. In any event, additional regulation is likely to be forthcoming at the U.S. federal level or the state level with respect to GHG emissions, and such regulation could result in the creation of additional costs in the form of taxes or required acquisition or trading of emission allowances.

Compliance with these or other changes in laws, regulations and obligations that create a GHG emissions trading scheme or GHG reduction policies generally could significantly increase our costs or reduce demand for products we produce. Depending on the nature of potential regulations and legislation, any future laws and regulations could result in increased compliance costs, additional operating restrictions or delays in implementing growth projects or other capital investments, and could have a material adverse effect on our business and results of operations.

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*The company's business, including its results of operations and reputation, could be adversely affected by process safety issues.*

Failure to appropriately manage safety, human health, product liability and environmental risks associated with the company's products, product life cycles and production processes could adversely impact employees, communities, stakeholders, the company's reputation and its results of operations. Public perception of the risks associated with the company's products and production processes could impact product acceptance and influence the regulatory environment in which the company operates. While the company has procedures and controls to manage process safety risks, issues could be created by events outside of its control including natural disasters, severe weather events and acts of sabotage.

*Legislation and regulatory initiatives could lead to a decrease in demand for our products.*

New or revised governmental regulations and independent studies relating to the effect of our products on health, safety and the environment may affect demand for our products and the cost of producing our products. Initiatives by governments and private interest groups will potentially require increased toxicological testing and risk assessments of a wide variety of chemicals, including chemicals used or produced by us. For example, in the United States, the National Toxicology Program (NTP) is a federal interagency program that seeks to identify and select for study chemicals and other substances to evaluate potential human health hazards. In the European Commission, REACH is regulation designed to identify the intrinsic properties of chemical substances, assess hazards and risks of the substances, and identify and implement the risk management measures to protect humans and the environment.

Assessments by the NTP, REACH or similar programs or regulations in other jurisdictions may result in heightened concerns about the chemicals we use or produce and may result in additional requirements being placed on the production, handling, labeling or use of those chemicals. Such concerns and additional requirements could also increase the cost incurred by our customers to use our chemical products and otherwise limit the use of these products, which could lead to a decrease in demand for these products. Such a decrease in demand could have an adverse impact on our business and results of operations.

*We operate internationally and are subject to exchange rate fluctuations, exchange controls, political risks and other risks relating to international operations.*

We operate internationally and are subject to the risks of doing business on a global level, including fluctuations in currency exchange rates, transportation delays and interruptions, war, terrorist activities, epidemics, pandemics, political and economic instability and disruptions, restrictions on the transfer of funds, the imposition of duties and tariffs, import and export controls, changes in governmental policies, labor unrest and current and changing regulatory environments. Recent demonstrations and popular unrest in portions of the Middle East are examples of these events.

These events could reduce the demand for our products, decrease the prices at which we can sell our products, disrupt production or other operations, require substantial capital and other costs to comply, and/or increase security costs or insurance premiums, all of which could reduce our operating results. In addition, we obtain a substantial portion of our principal raw materials from international sources that are subject to these same risks. Our compliance with applicable customs, currency exchange control regulations, transfer pricing regulations or any other laws or regulations to which we may be subject could be challenged. Furthermore, these laws may be modified, the result of which may be to prevent or limit subsidiaries from transferring cash to us.

Furthermore, we are subject to certain existing, and may be subject to possible future, laws that limit or may limit our activities while some of our competitors may not be subject to such laws, which may adversely affect our competitiveness.

In addition, we generate revenues from export sales and operations that may be denominated in currencies other than the relevant functional currency. Exchange rates between these currencies and functional currencies in recent years have fluctuated significantly and may do so in the future. Future events, which may significantly increase or

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decrease the risk of future movement in currencies in which we conduct our business, cannot be predicted. We also may hedge certain revenues and costs using derivative instruments to minimize the impact of changes in the exchange rates of those currencies compared to the respective functional currencies. It is possible that fluctuations in exchange rates will result in reduced operating results.

### ***U.S. anti-inversion rules may apply to LyondellBasell Industries N.V. resulting in adverse U.S. federal income tax consequences.***

The U.S. Internal Revenue Service is examining the Company's federal income tax returns. As part of that review, the IRS is examining whether under Section 7874 of the Internal Revenue Code LyondellBasell Industries N.V. should be treated as a U.S. corporation for U.S. federal income tax purposes. The IRS also is examining whether Section 7874 alternatively applies to certain of the Company's intercompany transactions that would result in additional U.S. federal income tax of the Company's U.S. subsidiaries. Application of Section 7874 in either instance is dependent on the value of our shares issued at emergence from bankruptcy to former creditors of our top U.S. holding company and its direct and indirect subsidiaries in exchange for their claims against those entities. It further would require a determination that the Company is not conducting substantial business activities in The Netherlands.

Treatment of LyondellBasell Industries N.V. as a U.S. corporation would result in significantly increased tax liability because our worldwide income would be subject to U.S. federal income tax. Any such increase likely would have a material adverse effect on our earnings and cashflow. Application of Section 7874 to our intercompany transactions would, for the 10-year period post emergence, result in the imposition of additional U.S. federal income tax on certain gains of our U.S. subsidiaries from those transactions. The increased taxation of those gains would negatively affect our earnings and cash flows.

No assurance can be given that the IRS will not determine that Section 7874 is applicable to us. Further, there can be no assurances that any such position taken by the IRS would not be sustained.

### ***Significant changes in pension fund investment performance or assumptions relating to pension costs may adversely affect the valuation of pension obligations, the funded status of pension plans, and our pension cost.***

Our pension cost is materially affected by the discount rate used to measure pension obligations, the level of plan assets available to fund those obligations at the measurement date and the expected long-term rate of return on plan assets. Significant changes in investment performance or a change in the portfolio mix of invested assets may result in corresponding increases and decreases in the valuation of plan assets, particularly equity securities, or in a change of the expected rate of return on plan assets. Any change in key actuarial assumptions, such as the discount rate, would impact the valuation of pension obligations, affecting the reported funded status of our pension plans as well as the net periodic pension cost in the following fiscal years.

Certain of our current pension plans have projected benefit obligations that exceed the fair value of the plan assets. As of December 31, 2011, the aggregate deficit was \$1,079 million. Any declines in the fair values of the pension plans assets could require additional payments by us in order to maintain specified funding levels.

Our pension plans are subject to legislative and regulatory requirements of applicable jurisdictions, which could include, under certain circumstances, local governmental authority to terminate the plan.

### ***We may be required to record material charges against our earnings due to any number of events that could cause impairments to our assets.***

We may be required to reduce production at or idle facilities for extended periods of time or exit certain businesses as a result of the cyclical nature of our industry. Specifically, oversupplies of or lack of demand for particular products or high raw material prices may cause us to reduce production. We may choose to reduce production at certain facilities because we have off-take arrangements at other facilities, which make any reductions or idling unavailable at those facilities. Any decision to permanently close facilities or exit a business likely would result in impairment and other charges to earnings.

Temporary outages at our facilities can last for several quarters and sometimes longer. These outages could cause us to incur significant costs, including the expenses of maintaining and restarting these facilities. In addition, even though we may reduce production at facilities, we may be required to continue to purchase or pay for utilities or raw materials under take-or-pay supply agreements.

### ***Many of our businesses depend on our intellectual property. Our future success will depend in part on our ability to protect our intellectual property rights, and our inability to do so could reduce our ability to maintain our competitiveness and margins.***

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We have a significant worldwide patent portfolio of issued and pending patents. These patents, together with proprietary technical know-how, are significant to our competitive position, particularly with regard to PO, performance chemicals, petrochemicals, and polymers, including process technologies such as *Spheripol*, *Spherizone*, *Hostalen*, *Spherilene*, *Lupotech T* and *Avant* catalyst family technology rights. We rely on the patent, copyright and trade secret laws of the countries in which we operate to protect our investment in research and development, manufacturing and marketing. However, we may be unable to prevent third parties from using our intellectual property without authorization. Proceedings to protect these rights could be costly, and we may not prevail.

The protection afforded by patents varies from country to country and depends upon the type of patent and its scope of coverage. While a presumption of validity exists with respect to patents issued to us, our patents may be challenged, invalidated, circumvented or rendered unenforceable. As patents expire, the products and processes described and claimed under those patents become generally available for use by competitors.

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Our continued growth strategy may bring us to regions of the world where intellectual property protection may be limited and difficult to enforce. In addition, patent rights may not prevent our competitors from developing, using or selling products that are similar or functionally equivalent to our products. Moreover, our competitors or other third parties may obtain patents that restrict or preclude our ability to lawfully produce or sell our products in a competitive manner, which could result in significantly lower revenues, reduced profit margins or loss of market share.

We also rely upon unpatented proprietary know-how and continuing technological innovation and other trade secrets to develop and maintain our competitive position. While it is our policy to enter into confidentiality agreements with our employees and third parties to protect our intellectual property, these confidentiality agreements may be breached, may not provide meaningful protection or adequate remedies may not be available. Additionally, others could obtain knowledge of our trade secrets through independent development or other access by legal or illegal means.

The failure of our patents or confidentiality agreements to protect our processes, apparatuses, technology, trade secrets or proprietary know-how could result in significantly lower revenues, reduced profit margins and cash flows and/or loss of market share. We also may be subject to claims that our technology, patents or other intellectual property infringes on a third party's intellectual property rights. Unfavorable resolution of these claims could result in restrictions on our ability to deliver the related service or in a settlement that could be material to us.

***We may not be able to fully or successfully implement our ongoing plans to improve and globally integrate our business processes and functions.***

We continue to seek ways to drive greater productivity, flexibility and cost savings. In particular, we are working towards the improvement and global integration of our business processes and functions. As part of these efforts, we have been centralizing certain functions, implementing new information technology, and integrating our existing information technology systems.

Our ongoing implementation of organizational improvements is made more difficult by our need to coordinate geographically dispersed operations. Inabilities and delays in implementing improvements can negatively affect our ability to realize projected or expected cost savings. In addition, the process of organizational improvements may cause interruptions of, or loss of momentum in, the activities of our businesses. It may also result in the loss of personnel or other labor issues. These issues, as well as any information technology systems failures, also could impede our ability to timely collect and report financial results in accordance with applicable laws and regulations.

Additionally, from time to time certain aspects of our business processes may be outsourced to third parties. The processes, or the portions thereof, that are outsourced generally will tend to be labor intensive transactional activities such as processing invoices for account payable transactions. Although we make a diligent effort to ensure that all providers of outsourced services observe proper internal control practices and procedures, we cannot assure that failures will not occur. The failure of such third parties to provide adequate services could adversely affect our results of operations, liquidity, or our ability to provide adequate financial and management reporting.

***Increased IT security threats and more sophisticated and targeted computer crime could pose a risk to our systems, networks, products, facilities and services.***

Increased global IT security threats and more sophisticated and targeted computer crime pose a risk to the security of our systems and networks and the confidentiality, availability and integrity of our data. While we attempt to mitigate these risks by employing a number of measures, including employee training, comprehensive monitoring of our networks and systems, and maintenance of backup and protective systems, our systems, networks, products, facilities and services remain potentially vulnerable to advanced persistent threats. Depending on their nature and scope, such threats could potentially lead to the compromising of confidential information, improper use of our systems and networks, manipulation and destruction of data, defective products, production downtimes and operational disruptions, which in turn could adversely affect our reputation, competitiveness and results of operations.



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### ***Shared control or lack of control of joint ventures may delay decisions or actions regarding the joint ventures.***

A portion of our operations are conducted through joint ventures, where control may be exercised by or shared with unaffiliated third parties. We cannot control the actions of our joint venture partners, including any nonperformance, default or bankruptcy of joint venture partners. The joint ventures that we do not control may also lack adequate internal controls systems or financial reporting systems to provide adequate and timely information for our reporting purposes.

In the event that any of our joint venture partners do not observe their obligations, it is possible that the affected joint venture would not be able to operate in accordance with our business plans. As a result, we could be required to increase our level of commitment in order to give effect to such plans. Differences in views among the joint venture participants also may result in delayed decisions or in failures to agree on major matters, potentially adversely affecting the business and operations of the joint ventures and in turn our business and operations .

### ***Our capital requirements could limit or cause us to change our growth and development plans.***

At December 31, 2011, we have approximately \$4.0 billion of total consolidated debt. Our debt and the limitations imposed on us by our financing arrangements could:

require us to dedicate a substantial portion, or all, of our cash flow from operations to payments of principal and interest on our debt;

make us more vulnerable during downturns, which could limit our ability to take advantage of significant business opportunities and react to changes in our business and in market or industry conditions; and

put us at a competitive disadvantage relative to competitors that have less debt.

If our cash flow from operations and capital resources were reduced, we may be forced to reduce or delay investments and capital expenditures or other planned uses of our cash due to our substantial debt service obligations. We could choose to sell assets, seek additional capital or restructure or refinance our indebtedness, but there can be no assurances that we would be able to do so on terms we deem acceptable, if at all. Additionally, our debt instruments may limit our ability to effect such actions.

Our debt or other financing arrangements contain a number of restrictive covenants that impose operating and financial restrictions on us. There also is a minimum fixed charge coverage ratio contained in our U.S. ABL facility that is applicable if availability under the facility falls below certain levels. We currently are in compliance with all of our restrictive and financial covenants; however, the ability to meet financial requirements can be affected by events beyond our control and, over time, these covenants may not be satisfied.

A breach of covenants of or the failure to pay principal and interest when due under our debt or other financing could result in a default or cross-default under all or some of those instruments. Any such default could result in an acceleration of all amounts outstanding under all facilities, and could relieve counterparties of their obligations to fund or otherwise make advances. Without waivers from the parties to our financing arrangements, any such default would have a material adverse effect on our ability to continue to operate.

### ***A substantial portion of our shares are owned by a few persons, and their interests in LyondellBasell Industries N.V. may conflict with other stakeholders' interests.***

As of February 24, 2012, two of our shareholders collectively own approximately 44% of our outstanding ordinary shares. Under Dutch law, there are no quorum requirements for shareholder voting and most matters are approved or adopted by a majority of votes cast. As a result, as long as these shareholders or any other substantial shareholder own, directly or indirectly, a substantial portion of our outstanding shares, they will be able to significantly influence all matters requiring shareholder approval, including amendments to our Articles of Association, the election of directors, significant corporate transactions, dividend payments and other matters. These shareholders may have interests that conflict with other stakeholders, including holders of our notes, and actions may be taken that other stakeholders do not view as beneficial.

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Additionally, these shareholders are party to nomination agreements that entitle each of the shareholders to cause our Supervisory Board to nominate for election members to our Supervisory Board for so long as the shareholder owns specified percentages of our ordinary shares.

*Our success depends upon our ability to attract and retain key employees and the identification and development of talent to succeed senior management.*

Our success depends on our ability to attract and retain key personnel, and we rely heavily on our management team. The inability to recruit and retain key personnel or the unexpected loss of key personnel may adversely affect our operations. In addition, because of the reliance on our management team, our future success depends in part on our ability to identify and develop talent to succeed senior management. The retention of key personnel and appropriate senior management succession planning will continue to be critically important to the successful implementation of our strategies.

**Item 1B. Unresolved Staff Comments.**

None.

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### **Item 3. Legal Proceedings. Bankruptcy Proceedings**

On January 6, 2009, certain of LyondellBasell AF's indirect U.S. subsidiaries, including Lyondell Chemical, and its German indirect subsidiary, Basell Germany Holdings GmbH, voluntarily filed for protection under Chapter 11 in the Bankruptcy Court. In April and May of 2009, LyondellBasell AF and certain other subsidiaries filed voluntary petitions for relief under chapter 11 in the Bankruptcy Court. The Bankruptcy Cases were filed in response to a sudden loss of liquidity in the last quarter of 2008. The debtors operated their businesses and managed their properties as debtors in possession during the Bankruptcy Cases. In general, this means that the Debtors operated in the ordinary course without Bankruptcy Court intervention. Bankruptcy Court approval was required, however, where the debtors sought authorization to engage in certain transactions not in the ordinary course of business.

We emerged from bankruptcy on April 30, 2010. As of that date, all assets of the debtor entities vested in the reorganized debtor entities free and clear of all claims, liens, encumbrances, charges, and other interests, except as provided in the Plan of Reorganization or the confirmation order entered on April 23, 2010 (the Confirmation Order). Except as otherwise expressly provided in the Plan of Reorganization or in the Confirmation Order, on April 30, 2010, each holder of a claim or equity interest is deemed to have forever waived, released, and discharged the debtor entities and the reorganized debtor entities, to the fullest extent permitted by law, of and from any and all claims, equity interests, rights, and liabilities that arose prior to the confirmation date.

### **Environmental Matters**

From time to time we and our joint ventures receive notices or inquiries from federal, state or local governmental entities regarding alleged violations of environmental laws and regulations pertaining to, among other things, the disposal, emission and storage of chemical and petroleum substances, including hazardous wastes. Item 103 of the SEC's Regulation S-K requires disclosure of certain environmental matters when a governmental authority is a party to the proceedings and the proceedings involve potential monetary sanctions that we reasonably believe could exceed \$100,000. There were no such matters pending as of December 31, 2011.

### **Litigation and Other Matters**

Information regarding our litigation and other legal proceedings can be found under the Litigation and Other Matters section of Note 18, *Commitments and Contingencies*, to the Consolidated Financial Statements.

### **Item 4. Mine Safety Disclosures. Not applicable.**

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

Our shares were listed on the NYSE on October 14, 2010 under the symbol LYB. Prior to that time, they were quoted in the Pink OTC Markets, Inc. (the Pink Sheets) under the symbol LALLF. There was no trading market for our shares prior to April 30, 2010. The high and low sales prices for our ordinary shares since they were issued are shown in the table below.

	High	Low
<b><u>2010</u></b>		
April 30 – June 30, 2010	\$ 23.25	\$ 16.15
Third Quarter 2010	\$ 23.95	\$ 14.86
Fourth Quarter 2010	\$ 34.54	\$ 23.71
<b><u>2011</u></b>		
First Quarter 2011	\$ 41.12	\$ 33.57
Second Quarter 2011	\$ 48.12	\$ 35.84
Third Quarter 2011	\$ 41.93	\$ 24.41
Fourth Quarter 2011	\$ 36.96	\$ 22.90
<b><u>2012</u></b>		
January 1 – February 24, 2012	\$ 46.39	\$ 32.39

 **Holders**

As of February 24, 2012, there were approximately 3,700 record holders of our shares, including Cede & Co. as nominee of the Depository Trust Company.

 **Dividends**

The Company paid a final dividend of \$0.10 per share for the fiscal year 2010 on May 26, 2011. The Company paid interim dividends of \$0.20 per share on September 7, 2011 and \$0.25 per share on December 16, 2011. The Company paid a special dividend of \$4.50 per share on December 16, 2011. The payment of dividends or distributions in the future will be subject to the requirements of Dutch law and the discretion of our shareholders (in the case of annual dividends), our Management Board and Supervisory Board. The declaration of any future cash dividends and, if declared, the amount of any such dividends, will depend upon general business conditions, our financial condition, our earnings and cash flow, our capital requirements, financial covenants and other contractual restrictions on the payment of dividends or distributions.

There can be no assurance that any dividends or distributions will be declared or paid in the future.

 **Dutch Tax Considerations**

We are a public company with limited liability (*naamloze vennootschap*) incorporated under Dutch law. In general, we must withhold tax (dividend tax) from dividends distributed on our ordinary shares at the rate of 15%. Dividends include, without limitation:

distributions of profits (including paid-in capital not recognized for dividend tax purposes) in cash or in kind, including deemed and constructive dividends;

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liquidation distributions and, generally, proceeds realized upon a repurchase of our ordinary shares or upon the transfer of our ordinary shares to our direct or indirect subsidiary, in excess of the average paid-in capital recognized for dividend tax purposes;

the par value of ordinary shares issued or any increase in the par value of ordinary shares, except where such increase in the par value of ordinary shares is funded out of our paid-in capital recognized for dividend tax purposes; and

repayments of paid-in capital recognized for dividend tax purposes up to the amount of our profits (zuivere winst) unless our general meeting of shareholders has resolved in advance that we shall make such repayments and the par value of the ordinary shares concerned has been reduced by a corresponding amount through an amendment of our articles of association.

A holder of ordinary shares which is, is deemed to be, or, in case the holder is an individual, has elected to be treated as, resident in The Netherlands for the relevant tax purposes is generally entitled to credit the dividend tax withheld against such holder's tax liability on income and capital gains or, in certain cases, to apply for a full refund of the dividend tax withheld.

A holder of ordinary shares which is not, is not deemed to be, and, in case the holder is an individual, has not elected to be treated as, resident in The Netherlands for the relevant tax purposes may be eligible for a partial or full exemption or refund of the dividend tax under an income tax convention in effect between The Netherlands and the holder's country of residence or under Dutch domestic rules. Moreover, Dutch resident entities benefitting from the participation exemption with respect to our ordinary shares may be eligible for a full exemption of dividend tax.

Dividend distributions to a U.S. holder of our ordinary shares (with an interest of less than 10 percent of the voting rights in our company) are subject to 15 percent dividend withholding tax, which is equal to the rate such U.S. holder may be entitled to under the current income tax treaty between the Netherlands and the United States (the Treaty). As such, there is no need to claim a refund of the excess of the amount withheld over the Treaty rate.

Under the Treaty, dividends paid by us to certain U.S. corporate shareholders holding directly at least 10% of the voting rights in our company are generally eligible for a reduction of the 15% withholding tax to 5%. Under certain circumstances and subject to various conditions, the Treaty provides for a full exemption or refund from dividend tax. Dividends received by exempt pension organizations and exempt organizations, as defined in the Treaty, may also be entitled to a full exemption or refund from dividend tax.

Under the terms of domestic anti-dividend stripping rules, a recipient of dividends distributed on our ordinary shares will not be entitled to an exemption from, reduction, refund, or credit of dividend tax if the recipient is not the beneficial owner of such dividends within the meaning of such rules.

Generally, any payments of interest and principal by us on debt can be made free of withholding or deduction for any taxes imposed, levied, withheld or assessed by The Netherlands or any political subdivision or taxing authority thereof or therein.

The issuance or transfer of our ordinary shares, and payments made with respect to our ordinary shares, will not be subject to value added tax in The Netherlands.

The subscription, issue, placement, allotment, delivery, transfer or execution of ordinary shares will not be subject to registration tax, capital tax, customs duty, transfer tax, stamp duty, or any other similar tax or duty in The Netherlands.

**Table of Contents****Performance Graph**

The graph below shows the relative investment performance of LyondellBasell Industries N.V. shares, the S&P 500 Index and the S&P 500 Chemicals Index since April 30, 2010, the first date on which we had issued capital as a publicly traded company. The graph assumes that \$100 was invested on April 30, 2010 and any dividends paid were reinvested at the date of payment. The graph is presented pursuant to SEC rules and is not meant to be an indication of our future performance.

Company / Index	Quarter Ending							
	4/30/10	6/30/10	9/30/10	12/31/10	3/31/11	6/30/11	9/30/11	12/31/11
<b>LyondellBasell Industries N.V.</b>	100	72.42	107.17	154.26	177.35	173.13	110.44	168.22
<b>S&amp;P 500 Index</b>	100	87.20	97.05	107.49	113.85	113.96	98.16	109.76
<b>S&amp;P 500 Chemicals Index</b>	100	83.42	99.91	117.58	125.93	128.20	99.73	116.10

**Item 6. SELECTED FINANCIAL DATA**

See Management's Discussion and Analysis of Financial Condition and Results of Operations for a discussion of factors that will enhance an understanding of this data.

The following selected financial data of the Company and its predecessor, LyondellBasell AF, should be read in conjunction with the Consolidated Financial Statements and related notes thereto and Management's Discussion and Analysis of Financial Condition and Results of Operations, below. The selected financial data of the Company and the Predecessor were derived from their consolidated financial statements. Those financial statements were prepared from the books and records of LyondellBasell AF for periods through April 30, 2010 and of the Company upon emergence from bankruptcy after that date. As discussed elsewhere in this annual report on Form 10-K, we became the successor parent holding company of the subsidiaries of LyondellBasell AF and the reporting entity upon completion of the bankruptcy proceedings. Financial information is reported for the Company as the successor

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on a basis different from financial information of the predecessor, LyondellBasell AF. As a result of the application of fresh-start accounting and restructuring activities pursuant to the Plan of Reorganization, the Successor period is not comparable to the Predecessor period.

	Successor			Predecessor		
	For the Year Ended	May 1 through December 31,	January 1 through April 30,	For the Year Ended December 31,		
	2011	2010	2010	2009	2008	2007 (a)
<b>In millions of dollars</b>						
<b>Results of Operations Data:</b>						
Sales and other operating revenues	\$ 51,035	\$ 27,684	\$ 13,467	\$ 30,828	\$ 50,706	\$ 17,120
Operating income (loss) <sup>(b)</sup>	3,998	2,254	690	317	(5,928)	934
Interest expense	(1,044)	(545)	(713)	(1,795)	(2,476)	(353)
Income (loss) from equity investments <sup>(c)</sup>	216	86	84	(181)	38	162
Income (loss) from continuing operations <sup>(d)</sup>	2,140	1,516	8,504	(2,871)	(7,343)	661
Earnings per share from continuing operations:						
Basic	3.76	2.68				
Diluted	3.74	2.67				
Income from discontinued operations, net of tax		64			15	
Earnings per share from discontinued operations:						
Basic		0.11				
Diluted		0.11				
<b>Balance Sheet Data:</b>						
Total assets	22,839	25,302		27,761	28,651	39,728
Short-term debt	48	42		6,182	774	2,415
Long-term debt <sup>(e)</sup>	3,984	6,040		802	23,195	22,000
Cash and cash equivalents	1,065	4,222		558	858	560
Accounts receivable	3,778	3,747		3,287	2,585	4,165
Inventories	5,499	4,824		3,277	3,314	5,178
Working capital	5,863	5,810		4,436	3,237	5,019
Liabilities subject to compromise				22,494		
<b>Cash Flow Data:</b>						
Cash provided by (used in):						
Operating activities	2,869	2,968	(925)	(787)	1,090	1,180
Investing activities	(1,021)	(323)	(224)	(611)	(1,884)	(11,899)
Expenditures for property, plant and equipment	(1,050)	(466)	(226)	(779)	(1,000)	(411)
Financing activities	(4,964)	(1,194)	3,315	1,101	1,083	10,416

(a) Results of operations and cash flow data reflect the acquisition of Lyondell Chemical from December 21, 2007. Balance sheet data include Lyondell Chemical balances as of December 31, 2007.

(b) Operating income for the year ended December 31, 2011 includes charges of \$136 million primarily reflecting the estimated cost related to the cessation of operations at the Berre refinery. Operating income for 2011 also includes corporate restructuring charges of \$93 million and impairment charges of \$52 million relating to capital expenditures at the Berre refinery and certain in-process research and design projects. Operating income for the eight months ended 2010 includes lower of cost or market charges of \$42 million to adjust the value of inventory to market value, a charge of \$64 million related to a dispute over an environmental liability and impairments of \$28 million primarily related to impairment of capital expenditures at the Berre refinery. Operating income for the year ended December 31, 2009 includes charges of \$56 million primarily for impairment of the carrying value of surplus emission allowances related to highly-reactive volatile organic compounds and non-U.S. emission rights, lower of cost or market charges of \$127 million to adjust the value of inventory to market value and an adjustment that increased operating income by \$65 million related to overstatement of goodwill impairment in 2008. The operating loss for the year ended December 31, 2008 includes charges of \$4,982 million for the





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impairment of goodwill, a charge of \$218 million for impairment of the full carrying value of the Berre refinery and lower of cost or market charges of \$1,256 million to adjust the value of inventory to market value. Operating income for the year ended December 31, 2007 includes charges of \$95 million related to the in-process research and development acquired in the acquisition of Lyondell Chemical, and \$20 million related to asset impairments of the carrying value of a plant in Canada and capitalized engineering costs for a new polymers plant in Germany.

- (c) Loss from equity investments for the year ended December 31, 2009 includes pre-tax charges of \$228 million for impairment of the carrying value of our investments in certain joint ventures.
  
- (d) Income from continuing operations for the year ended December 31, 2011 includes after-tax premiums and charges on early repayment of debt of \$279 million and after-tax charges of \$136 million primarily reflecting the estimated cost related to the cessation of operations at the Berre refinery. In addition, income from continuing operations in 2011 includes after-tax corporate restructuring charges of \$77 million, after-tax impairment charges of \$46 million relating to capital expenditures at the Berre refinery and certain in-process research and design projects, after-tax fair value adjustments related to our warrants of a negative \$37 million, partially offset by a \$26 million after-tax gain on the sale of surplus precious metals. Income from continuing operations for the eight months ended December 31, 2010 included an after-tax charge of \$15 million related to reorganization items and after-tax fair value adjustments related to our warrants of a negative \$114 million. The four months ended April 30, 2010 included after-tax income of \$8,640 million related to reorganization items. Loss from continuing operations for the year ended December 31, 2009 included after-tax charges of \$1,925 million related to reorganization items, \$11 million for impairments of goodwill and other assets and \$228 million for the impairment of the carrying value of our investments in certain joint ventures, partially offset by \$78 million of involuntary conversion gains related to insurance proceeds for damages sustained in 2005 at a polymers plant in Münchsmünster, Germany. Loss from continuing operations for the year ended December 31, 2008 included after-tax charges of \$4,982 million related to the impairment of goodwill, \$816 million to adjust the value of inventory to market value and \$146 million, primarily for impairment of the carrying value of the Berre Refinery, all of which were partially offset by \$51 million of involuntary conversion gains related to insurance proceeds for damages sustained at the Münchsmünster polymers plant. Income from continuing operations for the year ended December 31, 2007 included after-tax benefits of \$130 million from the \$200 million break-up fee related to a proposed merger with the Huntsman group, partially offset by after tax-charges of \$95 million related to the in-process research and development acquired in the acquisition of Lyondell Chemical, and \$13 million related to asset impairments of the carrying value of a plant in Canada and capitalized engineering costs for a new polymers plant in Germany.
  
- (e) Includes current maturities of long-term debt.

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

This discussion should be read in conjunction with the information contained in our Consolidated Financial Statements, and the notes thereto contained elsewhere in this report. When we use the terms we, us, our or similar words in this discussion, unless the context otherwise requires, we are referring to LyondellBasell Industries N.V. and its consolidated subsidiaries. We also refer to the Company as LyondellBasell N.V., the Successor Company and the Successor.

In addition to comparisons of current operating results with the same period in the prior year, we have included, as additional disclosure, certain trailing quarter comparisons of fourth quarter 2011 operating results to third quarter 2011 operating results. Our businesses are highly cyclical, in addition to experiencing some less significant seasonal effects. Trailing quarter comparisons may offer important insight into current business direction.

References to industry benchmark prices or costs, including the weighted average cost of ethylene production, are generally to industry prices and costs reported by CMAI, except that references to industry benchmarks for refining and oxyfuels market margins are to industry prices reported by Platts, a reporting service of The McGraw-Hill Companies and crude oil and natural gas benchmark price references are to Bloomberg.

**OVERVIEW**

Our performance is driven by, among other things, global economic conditions generally and their impact on demand for our products, raw material and energy prices, and industry-specific issues, such as production capacity. Our businesses are subject to the cyclicity and volatility seen in the chemicals and refining industries generally.

LyondellBasell N.V., the successor holding company, owns and operates, directly and indirectly, substantially the same business owned and operated by LyondellBasell AF prior to the Company's emergence from bankruptcy. For accounting purposes, the operations of LyondellBasell AF are deemed to have ceased on April 30, 2010 and LyondellBasell N.V. is deemed to have begun operations on that date. Effective May 1, 2010, we adopted fresh-start accounting. References in the following discussions to the Company for periods prior to April 30, 2010, the Emergence Date, are to the Predecessor Company and, for periods after the Emergence Date, to the Successor Company.

To ensure a proper analysis of the year over year results, the effects of fresh-start accounting on the Successor period are specifically addressed throughout this discussion. The primary impacts of our reorganization pursuant to the Plan of Reorganization and the adoption of fresh-start accounting on our results of operations are as follows:

*Tax Impact of Reorganization* The application of the tax provisions of the Internal Revenue Code to the Plan of Reorganization resulted in the reduction or elimination of the majority of our tax attributes that otherwise would have carried forward into 2011 and later years. As a result, we did not retain any U.S. net operating loss carryforwards, alternative minimum tax credits or capital loss carryforwards after 2010. In addition, a significant portion of our tax basis in depreciable assets was eliminated. Accordingly we estimate our cash tax liabilities for the years following 2010 will be relatively higher than in 2009 or 2010. As a result of certain prior year limitations on the deductibility of our interest expense in the U.S., we retained approximately \$2,500 million of interest carryforwards which are available to offset future taxable income, subject to certain limitations.

*Inventory* We adopted the last in, first out ( LIFO ) method of accounting for inventory upon implementation of fresh-start accounting. Prior to the emergence from bankruptcy, LyondellBasell AF used both the first in, first out ( FIFO ) and LIFO methods of accounting to determine inventory cost. For purposes of evaluating segment results, management reviewed operating results for LyondellBasell AF that were determined using current cost, which approximates results using the LIFO method of accounting for inventory. Subsequent to the Emergence Date, our

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operating results are reviewed using the LIFO method of accounting for inventory. While determining the impact of the adoption of LIFO on predecessor periods is not practicable, we believe that the current cost method used by the Predecessor for segment reporting is similar to LIFO and the current cost method would have resulted in a decrease of cost of sales of \$29 million and \$199 million for the twelve months ended December 31, 2009 and four months ended April 30, 2010, respectively.

In addition, on April 30, 2010, pursuant to ASC Topic 852, *Reorganizations*, we recorded inventory at fair value. The increase in inventory of \$1,297 million was primarily in the U.S. and was largely driven by the price of crude oil. In the 2010 Successor period, lower market prices, primarily for polypropylene, resulted in a \$42 million lower of cost or market charge to adjust the value of our finished goods inventory to market. The effect of this adjustment to the value of our inventory is reflected in cost of sales for the 2010 Successor period.

*Depreciation and amortization expense* Depreciation and amortization expense is lower in the Successor periods as a result of our revaluation of assets for fresh-start accounting. For additional information on the revaluation of assets, see Note 23 to the Consolidated Financial Statements. Depreciation and amortization as reported for all periods presented is as follows:

Millions of dollars	Successor		Predecessor	
	For the Year Ended December 31, 2011	May 1 through December 31, 2010	January 1 through April 30, 2010	For the Year Ended December 31, 2009
<b>Cost of sales:</b>				
Depreciation	\$ 718	\$ 394	\$ 464	\$ 1,412
Amortization	170	142	75	293
<b>Research and development expenses:</b>				
Depreciation	21	11	8	24
<b>Selling, general and administrative expenses:</b>				
Depreciation	22	11	18	45
	\$ 931	\$ 558	\$ 565	\$ 1,774

*Interest expense* Lower interest expense in the 2010 Successor period was largely driven by the discharge or repayment of debt, upon which interest was accruing during the bankruptcy, through the Company's reorganization on April 30, 2010 pursuant to the Plan of Reorganization, partially offset by interest expense on the new debt incurred as part of the emergence from bankruptcy. Interest expense in 2011, which was lower compared to the combined 2010 Successor and Predecessor periods, reflects the repayment of \$4,288 million principal amount of debt since the beginning of the fourth quarter 2010. This benefit was partially offset by the premiums and other costs associated with the prepayments as well as interest expense on the Senior 6% Notes issued in November 2011.

Millions of dollars	Successor		Predecessor	
	For the Year Ended December 31, 2011	May 1 through December 31, 2010	January 1 through April 30, 2010	For the Year Ended December 31, 2009
Interest expense	\$ 1,044	\$ 545	\$ 713	\$ 1,795

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*Foreign Currency Translations of Non-U.S. Denominated Financial Statements* In countries outside of the United States, we generally generate revenues and incur operating expenses denominated in local currencies. The predominant local currency of our operations outside of the United States is the Euro. The gains and losses that result from the process of translating foreign functional currency financial statements to U.S. dollars are included in Other Comprehensive Income (loss) in Stockholders' Equity. These translation adjustments may be significant in any given period, based on the fluctuations of the Euro relative to the U.S. Dollar. A decrease in the value of the U.S. dollar relative to the euro in 2011 resulted in a loss of \$237 million. The net loss, which is reflected in the \$237 million loss in Other Comprehensive Income on the Consolidated Statement of Stockholders' Equity at December 31, 2011, represents a net decrease in Comprehensive Income during 2011.

## **Overview of Results of Operations**

**2011 Versus 2010** Business conditions in 2011 were improved over 2010 despite a significant economic slowdown, particularly in Europe, in the fourth quarter 2011. Underlying business fundamentals in 2011 were similar to those experienced in 2010, including the low price of natural gas in North America relative to the global price of crude oil. In 2011, lower prices for natural gas-based liquid feedstocks, particularly ethane, relative to the prices of crude-oil based feedstocks, provided an advantage for producers with the capability to shift the raw material ratio between these raw material groups. Also in 2011, in an otherwise weak market, Gulf Coast refiners of heavy crude oil benefited from discounts on the price of heavy crude oil.

Although results were impacted by an economic slowdown in the fourth quarter, overall results for 2011 were strong in most of our businesses. The O&P Americas segment benefited from strong margins for ethylene and ethylene co-products. Amid growing economic uncertainty in Europe, continued strong results for our differentiated PP compounding products coupled with earnings from our joint ventures enabled our O&P EAI segment to maintain results at the 2010 level. I&D segment results were bolstered by strong product margins across most businesses, particularly BDO, EO and derivatives and acetyls, reflecting improved automotive and durable goods demand. The Refining and Oxyfuels segment results were higher primarily due to higher refining margins and higher crude processing rates at the Houston refinery and higher oxyfuels margins, which more than offset fourth quarter 2011 charges related to the suspension of operations at the Berre refinery and significantly lower fourth quarter refining margins. Results for our Technology segment were comparable in 2011 and 2010 as lower revenue recognized in 2011 from process licenses issued in prior years and higher R&D costs offset the effects of higher operating results for catalysts.

**2010 Versus 2009** Global market conditions in 2010 improved from the weak conditions experienced throughout most of 2009 as demand in the durable goods sector, particularly the automotive markets, was higher than in 2009. As a result, demand and operating rates were higher in 2010 than in 2009. In addition, certain of our business segments benefited from planned and unplanned competitor operating disruptions, particularly during the second quarter 2010.

Excluding the impacts of fresh-start accounting discussed above, operating results in 2010 generally reflected higher product margins and higher sales volumes compared to 2009. Reliable operations and the effect of industry supply disruptions resulted in higher product margins and higher sales volumes in the O&P-Americas segment. Higher operating results in the O&P-EAI and the I&D businesses were primarily a reflection of higher sales volumes and higher product margins due to improvement in the durable goods markets, especially the automotive market. The Refining and Oxyfuels segment results were higher in 2010 primarily due to higher refining margins at the Houston refinery. Lower licensing revenue contributed to lower results in the Technology segment.

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Results of operations for the Successor and Predecessor periods discussed in these Results of Operations are presented in the table below.

Millions of dollars	Successor		Predecessor	
	For the Year Ended December 31, 2011	May 1 through December 31, 2010	January 1 through April 30, 2010	For the Year Ended December 31, 2009
Sales and other operating revenues	\$ 51,035	\$ 27,684	\$ 13,467	\$ 30,828
Cost of sales	45,913	24,767	12,414	29,516
Selling, general and administrative expenses	928	564	308	850
Research and development expenses	196	99	55	145
Operating income	3,998	2,254	690	317
Interest expense	(1,044)	(545)	(713)	(1,795)
Interest income	38	17	5	18
Other income (expense), net	25	(103)	(265)	320
Income (loss) from equity investments	216	86	84	(181)
Reorganization items	(45)	(23)	7,388	(2,961)
Provision for (benefit from) income taxes	1,048	170	(1,315)	(1,411)
Income from discontinued operations, net of tax		64		
Net income (loss)	\$ 2,140	\$ 1,580	\$ 8,504	\$ (2,871)

Segment operating results discussed below are reviewed for the Successor period using the LIFO method of accounting for inventory and were reviewed for the Predecessor periods on a current cost basis.

**RESULTS OF OPERATIONS**

**Revenues** We had revenues of \$51,035 million in 2011, \$41,151 million in 2010 and \$30,828 million in 2009. Revenues increased \$9,884 million, or 24%, in 2011 compared to 2010. Higher average sales prices, which reflect higher raw material costs, improved supply/demand fundamentals in the O&P-Americas and I&D segments and higher refining margins at our Houston refinery were responsible for a 20% increase in revenues. The effect of higher sales volumes, primarily at the Houston refinery, was responsible for a 4% increase in revenues.

Revenues in 2010 increased \$10,323, or 33%, compared to 2009. Higher average product sales prices were responsible for nearly all of the 33% revenue increase in 2010. A slight 1% increase in revenues resulting from the effect of higher sales volumes in 2010 compared to 2009 was mostly offset by lower licensing revenue in the Technology segment. Higher crude-oil and natural gas prices also contributed to the increase in average sales prices in 2010.

**Cost of Sales** Cost of sales were \$45,913 million in 2011, \$37,181 million in 2010 and \$29,516 million in 2009. The \$8,732 million increase in cost of sales in 2011 was primarily due to higher raw material costs, which reflect the effects of higher prices for crude oil and other hydrocarbons compared to 2010. Cost of sales for 2011 includes charges totaling \$191 million, primarily relating to the estimated cost of a social plan associated with the suspension of operations at our Berre refinery, impairments of assets, and increases in environmental liabilities and asset retirement obligations. These charges were partially offset by a benefit from \$187 million of lower depreciation and amortization in 2011 compared to 2010, primarily due to the \$7,474 million write-down of Property, Plant and Equipment associated with the April 2010 revaluation of our assets in fresh-start accounting. The 2010 Successor period included a \$64 million non-cash charge as a change in estimate related to a dispute that arose during the third quarter 2010 over an environmental liability.

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The \$7,665 million increase in cost of sales in 2010, compared to 2009, was primarily due to higher raw material costs, which reflect the effects of higher crude oil and natural gas liquids-based raw material prices, as well as the effect of higher sales volumes. Cost of sales in the Successor period also included the \$64 million change in estimate described above. Lower depreciation and amortization expense of \$630 million due to the write-down of Property, plant, and equipment associated with the revaluation of our assets in fresh-start accounting partially offset the higher costs in the Successor Period. The Predecessor period in 2010 included a charge of \$23 million for plant closure and other costs related to a polypropylene plant in Terni, Italy.

**SG&A Expenses** Selling, general and administrative ( SG&A ) expenses were \$928 million in 2011, \$872 million in 2010 and \$850 million in 2009. The \$56 million increase in 2011 reflects charges associated with activities to reorganize certain functional organizations and incentive compensation related to the special dividend paid in December 2011. These increases were partially offset by lower employee-related expense associated with the lower headcount in 2011.

**Operating Income** The Company had operating income of \$3,998 million, \$2,944 million and \$317 million in 2011, 2010 and 2009, respectively. Results for the underlying operations of the Company increased in 2011 compared to 2010 despite a significant decrease in operating results in the fourth quarter 2011. The increase primarily reflects higher product margins for ethylene, butanediol, EO and derivatives and acetyls as well as higher refining margins at our Houston refinery. Operating results for 2011 include charges totaling \$307 million primarily related to the estimated cost of a social plan associated with the suspension of operations at our Berre refinery, activities to reorganize certain functional organizations, impairments of assets, and increases in environmental liabilities and asset retirement obligations. These charges were partially offset by benefits of \$90 million related to the sale of excess precious metals and proceeds from insurance and other settlements.

The results of our underlying operations improved in 2010, compared to 2009, reflecting higher product margins and the effect of higher sales volumes as demand increased due to improved global market conditions, particularly in the first half of the year compared to the same periods in 2009 when demand was very weak. Operating results in the 2010 Successor period were negatively impacted by non-cash charges described above of \$64 million and \$42 million, respectively, related to a change in estimate associated with a dispute over an environmental liability and the adjustment of inventory to the lower of cost or market.

Operating results in 2011 and in the 2010 Successor period also benefited from lower depreciation and amortization expense of \$192 million and \$651 million, respectively, primarily due to the write-down of Property, plant, and equipment associated with the revaluation of our assets in fresh-start accounting in April 2010. Operating results for each of our business segments are reviewed further in the **Segment Analysis** section below.

**Interest Expense** Interest expense was \$1,044 million in 2011, \$1,258 million in 2010 and \$1,795 million in 2009. The \$214 million decrease in interest expense in 2011 reflects the repayment of \$4,288 million principal amount of debt since the beginning of the fourth quarter 2010, partially offset by \$443 million of prepayment premiums and unamortized debt issuance cost write-offs related to the 2011 repayments. The prepayment of debt in 2011 included \$1,731 million of our 8% senior notes, \$1,319 million of our 11% senior notes and the remaining \$5 million outstanding under our Senior Term Loan Facility. Interest expense for 2011 also includes interest on our newly issued 6% senior notes due 2021.

Interest expense was \$537 million lower in 2010 compared to 2009, primarily due to the repayment or discharge of debt on the Emergence Date in accordance with the Plan of Reorganization, upon which interest was accruing during the bankruptcy, and the repayment of \$1,233 million of debt in the fourth quarter 2010. This decrease in interest expense was partially offset by interest expense on the debt incurred as part of the emergence financing (see Note 12 to the Consolidated Financial Statements) and \$26 million of charges related to the prepayment of \$769 million of debt in December 2010. The prepayment of debt included \$275 million of our 8% senior secured notes and \$494 million of the senior secured term loan facility in December 2010. We also repaid \$464 million under the accounts receivable securitization facility and accounts receivable factoring agreement during October and November of 2010.

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**Other Income (Expense), net** The Company had other income, net, of \$25 million in 2011, other expense, net, of \$368 million in 2010 and other income, net, of \$320 million in 2009. Other income, net, in 2011 included gains of \$41 million related to the sale of excess precious metals, \$15 million related to the sale of scrap at one of our plants and \$15 million related to a settlement associated with the July 2008 crane incident at our Houston refinery. These gains were partially offset by the negative effect of the \$37 million fair value adjustment of the warrants to purchase our shares and \$17 million of foreign exchange losses.

Other expense, net, in 2010 included the negative effect of the fair value adjustment of the warrants to purchase our shares of \$114 million and foreign exchange losses of \$240 million. In 2009 the Company recognized involuntary conversion gains of \$120 million, representing partial insurance settlements of claims related to damages sustained in 2005 at the polymers plant in Münchsmünster, Germany, and foreign exchange gains of \$123 million as a result of changes in currency exchange rates. Other income, net, in 2009 also included benefits totaling \$72 million resulting from indemnification payments received from previous plant owners for employee benefit and environmental remediation costs related to plant closures and a \$15 million gain related to settlement of a U.K. pension claim.

The foreign exchange loss of \$240 million in 2010 and gain of \$123 million in 2009 were primarily the result of the revaluation of third party debt of certain of the Company's subsidiaries due to changes in the foreign exchange rates in effect during those periods. Such debt was denominated in currencies other than the functional currencies of the subsidiaries and was refinanced upon emergence from bankruptcy.

**Income (Loss) from Equity Investments** The Company had income from equity investments totaling \$216 million in 2011, \$170 million in 2010 and a loss from equity investments of \$181 million in 2009. The increase of \$46 million in 2011 primarily reflects the addition of capacity at our HMC joint venture in late 2010 and the operations of our joint venture in Ningbo, China, which commenced operations in June 2010. The benefit of these joint ventures was partially offset by lower results of our joint venture located in Poland.

Income from equity investments in 2010 benefited from the operations of our SEPC joint venture, which commenced operations in June 2009, and from a new polypropylene plant operated by our HMC Polymers Company Ltd. joint venture that commenced operations in October 2010. The loss from equity investments in 2009 included a \$228 million charge for impairment of the carrying value of the Company's investments in certain joint ventures.

**Reorganization Items** The Company had reorganization expense of \$45 million in 2011, income from reorganization items totaling \$7,365 million in 2010 and reorganization expense of \$2,961 million in 2009. Reorganization items in 2011 include charges totaling \$32 million related to an estimated claim associated with a lawsuit filed by BASF. For additional information related to this claim, see Note 18 to the Consolidated Financial Statements.

Gains from reorganization items in the 2010 Predecessor period included gains totaling \$13,617 million related to settlement of liabilities subject to compromise, deconsolidation of entities upon emergence, adjustments related to rejected contracts, and a reduction of environmental remediation liabilities. These gains were partially offset by a charge of \$6,278 million related to the changes in net assets resulting from the application of fresh-start accounting and by several one-time emergence costs, including the success and other fees earned by certain professionals upon the Company's emergence from bankruptcy, damages related to the rejection of executory contracts and plant closure costs. Reorganization items expense in the 2010 Successor period is primarily related to professional fees.

The 2009 period included charges for the write off of assets associated with a lease rejection; damage claims related to certain executory contracts; the net write off of unamortized debt issuance costs, premiums and discounts; environmental liabilities; professional fees associated with the chapter 11 proceedings; shutdown costs related primarily to the shutdown of its olefins plant at Chocolate Bayou, Texas and the long-term idling of its ethylene glycol facility in Beaumont, Texas; as well as employee severance and other costs. For additional information on reorganization items, see Note 22 to the Consolidated Financial Statements.

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**Income Tax** Our effective income tax rate of 32.9% in 2011 resulted in a tax provision of \$1,048 million on pre-tax income of \$3,188 million. In the eight months ended December 31, 2010, the Successor recorded a tax provision of \$170 million, representing an effective tax rate of 10.1% on pre-tax income of \$1,686 million. In the four months ended April 30, 2010, the Predecessor recorded a tax benefit of \$1,315 million, representing a negative effective tax rate of 18.3% on pre-tax income of \$7,189 million. During 2009, the Predecessor recorded a tax benefit of \$1,411 million, representing an effective tax rate of 32.9% on a pre-tax loss of \$4,282 million.

The effective income tax rate for the twelve months ended December 31, 2011 was lower than the U.S. statutory tax rate of 35% primarily due to the effect of income being taxed in countries with lower statutory income tax rates and favorable permanent deductions related to certain or our notional royalties, equity earnings and the U.S. domestic production activity deduction. The provision for the 2010 Successor period differs from the U.S. statutory income tax rate of 35% primarily due to the fact that in several countries the Company generated either income with no tax expense or losses where we recorded no tax benefit due to valuation allowances on our deferred tax assets in those countries. The tax provision for the 2010 Predecessor period was significantly lower than the U.S. statutory income tax rate primarily because a substantial portion of the pre-tax gain from the discharge of pre-petition liabilities was not subject to income tax. This benefit was partially offset by restructuring charges for which no tax benefit was provided. The tax benefit recorded for 2009 was lower than the U.S. statutory income tax rate of 35% primarily due to operations in non-US jurisdictions with rates lower than the U.S. statutory rate. This benefit was partially offset by restructuring costs for which no tax benefit was provided.

**Income (Loss) from Continuing Operations** Income from continuing operations was \$2,140 million in 2011 and \$10,020 million in 2010 and losses from continuing operations were \$2,871 million in 2009. The following table summarizes the major components contributing to the income (loss) from continuing operations:

	Successor		Predecessor	
	For the Year Ended December 31, 2011	May 1 through December 31, 2010	January 1 through April 30, 2010	For the Year Ended December 31, 2009
Millions of dollars				
Operating income	\$ 3,998	\$ 2,254	\$ 690	\$ 317
Interest expense, net	(1,006)	(528)	(708)	(1,777)
Other income (expense), net	25	(103)	(265)	320
Income (loss) from equity investments	216	86	84	(181)
Reorganization items	(45)	(23)	7,388	(2,961)
Provision for (benefit from) income taxes	1,048	170	(1,315)	(1,411)
<b>Net income (loss) from continuing operations</b>	<b>\$ 2,140</b>	<b>\$ 1,516</b>	<b>\$ 8,504</b>	<b>\$ (2,871)</b>

In 2009, the loss from equity investments for the O&P EAI segment included charges of \$228 million for impairment of the carrying value of the Company's equity investments in certain joint ventures (see Note 9 to the Consolidated Financial Statements).



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The table below summarizes items of special note with regards to our income (loss) from continuing operations for the periods shown:

	Successor		Predecessor	
	For the Year Ended December 31, 2011	May 1 through December 31, 2010	January 1 through April 30, 2010	For the Year Ended December 31, 2009
<b>Millions of dollars</b>				
Pretax charges (benefits):				
Charges and premiums related to prepayment of debt	\$ 443	\$ 26	\$	\$
Berre refinery closure costs consisting primarily of the social plan	136			
Reorganization items	45	23	(7,388)	2,961
Corporate restructurings	93			
Impairments	52	28	9	245
Sale of precious metals	(41)			
Warrants fair value adjustment	37	114		
Gain related to insurance settlements	(34)			(120)
Environmental accruals	16			
Settlement related to Houston refinery crane incident	(15)			
Asset retirement obligation	10			
Charge related to dispute over environmental liability		64		
Gain on sale of Flavors and Fragrance business		(64)		
Inventory valuation adjustments		42		127
Total pretax income effect	742	233	(7,379)	3,213
Tax effect of above items	(175)	(48)	(1,260)	(1,133)
Total	\$ 567	\$ 185	\$ (8,639)	\$ 2,080

Impairments in 2009 include an immaterial adjustment related to prior periods which increased income from operations and net income for the three-month period ended December 31, 2009, by \$65 million. The adjustment related to an overstatement of goodwill impairment in 2008.

**Income from Discontinued Operations, Net of Tax** The Company had income from discontinued operations of \$64 million in the 2010 Successor period related to the sale of its Flavor and Fragrance chemicals business.

**Fourth Quarter 2011 versus Third Quarter 2011** The Company had a net loss of \$218 million in the fourth quarter compared to net income of \$895 million in the third quarter. The fourth quarter net loss reflected pretax charges totaling \$614 million related to the early repayment of debt, reorganization items, the anticipated cost of the social plan related to the suspension of operations at the Berre refinery, corporate restructurings, environmental charges and fair value adjustment of our outstanding warrants. These fourth quarter charges were partially offset by a \$15 million pretax settlement related to the 2008 crane collapse at our Houston refinery. Net income in the third quarter reflected pretax charges totaling \$81 million related to compensation expense, impairment of an R&D project in Europe, an asset retirement obligation associated with our Berre refinery and activities to reorganize certain functional organizations in Europe. These charges were partially offset by benefits totaling \$44 million, including the fair value adjustment of our outstanding warrants.

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Apart from these items, the net loss in the fourth quarter reflected a decline in operating results in all but our Technology segment, which experienced comparable results to the third quarter. The Refining and Oxyfuels segment reflected the effect of significantly lower refining margins, especially at the Houston refinery. Results for our O&P EAI and I&D segments reflected the effect of poor European economic conditions and a yearend slowdown as margins and volumes for most products declined. The O&P Americas segment primarily reflected the decline in the average sales prices for ethylene co-products and ethylene. The effect of the decline in operating results was partially offset by a \$92 million tax benefit in the fourth quarter compared to a \$489 million provision for income taxes in the third quarter. The \$581 million decrease in tax expense was primarily attributable to lower actual earnings coupled with an increase in the favorable permanent deductions related to notional royalties, equity earnings and the U.S. domestic production activity deduction (Section 199) offset with a reduction in the release of foreign valuation allowances.

## **Segment Analysis**

Our operations are in five reportable segments: O&P Americas; O&P EAI; I&D; Refining and Oxyfuels; and Technology. These operations comprise substantially the same businesses owned and operated by LyondellBasell AF prior to the Company's emergence from bankruptcy. However, for accounting purposes, the operations of LyondellBasell AF are deemed to have ceased on April 30, 2010 and LyondellBasell N.V. is deemed to have begun operations on that date. The results of operations for the Successor are not comparable to the Predecessor due to adjustments made under fresh-start accounting as described in Overview. The impact of these items is addressed in the discussion of each segment's results below.

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The following tables reflect selected financial information for our reportable segments. Operating income (loss) for segment reporting is on a LIFO basis for the Successor and on a current cost basis for the Predecessor.

	Successor		Predecessor	
	Year Ended December 31, 2011	May 1 through December 31, 2010	January 1 through April 30, 2010	For the Twelve Months Ended December 31, 2009
<b>Millions of dollars</b>				
<b>Sales and other operating revenues:</b>				
O&P Americas segment	\$ 14,880	\$ 8,406	\$ 4,183	\$ 8,614
O&P EAI segment	15,460	8,729	4,105	9,401
I&D segment	6,487	3,754	1,820	3,778
Refining and Oxyfuels segment	20,733	10,321	4,748	12,078
Technology segment	506	365	145	543
Other, including intersegment eliminations	(7,031)	(3,891)	(1,534)	(3,586)
<b>Total</b>	<b>\$ 51,035</b>	<b>\$ 27,684</b>	<b>\$ 13,467</b>	<b>\$ 30,828</b>
<b>Operating income (loss):</b>				
O&P Americas segment	\$ 1,857	\$ 1,043	\$ 320	\$ 169
O&P EAI segment	475	411	115	(2)
I&D segment	862	512	157	250
Refining and Oxyfuels segment	718	241	(99)	(357)
Technology segment	107	69	39	210
Other, including intersegment eliminations	(21)	(22)	(41)	18
Current cost adjustment			199	29
<b>Total</b>	<b>\$ 3,998</b>	<b>\$ 2,254</b>	<b>\$ 690</b>	<b>\$ 317</b>
<b>Income (loss) from equity investments:</b>				
O&P Americas segment	\$ 21	\$ 16	\$ 5	\$ 7
O&P EAI segment	168	68	80	(172)
I&D segment	27	2	(1)	(16)
<b>Total</b>	<b>\$ 216</b>	<b>\$ 86</b>	<b>\$ 84</b>	<b>\$ (181)</b>

**Olefins and Polyolefins Americas Segment**

**2011 Versus 2010** The U.S. ethylene industry continued to benefit from processing natural gas liquids in 2011. The cost of ethylene produced from natural gas liquids continues to be lower compared to that produced from crude oil-based liquids, which is the predominant feedstock used in the rest of the world. Ethylene margins remained strong in 2011 primarily due to advantaged prices for ethane, which was the favored feedstock. Co-product sales prices, which remained high in 2011 despite a fourth quarter decline, also contributed to the strength of ethylene margins. Market demand for polyethylene was relatively unchanged in 2011, but higher prices driven by increased raw material costs dampened demand for U.S. polypropylene.

Operating results for 2011 and the 2010 Successor period include the impacts of fresh-start accounting, including the benefit of lower depreciation and amortization expense related to the write-down of segment assets. The 2010 Successor period also includes the negative impact of a non-cash charge to adjust inventory to market value (see Results of Operations-Cost of Sales ).



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**2010 Versus 2009** Market demand in the U.S. for ethylene was higher in 2010 compared to 2009. As a result of higher industry operating rates compared to rates experienced during 2009, ethylene margins were higher as benchmark sales prices increased significantly more than the benchmark weighted average costs of ethylene production. Sales of polyolefins in 2010 were comparable to 2009 although producers favored domestic market sales over exports due to improved domestic demand.

Operating results for 2010 primarily reflected strong demand and higher margins for ethylene due to improved economic conditions in 2010 and unplanned operating issues and turnarounds at competitor facilities in the first half of the year. Polypropylene results were also higher in 2010 compared to 2009 as U.S. economic conditions improved. Demand for polyethylene in 2010 was comparable to 2009. Operating results for the Successor period reflect the impacts of the Company's reorganization and fresh-start accounting, including a non-cash charge to adjust inventory to market value and the benefit of lower depreciation and amortization expense related to the write-down of segment assets (see Results of Operations Cost of Sales). The net effect of these items contributed to the significantly improved results of operations in the 2010 Successor periods compared to the twelve months of 2009.

*Ethylene Raw Materials* Benchmark crude oil and natural gas prices generally have been indicators of the level and direction of the movement of raw material and energy costs for ethylene and its co-products in the O&P Americas segment. Ethylene and its co-products are produced from two major raw material groups:

crude oil-based liquids ( liquids or heavy liquids ), including naphtha, condensates, and gas oils, the prices of which are generally related to crude oil prices; and

natural gas liquids ( NGLs ), principally ethane and propane, the prices of which are generally affected by natural gas prices. Although the prices of these raw materials are generally related to crude oil and natural gas prices, during specific periods the relationships among these materials and benchmarks may vary significantly.

In the U.S., we have a significant capability to shift the ratio of raw materials used in the production of ethylene and its co-products to take advantage of the relative costs of heavy liquids and NGLs.

Production economics for the industry continued to favor NGLs in 2011. As a result, we further increased our use of NGLs and reduced liquids consumption at our U.S. plants. During 2011, approximately 75% of our U.S. ethylene production was produced from NGLs compared to 70% in 2010.

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The following table shows the average U.S. benchmark prices for crude oil and natural gas for the applicable periods, as well as benchmark U.S. sales prices for ethylene and propylene, which we produce and sell or consume internally, and certain polyethylene and polypropylene products. The benchmark weighted average cost of ethylene production, which is reduced by co-product revenues, is based on CMAI's estimated ratio of heavy liquid raw materials and NGLs used in U.S. ethylene production.

	Average Benchmark Price and Percent Change Versus Prior Year Period Average					
	Year Ended December 31, 2011			Year Ended December 31, 2010		
	2011	2010	Change	2010	2009	Change
Crude oil (WTI) dollars per barrel	95.1	79.6	20%	79.6	62.1	28%
Natural gas (Henry Hub) dollars per million BTUs United States cents per pound:	4.1	4.5	(8)%	4.5	3.8	19%
Weighted average U.S. cost of ethylene production	35.6	30.0	19%	30.0	26.2	14%
Ethylene	54.3	45.9	18%	45.9	33.9	35%
Polyethylene (HD)	89.4	82.2	9%	82.2	66.5	24%
Propylene - polymer grade	73.3	59.6	23%	59.6	37.9	57%
Polypropylene	100.5	86.0	17%	86.0	64.4	34%

The following table sets forth the O&P Americas segment's sales and other operating revenues, operating income, income from equity investments and selected product sales volumes.

	Successor		Predecessor	
	Year Ended December 31, 2011	May 1 through December 31, 2010	January 1 through April 30, 2010	Year Ended December 31, 2009
<b>Millions of dollars</b>				
Sales and other operating revenues	\$ 14,880	\$ 8,406	\$ 4,183	\$ 8,614
Operating income	1,857	1,043	320	169
Income from equity investments	21	16	5	7

**Production Volumes, in millions of pounds**

Ethylene	8,353	5,585	2,768	8,129
Propylene	2,907	1,998	1,019	2,913

**Sales Volumes, in millions of pounds**

Polyethylene	5,493	3,704	1,765	5,472
Polypropylene	2,471	1,735	836	2,416

**Revenues** Revenues increased by \$2,291 million, or 18%, in 2011 compared to 2010. Higher average sales prices for most products in 2011 were responsible for revenue increases of 22% while lower sales volumes reduced revenues by 4% in 2011 compared to 2010. An improved supply/demand balance and higher crude-oil based raw material costs were reflected in the higher average sales prices in 2011.

Revenues in 2010 increased by \$3,975 million, or 46%, compared to 2009, primarily as a result of significantly higher average sales prices. The increased sales prices in the 2010 periods reflect an increase in demand resulting from improved economic conditions and the effect of constrained supply due to operating issues and turnarounds at competitor plants.

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**Operating Income** Operating results reflected an increase of \$494 million in 2011 compared to 2010 and an increase of \$1,194 million in 2010 compared to 2009.

The \$494 million increase in operating results for 2011 was primarily due to higher ethylene product margins, which were partially offset by lower product margins for polyethylene and polypropylene and the effect of lower ethylene and polypropylene sales volumes. The higher ethylene margins reflected increases in the average sales prices of ethylene and ethylene co-products during 2011, which more than offset increases in raw material prices. Polyethylene and polypropylene product margins were lower in 2011 compared to 2010 as increases in raw material costs outpaced the increases in average sales prices. Operating results for 2011 were negatively impacted by a major turnaround at our Channelview plant and a utility supplier outage at our Morris, Illinois facility as well as planned and unplanned outages at our polypropylene plants. Operating results for 2011 benefited from \$64 million of lower depreciation expense compared to 2010 as a result of the application of fresh-start accounting and the revaluation of our assets, while the 2010 Successor period results were negatively impacted by a \$34 million non-cash charge to adjust inventory to market value.

The underlying operations increased in 2010 compared to 2009, primarily due to higher product margins for ethylene as higher average sales prices for ethylene and its co-products more than offset higher raw material costs. In addition, the effect of higher polypropylene sales volumes during 2010 partially offset the effect of higher utility, planned maintenance and other costs. Operating results for the 2010 Successor period were impacted by the non-cash inventory charge described above. Lower depreciation and amortization expense of \$204 million in 2010 compared to 2009, was primarily the result of the write-down of Property, plant, and equipment associated with the revaluation of our assets in fresh-start accounting.

**Fourth Quarter 2011 versus Third Quarter 2011** Operating income decreased from \$599 million in the third quarter to \$328 million in the fourth quarter. The decrease in fourth quarter operating results reflects lower product margins across all businesses, primarily ethylene, and the effect of lower ethylene sales volumes. The lower ethylene margins are primarily the result of a decline in the average sales prices for ethylene co-products and ethylene from those experienced in the third quarter. An economic slowdown during the fourth quarter led to lower demand resulting in a decrease in ethylene sales volumes. The lower product margins for polyethylene and polypropylene reflect the effect of lower prices of ethylene and propylene, respectively, which were both outpaced by the decrease in average sales prices. Polyolefins sales volumes were relatively unchanged in the fourth quarter, compared to the third quarter.

**Olefins and Polyolefins Europe, Asia and International Segment**

**2011 Versus 2010** Market conditions, which were strong in the first half of 2011, began to deteriorate in the third quarter and continued to decline rapidly in the fourth quarter of 2011. The decline was most evident in the slowdown experienced in Europe amid uncertainty and poor economic conditions. An industry wide inventory adjustment that occurred during the fourth quarter 2011 as producers drew down existing inventories led to a decline in prices from the high levels experienced earlier in the year. Despite lower market demand for ethylene in 2011, industry margins for ethylene expanded as benchmark average sales prices increased more than the benchmark weighted average cost of ethylene production. Market demand for polyolefins was lower in 2011 compared to 2010.

Despite a lower second half of 2011, operating results in 2011 for the O&P EAI segment reflected higher product margins for ethylene and especially butadiene, and higher sales volumes across most products compared to 2010. Segment results in 2011 also benefited from the continued strong performance of our joint ventures and our PP compounding business. Results for the 2010 Successor period include the negative impact of a charge related to a change in estimate associated with a dispute over environmental indemnity, while 2011 results include charges associated with activities to reorganize certain functional organizations and for increased environmental liabilities at our Wesseling, Germany site (see Results of Operations-Cost of Sales ).

**2010 Versus 2009** Market demand in Europe was generally higher in 2010 compared to 2009 as planned and unplanned outages resulted in reduced supply and higher operating results in the second and third quarters of 2010. Ethylene margins expanded as benchmark average sales prices increased more than the benchmark weighted

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average cost of ethylene production. Global polyolefin markets also improved in 2010 compared to 2009. The improvement in polypropylene and LDPE reflected tight supply conditions amid planned and unplanned industry outages throughout 2010.

Operating results for the 2010 periods reflected higher product margins for both olefins and polyolefins. Higher sales volumes for PP Compounds and polypropylene in 2010 compared to 2009 reflect higher demand, primarily from the automotive industry. Operating results for the Successor period also reflected the impacts of fresh-start accounting, including the benefit of lower depreciation and amortization expense related to the write-down of segment assets (see Results of Operations Cost of Sales ).

*Ethylene Raw Materials* In Europe, heavy liquids are the primary raw materials for our ethylene production.

The following table shows the average West Europe benchmark prices for Brent crude oil for the applicable periods, as well as benchmark Western Europe prices for ethylene and propylene, which we produce and consume internally or purchase from unrelated suppliers, and certain polyethylene and polypropylene products.

	Average Benchmark Price and Percent Change Versus Prior Year Period Average					
	Year Ended December 31,			Year Ended December 31,		
	2011	2010	Change	2010	2009	Change
Brent crude oil - dollars per barrel	110.7	80.8	37%	80.8	68.3	18%
Western Europe benchmark prices weighted average cost of ethylene production - 0.01 per pound	36.5	29.5	24%	29.5	23.8	24%
Ethylene	51.7	43.2	20%	43.2	33.4	29%
Polyethylene (high density)	61.6	52.5	17%	52.5	42.9	22%
Propylene	50.7	42.4	20%	42.4	27.7	53%
Polypropylene (homopolymer)	63.9	57.7	11%	57.7	39.9	45%
Average Exchange Rate - \$US per	1.3992	1.3205	6%	1.3205	1.3972	(5)%

The following table sets forth the O&P EAI segment's sales and other operating revenues, operating income, income from equity investments and selected product production and sales volumes.

Millions of dollars	Successor		Predecessor	
	For the Year Ended December 31, 2011	May 1 through December 31, 2010	January 1 through April 30, 2010	For the Year Ended December 31, 2009
Sales and other operating revenues	\$ 15,460	\$ 8,729	\$ 4,105	\$ 9,401
Operating income (loss)	475	411	115	(2)
Income (loss) from equity investments	168	68	80	(172)

**Production volumes, in millions of pounds**

Ethylene	3,729	2,502	1,108	3,503
Propylene	2,286	1,584	661	2,149

**Sales volumes, in millions of pounds**

Polyethylene	5,143	3,402	1,658	4,815
Polypropylene	6,624	4,906	2,117	6,156



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**Revenues** Revenues for 2011 increased by \$2,626 million, or 20%, compared to revenues for 2010, and revenues for 2010 increased by \$3,433 million, or 37%, compared to revenues for 2009.

The increase in 2011 revenues, compared to 2010, was due to higher average product sales prices, which were mainly driven by higher raw material costs. Sales volumes in 2011 decreased slightly as a decline in polypropylene sales was offset by increases in other product areas, but sales volumes in the second half of 2011 were significantly lower than in the first half of the year. Overall, the change in 2011 sales volumes did not have a material impact on revenues. Higher average product sales prices across most products, particularly ethylene, butadiene, polyethylene and polypropylene, were responsible for a 25% increase in 2010 revenues compared to 2009. The remaining 12% increase was due to the effect of higher sales volumes, particularly polypropylene, including Catalloy and PP Compounds.

**Operating Income** Operating results decreased \$51 million in 2011, compared to 2010. Operating results for 2011 include the impact of charges associated with activities to reorganize certain functional organizations and for increased environmental liabilities at our Wesseling, Germany site. Operating results for the Successor period in 2010 were negatively impacted by a charge associated with a change in estimate that arose during the third quarter 2010 over an environmental indemnity. Apart from the items discussed above, results for the underlying operations in 2011 and 2010 were comparable.

Business results in 2011 primarily reflected higher product margins for butadiene, ethylene, and to a lesser extent, PP compounds, and the effect of slightly higher ethylene sales volumes. These improvements were substantially offset by lower product margins for polypropylene and polyethylene reflecting higher monomer prices compared to those experienced in 2010 and higher freight and distribution and other costs. The strength in butadiene margins reflects strong global demand coupled with constrained supply as a result of a preference for NGL olefins feedstocks, which produce less butadiene than liquid feedstocks, in North America.

Operating results increased \$528 million in 2010 compared to 2009. Underlying operating results were higher in 2010, compared to 2009, primarily as a result of higher product margins for ethylene, butadiene, polypropylene and polyethylene, mainly LDPE. Fixed costs were also higher in 2010 compared to 2009, reflecting costs related to our maintenance program and the start-up of the polymers plant in Münchmünster, Germany. Operating results for 2010 were negatively impacted by a \$35 million charge associated with the change in estimate described above. Lower depreciation and amortization expense of \$62 million in 2010 compared to 2009 was primarily a result of our write-down of Property, plant and equipment associated with the revaluation of our assets in fresh-start accounting.

**Income (loss) from equity investments** Income from equity investments increased \$20 million in 2011 compared to 2010 and increased \$320 million from 2010 to 2009. The increase in equity income in 2011 primarily reflects the addition of capacity at our HMC joint venture in late 2010, partially offset by lower results for our joint venture located in Poland. We received dividends of \$181 million and \$40 million from our equity investments in 2011 and 2010, respectively. Income in 2009 reflected after-tax impairments of \$228 million related to certain joint ventures and was as a result of weak current and projected market conditions at the time.

**Fourth Quarter 2011 versus Third Quarter 2011** An operating loss of \$55 million was incurred in the fourth quarter compared to operating income of \$144 million in the third quarter. The \$199 million decrease in operating results in the fourth quarter is primarily attributable to lower product margins and the effect of lower sales volumes across all businesses except for PP compounding. Softness in the European market during the fourth quarter 2011 was reflected in a decrease in product margins for olefins and in some reduction of the strong margins previously realized for butadiene. Fourth quarter operating results for the polyolefins businesses primarily reflected lower polyethylene margins. The overall performance of the PP compounding and Catalloy businesses remain strong despite a slight decrease in fourth quarter results compared to the third quarter.

**Intermediates and Derivatives Segment**

**2011 Versus 2010** The demand for Intermediates & Derivatives products remained strong in the first nine months of 2011. Significant scheduled maintenance turnarounds at two facilities commenced at the end of the third quarter 2011 and continued into the fourth quarter. As the facilities returned to full operations in the fourth quarter,

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demand eroded, particularly in Europe. The decrease in demand reflected typical seasonal declines as well as a weak start to the winter aircraft deicing season. I&D segment results for 2011 reflected higher margins in most product areas, especially in butanediol ( BDO ), acetyls, isobutylenes and in EO and derivatives. Operating results for 2011 reflected the impacts of fresh-start accounting, including the benefit of lower depreciation and amortization expense for 2011 related to the write-down of segment assets. The 2010 Successor period includes the negative impact of a non-cash charge to adjust inventory to market value. See Results of Operations Cost of Sales. Operating results for 2010 also included the operations of our Flavors and Fragrances business that was sold in December 2010.

**2010 Versus 2009** Market demand for I&D products improved in 2010 primarily due to the recovery of the automotive industry and planned and unplanned industry outages during 2010 which tightened industry supply. Demand in the Intermediates market returned to at or above pre-recession levels in 2010.

Operating results for 2010 primarily reflected higher sales volumes across most products compared to 2009. The propylene oxide business benefited from planned and unplanned competitor downtime in the first half of 2010 as the market for durable goods end-uses strengthened. Operating results for the Successor periods reflected the impacts of fresh-start accounting, including a non-cash charge, in the second quarter 2010, to adjust inventory to market value that was offset by the benefit of lower depreciation and amortization expense related to the write-down of segment assets (see Results of Operations Cost of Sales ).

The following table sets forth the I&D segment's sales and other operating revenues, operating income, income from equity investments and selected product sales volumes.

	Successor		Predecessor	
	For the Year Ended December 31, 2011	May 1 through December 31, 2010	January 1 through April 30, 2010	For the Year Ended December 31, 2009
<b>Millions of dollars</b>				
Sales and other operating revenues	\$ 6,487	\$ 3,754	\$ 1,820	\$ 3,778
Operating income	862	512	157	250
Income (loss) from equity investments	27	2	(1)	(16)

**Sales Volumes, in millions of pounds**

PO and derivatives	3,103	2,248	1,134	2,695
EO and derivatives	1,100	614	358	1,063
Styrene	3,065	2,023	858	2,291
Acetyls	1,637	1,189	518	1,682
TBA intermediates	1,795	1,208	613	1,381

**Revenues** Revenues for 2011 increased \$913 million, or 16%, compared to 2010, reflecting higher average sales prices across all businesses and the effect of higher sales volumes for EO, EG and styrene, which more than offset declines in volumes for PO & derivatives, acetyls and isobutylenes. Increased demand in the Asian automotive and polyester markets and the effect of competitor outages on supply were partially responsible for the higher average sales prices in 2011. The sales volumes changes reflected the effects of the scheduled maintenance turnarounds at two of our facilities in the fourth quarter 2011, higher production from the EO/EG facility in a strong global market for most of the year, and the year end slowdown experienced primarily in Europe. The higher average sales prices resulted in a revenue increase in 2011 of 16%, while higher sales volumes resulted in a revenue increase of 3%. Revenues of our Flavors and Fragrance chemicals business, which was sold in December 2010, comprised 3% of total revenues in 2010.

Revenues for 2010 increased \$1,796 million, or 48%, compared to revenues for 2009. The increase in revenue in 2010 compared to 2009 reflected increased demand in 2010 leading to higher sales volumes and higher average sales prices across most products, particularly PO, BDO, PG, TBA, and styrene. The higher average product sales

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prices were responsible for a 28% revenue increase. Higher sales volumes for all but EO and EG, were responsible for the remaining 20% increase in revenues. EO and EG sales volumes were lower in 2010 due to planned and unplanned maintenance activities during the latter half of 2010.

**Operating Income** Operating results increased \$193 million in 2011, compared to 2010. The increase in operating results primarily reflected higher product margins across all business products, especially in PO derivatives. Improved automotive and other durable goods demand and competitor outages contributed to favorable supply/demand fundamentals as prices outpaced increased raw material costs. Operating results in 2011 benefited from lower depreciation and amortization expense of \$30 million compared to 2010, primarily due to the write-down of Property, plant and equipment associated with the revaluation of our assets in fresh-start accounting. Operating results for 2010 also included the results of the Flavors & Fragrance chemicals business which was sold in December 2010. The operating results for the 2010 Successor period were negatively impacted by an \$8 million non-cash charge to adjust inventory at December 31, 2010 to market, which was lower than the value at April 30, 2010 applied during fresh-start accounting.

Operating results, which increased \$419 million in 2010, compared to 2009, include the non-cash charge to adjust inventory described above. Lower depreciation and amortization expense of \$104 million in 2010 compared to 2009 was primarily the result of our write-down of Property, plant and equipment associated with the revaluation of our assets in fresh-start accounting. The remaining increases in 2010 primarily reflected the favorable effect of significantly higher sales volumes for PO and PO derivatives, TBA and styrene. Lower product margins for styrene and TBA and derivatives more than offset higher product margins for acetyls, EO and EG.

**Fourth Quarter 2011 versus Third Quarter 2011** Operating income was \$134 million in the fourth quarter compared to \$259 million in the third quarter. Fourth quarter results reflect a decrease in demand as economic conditions in Europe weakened and unseasonably warm weather conditions reduced demand for aircraft deicing products. These fundamentals combined with scheduled maintenance turnarounds contributed to the lower fourth quarter 2011 volumes for the PO, acetyls and TBA and intermediates businesses.

## **Refining and Oxyfuels Segment**

**2011 Versus 2010** Benchmark U.S. heavy crude refining margins, despite declining significantly in the fourth quarter, were higher in 2011 as a result of significant discounts for heavy crude oil and increased gasoline and distillate spreads over crude oil for much of the year. European refining margins were challenged by industry overcapacity and the loss of Libyan crude oil supply. Oxyfuels margins in 2011 improved compared to 2010 due to higher gasoline prices relative to the cost of natural gas-based raw material costs.

Segment operating results were higher in 2011 compared to 2010, even with charges of \$136 million primarily related to the anticipated cost of the social plan related to the suspension of operations at our Berre refinery and significantly lower refining margins in the fourth quarter. The higher 2011 results primarily reflected the effect of higher crude oil refining margins, higher oxyfuels margins, and increased crude runs at the Houston refinery compared to 2010. Crude processing rates at the Houston refinery were higher in 2011, compared to the same periods in 2010, as a result of unplanned outages during 2010, including the crude unit fire in May 2010. Crude processing rates remained reduced at the Berre in response to continued poor market conditions and margins. Oxyfuels results in 2011 were higher compared to 2010. Operating results for 2011 and the Successor period in 2010 reflect the impacts of fresh-start accounting, including the benefit of lower depreciation and amortization expense related to the write-down of segment assets.

**2010 Versus 2009** In 2010 compared to 2009, benchmark heavy crude refining margins averaged higher, primarily due to an increase in the differential between the cost of heavy and light crude oil.

Operating results in 2010 compared to 2009 primarily reflected higher benchmark refining margins and lower crude processing rates at the Houston refinery. Crude processing rates for the Houston refinery reflected the effects of a crude unit fire, sulfur recovery constraints and unplanned outages, while the Berre refinery crude processing rates were negatively affected by national strikes in France during the fourth quarter 2010. Oxyfuels results were lower in 2010. Operating results for the Successor period reflected the impacts of fresh-start accounting, including

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non-cash charges in the second and third quarters of 2010 to adjust inventory to market value, all of which was recovered in the fourth quarter 2010, and the benefit of lower depreciation and amortization expense related to the write-down of segment assets (see Results of Operations Cost of Sales ).

The following table sets forth the Refining and Oxyfuels segment's sales and other operating revenues, operating income and sales volumes for certain gasoline blending components for the applicable periods. In addition, the table shows market refining margins for the U.S. and Europe and MTBE margins in Northwest Europe ( NWE ). In the U.S., LLS, or Light Louisiana Sweet and WTI, or West Texas Intermediate, are light crude oils, while Maya is a heavy crude oil. In Europe, Urals 4-1-2-1 is a measure of West European refining margins.

	Successor		Predecessor	
	Year Ended December 31, 2011	May 1 through December 31, 2010	January 1 through April 30, 2010	Year Ended December 31, 2009
<b>Millions of dollars</b>				
Sales and other operating revenues	\$ 20,733	\$ 10,321	\$ 4,748	\$ 12,078
Operating income (loss)	718	241	(99)	(357)
<b>Sales Volumes, in millions</b>				
Gasoline blending components MTBE/ETBE (gallons)	868	625	266	831
<b>Crude processing rates (thousands of barrels per day)</b>				
Houston Refinery	263	223	263	244
Berre Refinery	82	94	75	86
<b>Market margins \$ per barrel</b>				
Light crude oil 2-1-1*	7.80	8.98	7.50	6.98
Light crude oil Maya differential*	13.76	8.99	9.46	5.18
Total Maya 2-1-1	21.56	17.97	16.96	12.16
Urals 4-1-2-1	8.08	6.59	6.17	5.57
<b>Market margins cents per gallon</b>				
MTBE NWE	83.1	33.9	58.5	67.9

\* WTI crude oil was used as the Light crude reference for periods prior to 2011. As of January 1, 2011 Light Louisiana Sweet ( LLS ) crude oil is used as the Light crude oil reference. Beginning in early 2011, the WTI crude oil reference has not been an effective indicator of light crude oil pricing given the large location differential compared to other light crude oils.

**Revenues** Revenues increased \$5,664 million, or 38%, in 2011 compared to 2010 and increased \$2,991 million, or 25%, from 2009 to 2010. The increase in revenues in 2011 was primarily due to higher average sales prices and the effect of higher refining sales volumes at our Houston refinery, as well as higher oxyfuels margins. These increases were partially offset by lower oxyfuels sales volumes. Higher average sales prices and higher sales volumes were responsible for revenue increases of 29% and 9%, respectively. Houston refinery crude processing rates were 11% higher compared to 2010, which was negatively impacted by a crude unit fire during the second quarter, sulfur constraints, unplanned coker unit outages and a supply disruption from a third party utility supplier. Crude processing rates for the Berre refinery were 7% lower in 2011, primarily as a result of management's decision to reduce crude processing rates in response to poor market conditions and labor actions associated with the Berre refinery.



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Higher average sales prices at the Houston and Berre refineries in 2010 were responsible for a 30% increase in revenues compared to 2009. Lower crude processing rates in 2010 decreased revenues by 5%, compared to 2009. Crude processing rates for the Houston refinery were 3% lower, compared to 2009, as a result of a May 2010 crude unit fire and other planned and unplanned outages during 2010. Crude processing rates for the Berre refinery were 2% higher in 2010, compared to 2009, despite several planned and unplanned outages.

**Operating Income (Loss)** Operating results increased \$576 million in 2011, compared to 2010. The improvement in the underlying operations primarily reflects higher refining margins at the Houston refinery as indicated by the increase in the Maya 2-1-1 benchmark margin, and higher oxyfuels margins. Financial performance of the Houston refining business was favorably impacted by purchasing crude oils at discounts versus the Maya reference price for heavy crude oil. Margins for oxyfuels products reflect the effect of higher spreads between the prices of gasoline and butane, a key raw material. Operating results for 2011 include charges of \$136 million associated with the estimated cost of the social plan related to suspension of operations at our Berre refinery and \$31 million of charges primarily associated with the impairment of assets at the Berre refinery. The effect of these charges in 2011 was partially offset by benefits totaling \$49 million, including an insurance recovery associated with the misconduct of a former employee and a settlement related to the 2008 crane incident at our Houston refinery. Operating results for 2011 also benefited from lower depreciation expense of \$90 million, compared to the same 2010 period as a result of the application of fresh-start accounting and the revaluation of our assets. Operating results for 2010 were negatively impacted by a \$21 million charge associated with a change in estimate related to a dispute over environmental indemnity, the impairment of assets related to the Berre refinery and a crude unit fire at the Houston refinery in May 2010, resulting in lost production and \$14 million of cash costs.

Operating results, which increased \$499 million in 2010, compared to 2009, were negatively impacted by the \$21 million charge associated with the change in estimate described above, charges of \$25 million for impairment of assets related to the Berre refinery, and by a crude unit fire at the Houston refinery in May 2010 resulting in lost production and \$14 million in cash costs. Operating results for 2009 included the benefit of \$50 million from the settlement of hedging activity at the Houston refinery related to distillates. Lower depreciation and amortization expense of \$269 million in 2010 compared to 2009 was primarily the result of the write-down of Property, plant and equipment associated with the revaluation of our assets in fresh-start accounting. Apart from the effects of the items listed above, increases in operating results for 2010 were primarily due to higher refining margins, especially at the Houston refinery, partially offset by lower product margins for oxyfuels. The decreased oxyfuels margins seen in 2010 were primarily due to the normalization of margins in 2010 compared to the exceptional margins achieved in 2009.

**Fourth Quarter 2011 versus Third Quarter 2011** An operating loss of \$196 million was incurred in the fourth quarter compared to operating income of \$454 million in the third quarter. Operating results in the fourth quarter 2011 included \$136 million of charges primarily related to the suspension of operations at our Berre refinery as described above. Refining margins in the third quarter included the benefit of purchasing crude oils at discounts versus the Maya reference price for heavy crude oil. Apart from these items, the remaining decrease in fourth quarter operating results reflects significantly lower refining margins, particularly at the Houston refinery, and to a lesser extent, lower volumes across all businesses. The lower refining margins at the Houston refinery are reflective of the significant decrease in the Maya 2-1-1 benchmark margin during the fourth quarter. Oxyfuels margins were lower in the fourth quarter due to a decrease in the spread between butane and gasoline as demand for high octane, clean gasoline components followed seasonal demand patterns. This decrease in oxyfuels margins was less severe than the seasonal winter decline usually experienced in the fourth quarter. Crude processing rates for the Houston refinery, which were impacted by planned maintenance outages during the fourth quarter were 3% lower compared to the third quarter. Crude processing rates in the fourth quarter for the Berre refinery were 23% lower compared to the third quarter as a result of management's decision to reduce rates in response to poor market conditions and margins and a disruption related to a strike following the announcement of the contemplated closing of the refinery.

**Table of Contents****Technology Segment**

**2011 Versus 2010** Results reflected higher research and development costs primarily related to charges for the impairment of an R&D project in Europe and the relocation of an R&D facility, and lower licensing and services revenue in 2011 compared to 2010. Operating results for the catalyst business were higher in 2011 compared to 2010.

**2010 Versus 2009** Results in 2010 were negatively impacted by lower licensing revenue, reflecting a slowdown in new polyolefin projects as a consequence of the economic crisis beginning late in the fourth quarter 2008. Higher sales volumes for catalysts partially offset the results for process licenses.

The following table sets forth the Technology segment's sales and other operating revenues and operating income.

	Successor		Predecessor	
	For the Year Ended December 31, 2011	May 1 through December 31, 2010	January 1 through April 30, 2010	For the Year Ended December 31, 2009
Millions of dollars				
Sales and other operating revenues	\$ 506	\$ 365	\$ 145	\$ 543
Operating income	107	69	39	210

**Revenues** Revenues were comparable in 2011 and 2010. Catalyst sales volumes and prices were essentially the same in both years. The recognition of revenue on process licenses issued in prior periods was lower in 2011 and resulted in a 2% decrease in revenues.

Revenues decreased \$33 million, or 6%, from 2009 to 2010. The recognition of revenue on process licenses issued in prior periods decreased in 2010 and was responsible for decreases in revenues of 15%. Catalyst sales volumes increased revenues by 9%.

**Operating Income** Operating income was comparable in 2011 and 2010. In 2011, lower revenue recognized from process licenses issued in prior years and higher R&D costs in 2011 offset the effects of higher operating results for catalysts. Operating income in both periods reflected the impact of a slowdown in new polyolefin projects that stemmed from the economic crisis in late 2008. Higher R&D costs include \$19 million of charges, primarily related to the impairment of an R&D project in Europe, and charges totaling \$16 million for employee severance and asset retirement obligations related to an R&D facility that is being relocated.

Operating income decreased \$102 million from 2009 to 2010. Results in 2010 were negatively affected by an \$8 million charge associated with a change in estimate related to a dispute that arose during the third quarter 2010 over an environmental indemnity and by a \$17 million charge related to the sale, in 2010, of higher cost inventory. The remaining decrease in operating income in 2010 compared to 2009 was primarily the result of lower licensing revenue, compared to 2009. These decreases in 2010 operating results were only partly offset by the effect of increased catalyst sales volumes in 2010. Operating income in 2009 also included the benefit of a government subsidy recognized as a reduction of R&D expense.

**Fourth Quarter 2011 versus Third Quarter 2011** Operating income was \$11 million in the fourth quarter compared to \$7 million in the third quarter. The increase in fourth quarter operating results was primarily due to higher revenue recognized from process licenses issued in prior years and lower R&D costs, partially offset by the effect of lower operating results for catalysts in the fourth quarter. Operating results for the third quarter included \$19 million of charges related to the impairment of an R&D project in Europe.

Table of Contents**FINANCIAL CONDITION**

Operating, investing and financing activities of continuing operations, which are discussed below, are presented in the following table:

Millions of dollars	Successor		Predecessor	
	Year Ended December 31, 2011	May 1 through December 31, 2010	January 1 through April 30, 2010	Year Ended December 31, 2009
Source (use) of cash:				
Operating activities	\$ 2,869	\$ 2,968	\$ (925)	\$ (787)
Investing activities	(1,021)	(323)	(224)	(611)
Financing activities	(4,964)	(1,194)	3,315	1,101

**Operating Activities** Cash of \$2,869 million provided in 2011 primarily reflected an increase in earnings and higher distributions from our joint ventures, partially offset by an increase in cash used by the main components of working capital and payments totaling \$1,699 million related to company contributions to our pension plans, tax payments, premiums and other fees related to prepayments of debt and a litigation settlement.

The main components of working capital used cash of \$118 million in 2011 compared to \$456 million in 2010. The increase in these working capital components during 2011 reflects increases of \$89 million and \$732 million, respectively, in accounts receivable and inventories, partially offset by a \$703 million increase in accounts payable. The increases in both accounts receivable and accounts payable reflect the effect of increasing prices over the period. The increase in inventories reflects the effect of higher prices and increased volumes, especially in the O&P Americas business segment as we built inventory in preparation for a major first quarter 2012 turnaround.

Cash provided by operating activities in the fourth quarter 2011 decreased significantly from the cash provided in the second and third quarters of 2011. The \$91 million of cash provided in the fourth quarter reflects \$476 million of cash provided by the main components of working capital and higher distributions from our joint ventures, all of which was substantially offset by the fourth quarter operating loss and payments totaling \$1,118 million related to company contributions to our pension plans, tax payments, premiums and other fees related to prepayment of debt and a litigation settlement. Our fourth quarter operating loss included after tax charges totaling \$448 million, including \$279 million related to the premiums and other charges associated with our prepayment of debt and \$136 million primarily associated with the suspension of operations at the Berre refinery.

The main components of working capital, which provided cash of \$476 million in the fourth quarter 2011, reflects decreases of \$193 million in accounts receivable, \$132 million in inventories and \$151 million in accounts payable. The decrease in accounts receivable reflects the effect of lower sales, particularly in our olefins and polyolefins businesses. The decrease in inventories in the fourth quarter, primarily reflected reductions in crude inventories at our Berre refinery, which ceased operations in early January 2012, and lower inventories for our I&D business segment as the inventory build in the third quarter in preparation for fourth quarter turnarounds was consumed. The decrease in accounts payable primarily reflected the reduction in crude purchases associated with the suspension of operations at the Berre refinery.

Cash provided in the combined Successor and Predecessor periods of 2010 primarily reflected an increase in earnings offset by payments for reorganization items, claims under the Plan of Reorganization, and certain annual payments relating to sales rebates, employee bonuses, property taxes and insurance premiums. The use of cash in 2009 primarily reflected a \$573 million increase in cash used by the main components of working capital—accounts receivable and inventory, net of accounts payable—and \$329 million of vendor prepayments that were required by certain third parties as a result of LyondellBasell AF's chapter 11 filing.



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In 2010, the main components of working capital—accounts receivable and inventory, net of accounts payable, used cash of \$456 million compared to \$573 million in 2009. The increase in these components of working capital during 2010 reflected a \$702 million increase in accounts receivable due to higher average sales prices and higher sales volumes and a \$395 million increase in inventory, partially offset by a \$641 million increase in accounts payable due to the higher costs and volumes of feedstocks, and more favorable payment terms.

The increase in cash used by the main components of working capital in 2009 primarily reflected a \$503 million repayment that was required in connection with the termination of an accounts receivable securitization program in early 2009.

**Investing Activities** Cash used in investing activities in 2011 primarily reflects capital expenditures of \$1,050 million and a \$42 million increase in restricted cash, partially offset by proceeds from the sale of assets. Capital expenditures in 2011 include the July 2011 purchase of a pipeline for \$73 million. The \$71 million of proceeds include \$57 million related to the sale of surplus precious metals associated with a catalyst for our EO and derivatives business. The increase in restricted cash is primarily related to the issuance of letters of credit, which are collateralized by cash.

Cash used in investing activities in 2010 included \$692 million of capital expenditures, partially offset by proceeds of \$154 million from the sale of our Flavors & Fragrance chemicals business in December 2010 and \$12 million in proceeds from a money market fund that had suspended rights to redemption in 2008.

The cash used in 2009 primarily included \$779 million of capital expenditures, partially offset by proceeds of \$120 million from insurance claims, \$20 million from sales of assets, and \$23 million from a net reduction of short-term investments. The cash provided by insurance claims related to damages sustained in 2005 at the polymers plant in Münchsmünster, Germany.

The following table summarizes capital expenditures anticipated for 2012 and actual capital expenditures for the periods from 2009 through 2011:

Millions of dollars	Plan 2012	Successor		Predecessor	
		Year Ended December 31, 2011	May 1 through December 31, 2010	January 1 through April 30, 2010	Year Ended December 31, 2009
<b>Capital expenditures by segment:</b>					
O&P Americas	\$ 594	\$ 425	\$ 146	\$ 52	\$ 142
O&P EAI	339	235	105	102	411
I&D	195	107	77	8	23
Refining and Oxyfuels	265	255	108	49	167
Technology	60	26	19	12	32
Other	5	10	12	3	6
Total capital expenditures by segment	1,458	1,058	467	226	781
<b>Less:</b>					
Contributions to PO Joint Ventures	37	8	1		2
Consolidated capital expenditures of continuing operations	\$ 1,421	\$ 1,050	\$ 466	\$ 226	\$ 779

The capital expenditures presented in the table above exclude costs of major periodic maintenance and repair activities, including turnarounds and catalyst recharges of \$71 million and \$39 million in the Predecessor periods of 2010 and 2009, respectively.

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**Financing Activities** Financing activities used cash of \$4,964 million during 2011. In November 2011, we redeemed \$1,204 million and 200 million (\$274 million) of our 8% senior dollar notes due 2017 and \$1,319 million of our 11% senior notes, comprising 66% of the then outstanding senior dollar notes and senior euro notes and 41% of the 11% senior notes at October 20, 2011. In May 2011, we redeemed \$203 million and 34 million (\$50 million) of our 8% senior secured notes due 2017, comprising 10% of the then outstanding senior secured notes, respectively at March 31, 2011. We paid premiums totaling \$404 million and bank fees of \$7 million in conjunction with these redemptions. We also repaid the remaining \$5 million outstanding under our Senior Term Loan Facility in November 2011.

Also in November 2011, we issued \$1,000 million of 6% senior notes due 2021 and received proceeds of \$985 million. In December 2011, we paid a special dividend totaling \$2,580 million, or \$4.50 per share, to shareholders of record on November 25, 2011. In addition to the special dividend, we paid a final 2010 dividend and interim dividends totaling \$313 million, including dividends of \$0.25, \$0.20 and \$0.10 per share of common stock, respectively, to shareholders of record on November 25, 2011, August 17, 2011 and May 5, 2011. In June 2011, we paid \$15 million of fees related to the amendment of our U.S. ABL facility. In the first quarter of 2011, we received proceeds of \$37 million upon conversion of outstanding warrants to common stock.

The cash used in the Successor period of 2010 primarily reflects the repayment of debt in the fourth quarter of 2010. In December 2010, we redeemed \$225 million and 37.5 million (\$50 million) of our 8% senior secured notes due 2017, comprising 10% of the then outstanding senior secured dollar notes and senior secured Euro notes, respectively. In conjunction with the redemption of the notes, we paid premiums totaling \$8 million. Also in 2010, we repaid \$495 million of the Senior Term Loan Facility, including a mandatory quarterly amortization payment of \$1 million and a prepayment, at par, of \$494 million in December 2010.

We made net payments totaling \$398 million in the Successor period of 2010 under the European Securitization Facility, which included the entire outstanding balance in October 2010. We also made net payments of \$14 million under our accounts receivable factoring facility during the Successor period of 2010.

As part of our emergence from bankruptcy, we received gross proceeds of \$2,800 million on April 30, 2010 in connection with the issuance of shares in a rights offering and paid \$86 million of fees, including \$70 million of fees to equity backstop providers. On April 30, 2010, we also received net proceeds of \$3,242 million from the issuance of new debt by our subsidiary, Lyondell Chemical, including Senior Secured Notes in the amounts of \$2,250 million and 375 million (\$497 million) and from proceeds of the Senior Term Loan facility of \$495 million, and paid related fees of \$72 million.

Proceeds from the rights offering and the senior notes, along with borrowings under the Senior Term Loan Facility and the amended and restated European Securitization Facility, were used to repay outstanding amounts of \$3,152 million under our DIP financing arrangement and to pay a \$195 million exit fee required under the arrangement. We also paid fees totaling \$92 million in connection with our new U.S. ABL Facility and amended and restated European Securitization Facility. Predecessor debt classified as Liabilities subject to compromise immediately prior to emergence from bankruptcy was discharged pursuant to the Plan of Reorganization (see Note 23 to the Consolidated Financial Statements).

Apart from the payments reflected above, during the 2010 Predecessor period, we made payments totaling \$25 million under other financing arrangements and had a net increase in borrowings of \$47 million under the European Securitization Facility.

In 2009, LyondellBasell AF borrowed \$2,167 million under a DIP financing arrangement, receiving net proceeds of \$2,089 million and subsequently paid additional bank fees of \$97 million. In addition, LyondellBasell AF paid fees of \$93 million related to the issuance of the DIP ABL facility, and at December 31, 2009 had \$325 million of net borrowings outstanding under this facility.

The chapter 11 filing in 2009 constituted a termination event under the asset-based credit facilities in the U.S., and LyondellBasell AF used \$880 million of the net proceeds under the DIP financing arrangement to repay \$766 million and \$114 million outstanding under the previous inventory-based credit facility and the North American accounts receivable securitization program, respectively. As noted under Operating Activities,

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LyondellBasell AF also used \$503 million to repurchase outstanding accounts receivable sold under its previous \$1,150 million receivables securitization facility. In addition, LyondellBasell AF repaid a \$100 million demand note related to emergency postpetition funding. In 2009, LyondellBasell AF made net repayments totaling \$201 million under its European receivables securitization program, which was amended and restated in March 2009. LyondellBasell AF repaid \$45 million (70 million Australian dollars) outstanding under an Australian term loan and \$11 million of other loans.

**Liquidity and Capital Resources** As of December 31, 2011, we had unrestricted cash of \$1,065 million. In addition, we had total unused availability under our credit facilities of \$2,183 million at December 31, 2011, which included the following:

\$1,738 million under our \$2,000 million U.S. ABL facility, which is subject to a borrowing base, net of outstanding borrowings and outstanding letters of credit provided under the facility. At December 31, 2011, we had \$262 million of outstanding letters of credit and no outstanding borrowings under the facility.

321 million and \$14 million (totaling approximately \$445 million) under our 450 million European receivables securitization facility. Availability under this facility is subject to a borrowing base, net of outstanding borrowings. There were no outstanding borrowings under this facility at December 31, 2011.

In December 2011, Lyondell Chemical settled a lawsuit in which BASF had obtained a judgment in 2007 of approximately \$200 million. Lyondell appealed the judgment and posted an appeal bond, which is collateralized by a \$200 million letter of credit and is included in the \$262 million of letters of credit issued under our U.S. ABL facility. The settlement was approved by the Bankruptcy Court on January 18, 2012, and we expect the appeal bond to be dissolved sometime in the first quarter of 2012. Upon final dissolution of the bond and the return and cancellation of the original letter of credit, our liquidity will increase by \$200 million.

We have receivables outstanding of 172 million (\$223 million) related to value added tax ( VAT ) in Italy. In the first quarter 2010, Italy implemented a reverse change rule, under which non-domestic companies may not collect VAT on sales to domestic companies but must submit VAT on purchases from domestic companies. As a result, the balance of VAT receivables due from Italy has increased during 2011. We fully expect to collect all amounts owed to us.

An offering to sell our Berre refinery in France, which commenced in May 2011, did not result in any offers to purchase. As a result, in September 2011, we announced our intention to initiate consultations with works councils regarding a contemplated closure of the refinery, which would affect approximately 370 employees. On January 4, 2012, refinery operations were suspended. The suspension of operations was in accordance with an agreement executed in the fourth quarter by our French entities and union representatives addressing the procedures by which suspension of refinery operations and the consultations would be governed. Consultations with the relevant works councils are in progress.

The Company has recorded a charge of \$136 million in the fourth quarter of 2011 primarily related to the estimated cost of the social plan and as a result of inventory write-downs. Final costs to be incurred are contingent on completion of the consultations. The Company expects to incur additional costs in connection with the cessation of operations. The Company does not believe any such additional costs will be material to its results of operations.

In addition to the letters of credit issued under the U.S. ABL facility, we also have outstanding letters of credit and bank guarantees totaling \$48 million, which are collateralized by cash. Such cash is included in the \$53 million of Restricted cash reflected on the Consolidated Balance Sheets as of December 31, 2011.

At December 31, 2011, we had total debt, including current maturities, of \$4,032 million.

We may use cash on hand, cash from operating activities and proceeds from asset divestitures to repay debt, which may include additional purchases of our outstanding bonds in the open market or otherwise. We also plan to finance our ongoing working capital, capital expenditures, debt service and other funding requirements through our future financial and operating performance, which could be affected by general economic, financial, competitive,



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legislative, regulatory, business and other factors, many of which are beyond our control. To the extent our cash balances and results of operations support the payment of dividends we also intend to declare and pay interim dividends. We believe that our cash, cash from operating activities and proceeds from our credit facilities provide us with sufficient financial resources to meet our anticipated capital requirements and obligations as they come due.

*Amendments* In November 2011, we obtained amendments to the indentures governing our 8% senior secured notes and 11% senior secured notes. These amendments include the release of all collateral securing the Notes and modification of other provisions relating to restrictive covenants.

In November 2011, an amendment to our European receivables securitization program resulted in a reduced pricing structure.

In June 2011, we obtained an amendment to our U.S. ABL facility to, among other things: (i) increase the facility to \$2 billion; (ii) extend the maturity date to June 2016; (iii) reduce the applicable margin and commitment fee and (iv) amend certain covenants and conditions to provide additional flexibility.

**Contractual and Other Obligations** The following table summarizes, as of December 31, 2011, our minimum payments for long-term debt, including current maturities, short-term debt, and contractual and other obligations for the next five years and thereafter.

Millions of dollars	Total	Payments Due By Period					
		2012	2013	2014	2015	2016	Thereafter
Total debt	\$ 4,032	\$ 52	\$ 1	\$ 1	\$ 1	\$ 1	\$ 3,976
Interest on total debt	2,820	372	368	367	367	361	985
Pension benefits:							
PBO	3,160	173	175	185	205	202	2,220
Assets	(2,081)						(2,081)
Funded status							
Other postretirement benefits	1,079						
Advances from customers	364	22	22	22	23	23	252
Other	146	53	22	17	12	12	30
Deferred income taxes	742	141	108	75	42	40	336
Other obligations:	917	137	140	138	134	76	292
Purchase obligations:							
Take-or-pay contracts	17,237	2,743	2,698	2,671	2,010	1,516	5,599
Other contracts	36,248	12,431	6,546	5,846	5,184	2,283	3,958
Operating leases	1,128	241	211	176	149	82	269
Total	\$ 64,713	\$ 16,365	\$ 10,291	\$ 9,498	\$ 8,127	\$ 4,596	\$ 15,836

*Total Debt* Total debt includes our 6% senior notes due 2021, 8% U.S. dollar and euro senior notes due 2017, 11% senior notes due 2018, 8.1% guaranteed notes due 2027 (the 2027 Notes ) and various non-U.S. loans. See Note 12 for a discussion of covenant requirements under the credit facilities and indentures and additional information regarding our debt facilities.

*Interest* Our debt and related party debt agreements contain provisions for the payment of monthly, quarterly or semi-annual interest at a stated rate of interest over the term of the debt.

*Pension Benefits* We maintain several defined benefit pension plans, as described in Note 15 to the Consolidated Financial Statements. At December 31, 2011, the projected benefit obligation for our pension plans

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exceeded the fair value of plan assets by \$1,079 million. Subject to future actuarial gains and losses, as well as actual asset earnings, we, together with our consolidated subsidiaries, will be required to fund the \$1,079 million, with interest, in future years. We contributed \$526 million and \$99 million to our pension plans in 2011 and 2010, respectively, and LyondellBasell AF made contributions to the plans of \$52 million in 2009. Estimates of pension benefit payments through 2016 are included in the table above.

*Other Postretirement Benefits* We provide other postretirement benefits, primarily medical benefits to eligible participants, as described in Note 15 to the Consolidated Financial Statements. We pay other unfunded postretirement benefits as incurred. Estimates of other postretirement benefit payments through 2016 are included in the table above.

*Advances from Customers* We are obligated to deliver product, primarily at cost-based prices, in connection with long-term sales agreements under which our Predecessor received advances from customers in prior years. These advances are treated as deferred revenue and will be amortized to earnings as product is delivered over the remaining terms of the respective contracts, which primarily range from 4 to 8 years. The unamortized long-term portion of such advances totaled \$146 million as of December 31, 2011.

*Other* Other primarily consists of accruals for environmental remediation costs, obligations under deferred compensation arrangements, and anticipated asset retirement obligations. See *Critical Accounting Policies* below for a discussion of obligations for environmental remediation costs.

*Deferred Income Taxes* The scheduled settlement of the deferred tax liabilities shown in the table is based on the scheduled reversal of the underlying temporary differences. Actual cash tax payments will vary depending upon future taxable income.

*Purchase Obligations* We are party to various obligations to purchase products and services, principally for raw materials, utilities and industrial gases. These commitments are designed to assure sources of supply and are not expected to be in excess of normal requirements. The commitments are segregated into take-or-pay contracts and other contracts. Under the take-or-pay contracts, we are obligated to make minimum payments whether or not we take the product or service. Other contracts include contracts that specify minimum quantities; however, in the event that we do not take the contractual minimum, we are only obligated for any resulting economic loss suffered by the vendor. The payments shown for the other contracts assume that minimum quantities are purchased. For contracts with variable pricing terms, the minimum payments reflect the contract price at December 31, 2011.

*Operating Leases* We lease various facilities and equipment under noncancelable lease arrangements for various periods. See Note 13 to the Consolidated Financial Statements for related lease disclosures.

## **RELATED PARTY TRANSACTIONS**

We have related party transactions with certain of our major shareholders and their affiliates and our joint venture partners. We believe that such transactions are effected on terms substantially no more or less favorable than those that would have been agreed upon by unrelated parties on an arm's length basis.

LyondellBasell AF had related party transactions with its equity investees and its affiliates as well as a member of its Supervisory Board (see Note 4 to the Consolidated Financial Statements). In addition, prior to the Emergence Date, LyondellBasell AF had related party transactions with Access Industries.

## **CRITICAL ACCOUNTING POLICIES**

Management applies those accounting policies that it believes best reflect the underlying business and economic events, consistent with accounting principles generally accepted in the U.S. (see Note 2 to the Consolidated Financial Statements). Our more critical accounting policies include those related to the valuation of inventory, long-lived assets, the valuation of goodwill, accruals for long-term employee benefit costs such as pension and other

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postretirement costs, liabilities for anticipated expenditures to comply with environmental regulations, and accruals for taxes based on income. Inherent in such policies are certain key assumptions and estimates made by management. Management periodically updates its estimates used in the preparation of the financial statements based on its latest assessment of the current and projected business and general economic environment.

*Inventory* LyondellBasell N.V. adopted the LIFO method of accounting for inventory upon implementation of fresh-start accounting. The price of crude oil and natural gas is subject to many factors, including changes in economic conditions. The fluctuation in the price of crude oil and natural gas from period to period may result in the recognition of charges to adjust the value of inventory to the lower of cost or market in periods of falling prices and the reversal of those charges in subsequent periods as market prices recover. Accordingly, our cost of sales and results of operations may be affected by such fluctuations. In conjunction with the implementation of fresh-start accounting on April 30, 2010, the Company recorded its inventory, which was primarily crude-oil derived, at fair value.

Following the revaluation of our inventory to fair value on April 30, 2010, we recorded a net non-cash charge of \$42 million to adjust the value of inventory to the lower of cost or market at December 31, 2010. No lower of cost or market charges were required in 2011.

*Long-Lived Assets* With respect to long-lived assets, which primarily include property, plant and equipment and intangible assets, key assumptions included the estimates of the asset fair values and useful lives at the Emergence Date and the recoverability of carrying values of fixed assets and other intangible assets, as well as the existence of any obligations associated with the retirement of fixed assets. Such estimates could be significantly modified and/or the carrying values of the assets could be impaired by such factors as new technological developments, new chemical industry entrants with significant raw material or other cost advantages, uncertainties associated with the European, U.S. and world economies, the cyclical nature of the chemical and refining industries, and uncertainties associated with regulatory governmental actions.

Earnings in 2011 and the 2010 Successor period included pretax charges of \$31 million and \$28 million primarily related to impairment of the carrying value of capital additions at our Berre refinery following an analysis of its discounted cash flow projections. During the year ended December 31, 2011 and the eight months ended December 31, 2010, we recognized impairments of \$19 million and \$3 million, respectively, related to certain in-process research and development projects which were abandoned.

Predecessor earnings for 2009 included pretax impairment charges of \$17 million, primarily related to the impairment of LyondellBasell AF's emissions allowances that are subject to reallocation to other industry participants under a proposed regulation by the Texas Commission on Environmental Quality. As part of its reorganization, LyondellBasell AF also recognized charges totaling \$679 million, including \$624 million for the write off of the carrying value and related assets of its Chocolate Bayou olefins facility near Alvin, Texas and \$55 million for the write off of its ethylene glycol facility in Beaumont, Texas.

For purposes of recognition and measurement of the above-noted impairments, long-lived assets were grouped with other assets and liabilities at the lowest level for which identifiable cash flows were largely independent of the cash flows of other assets and liabilities.

The estimated useful lives of long-lived assets range from 3 to 30 years. Depreciation and amortization of these assets, including amortization of deferred turnaround costs, under the straight-line method over their estimated useful lives totaled \$931 million in 2011. If the useful lives of the assets were found to be shorter than originally estimated, depreciation and amortization charges would be accelerated over the revised useful life.

*Goodwill* Goodwill of \$585 million at December 31, 2011 represents the tax effect of the differences between the tax and book bases of the Company's assets and liabilities resulting from the Company's revaluation of those assets and liabilities to fair value in connection with the Company's emergence from bankruptcy and adoption of fresh-start accounting. LyondellBasell N.V. evaluates the carrying value of goodwill annually or more frequently if events or changes in circumstances indicate that the carrying amount may exceed fair value.

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In accordance with the recently issued ASU No. 2011-08, *Intangibles - Goodwill and Other (Topic 350) Testing Goodwill for Impairment*, we used a qualitative approach to test goodwill for impairment. In December 2011, we chose to adopt this ASU early and performed a qualitative assessment and determined that it was more likely than not that the fair values of our reporting units were not less than their carrying values and it was not necessary to perform the currently prescribed two-step goodwill impairment test. The recoverability of our goodwill is dependent upon the discounted estimated future operating results associated with our reporting units, which could change significantly based upon business performance or other factors.

*Long-Term Employee Benefit Costs* The costs to LyondellBasell N.V. of long-term employee benefits, particularly pension and other postretirement medical and life insurance benefits, are incurred over long periods of time, and involve many uncertainties over those periods. The net periodic benefit cost attributable to current periods is based on several assumptions about such future uncertainties, and is sensitive to changes in those assumptions. It is management's responsibility, often with the assistance of independent experts, to select assumptions that in its judgment represent its best estimates of the future effects of those uncertainties. It also is management's responsibility to review those assumptions periodically to reflect changes in economic or other factors that affect those assumptions.

The current benefit service costs, as well as the existing liabilities, for pensions and other postretirement benefits are measured on a discounted present value basis. The discount rate is a current rate, related to the rate at which the liabilities could be settled. LyondellBasell N.V.'s assumed discount rate is based on published average rates for high-quality (Aa rating) ten-year fixed income securities. For the purpose of measuring the benefit obligations at December 31, 2011, LyondellBasell N.V. used a weighted average discount rate of 4.07% for the U.S. plans which reflects the different terms of the related benefit obligations. The weighted average discount rate used to measure obligations for non-U.S. plans at December 31, 2011 was 4.83%, reflecting market interest rates. The discount rates in effect at December 31, 2011 will be used to measure net periodic benefit cost during 2012.

The benefit obligation and the periodic cost of other postretirement medical benefits also are measured based on assumed rates of future increase in the per capita cost of covered health care benefits. As of December 31, 2011, the assumed rate of increase for our U.S. plans was 8.2%, decreasing to 4.5% in 2027 and thereafter. A one percentage point change in the health care cost trend rate assumption would have no significant effect on either the benefit liability or the net periodic cost, due to limits on LyondellBasell N.V.'s maximum contribution level under the medical plan.

The net periodic cost of pension benefits included in expense also is affected by the expected long-term rate of return on plan assets assumption. Investment returns that are recognized currently in net income represent the expected long-term rate of return on plan assets applied to a market-related value of plan assets which, for LyondellBasell N.V., is defined as the market value of assets. The expected rate of return on plan assets is a longer term rate, and is expected to change less frequently than the current assumed discount rate, reflecting long-term market expectations, rather than current fluctuations in market conditions.

The weighted average expected long-term rate of return on U.S. and non-U.S. plan assets of 8.00% and 6.21%, respectively, is based on the average level of earnings that its independent pension investment advisor had advised could be expected to be earned over time. The expectation is based on an asset allocation that varies by region. The asset allocations are summarized in Note 15 to the Consolidated Financial Statements. The actual returns in 2011 were a loss of 0.76% for U.S. plan assets and a gain of 3.82% for non-U.S. plan assets.

The actual rate of return on plan assets may differ from the expected rate due to the volatility normally experienced in capital markets. Management's goal is to manage the investments over the long term to achieve optimal returns with an acceptable level of risk and volatility.

Net periodic pension cost recognized each year includes the expected asset earnings, rather than the actual earnings or loss. This unrecognized amount, to the extent it exceeds 10% of the projected benefit obligation for the respective plan, is recognized as additional net periodic benefit cost over the average remaining service period of the participants in each plan.



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Additional information on the key assumptions underlying these benefit costs appears in Note 15 to the Consolidated Financial Statements.

*Liabilities for Environmental Remediation Costs* Environmental remediation liabilities were recorded at fair value at emergence. Additional liabilities recorded subsequent to emergence for anticipated expenditures related to investigation and remediation of contaminated sites, which include current and former plant sites and other remediation sites, are accrued when it is probable a liability has been incurred and the amount of the liability can be reasonably estimated. Only ongoing operating and monitoring costs, the timing of which can be determined with reasonable certainty, are discounted to present value. Future legal costs associated with such matters, which generally are not estimable, are not included in these liabilities.

As of December 31, 2011, LyondellBasell N.V.'s accrued liability for future environmental remediation costs at current and former plant sites and other remediation sites totaled \$120 million. The liabilities for individual sites range from less than \$1 million to \$23 million, and remediation expenditures are expected to occur over a number of years, and not to be concentrated in any single year. In the opinion of management, it is reasonably possible that losses in excess of the liabilities recorded for environmental remediation may have been incurred. However, we cannot estimate any amount or range of such possible additional losses. New information about sites, new technology or future developments such as involvement in investigations by regulatory agencies, could require LyondellBasell N.V. to reassess potential exposure related to environmental matters. See Note 18 to the Consolidated Financial Statements for further discussion of environmental remediation matters.

*Accruals for Taxes Based on Income* The determination of our provision for income taxes and the calculation of our tax benefits and liabilities is subject to management's estimates and judgments due to the complexity of the tax laws and regulations in the tax jurisdictions in which we operate. Uncertainties exist with respect to interpretation of these complex laws and regulations.

Deferred tax assets and liabilities are determined based on temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, and are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to reverse.

We recognize future tax benefits to the extent that the realization of these benefits is more likely than not. Our current provision for income taxes was impacted significantly by the initial recognition of valuation allowances related to net deferred assets in certain non-U.S. jurisdictions. Further changes to these valuation allowances may impact our future provision for income taxes, which will include no tax benefit with respect to losses incurred and no tax expense with respect to income generated in these countries until the respective valuation allowance is eliminated.

For further information related to our income taxes, see Note 17 to the Consolidated Financial Statements of LyondellBasell N.V. for the year ended December 31, 2011.

## **ACCOUNTING AND REPORTING CHANGES**

For a discussion of the potential impact of new accounting pronouncements on our consolidated financial statements, see Note 2 to the Consolidated Financial Statements.

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

See Note 14 to the Consolidated Financial Statements for discussion of LyondellBasell N.V.'s management of commodity price risk, foreign currency exposure and interest rate risk through its use of derivative instruments and hedging activities.

The Company's ability to engage in risk mitigation activities through the use of derivative transactions was limited from early 2009 to April 30, 2010 as a result of the voluntary filings in 2009 for relief under chapter 11 of the U.S. Bankruptcy Code and the associated perceived credit risk.

**Commodity Price Risk**

A substantial portion of our products and raw materials are commodities whose prices fluctuate as market supply and demand fundamentals change. Accordingly, product margins and the level of our profitability tend to fluctuate with changes in the business cycle. We try to protect against such instability through various business strategies. These include provisions in sales contracts allowing us to pass on higher raw material costs through timely price increases, formula price contracts to transfer or share commodity price risk, and increasing the depth and breadth of our product portfolio.

In addition, we selectively use commodity swap, option, and futures contracts with various terms to manage the volatility related to purchases of natural gas and raw materials, as well as product sales. Such contracts are generally limited to durations of one year or less. Cash-flow hedge accounting may be elected for these derivative transactions; however, in some cases, when the duration of a derivative is short, hedge accounting is not elected. When hedge accounting is not elected, the changes in fair value of these instruments will be recorded in earnings. When hedge accounting is elected, gains and losses on these instruments will be deferred in accumulated other comprehensive income ( AOCI ), to the extent that the hedge remains effective, until the underlying transaction is recognized in earnings. Market risks created by these derivative instruments and the mark-to-market valuations of open positions are monitored by management.

The estimated fair value and notional amounts of our open commodity futures contracts are shown in the table below:

Millions of dollars	Open Commodity Contracts December 31, 2011				
	Fair Value	Notional Amounts Value	Volumes	Volume Unit	Maturity Dates
Futures:					
Gasoline sales	\$ 12	\$ 34	12	million gallons	January 2012 - February 2012
Heating oil sales	1	54	19	million gallons	January 2012
Butane purchases	(1)	22	12	million gallons	January 2012 - February 2012
	\$ 12	\$ 110			

Millions of dollars	December 31, 2010				
	Fair Value	Notional Amounts Value	Volumes	Volume Unit	Maturity Dates
Futures:					
Gasoline sales	\$	\$ 16	7	million gallons	February 2011
Heating oil sales	(1)	54	21	million gallons	February 2011
	\$ (1)	\$ 70			



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We use value at risk ( VAR ), stress testing and scenario analysis for risk measurement and control purposes. VAR estimates the maximum potential loss in fair market values, given a certain move in prices over a certain period of time, using specified confidence levels. Using sensitivity analysis and hypothetical changes in market prices ranging from 26% to 36%, which represents the one year volatility ranges of the underlying products, the effect would have been to increase LyondellBasell N.V.'s net income by less than \$1 million. The quantitative information about market risk is necessarily limited because it does not take into account the effects of the underlying operating transactions.

### **Foreign Exchange Risk**

We manufacture and market our products in a number of countries throughout the world and, as a result, are exposed to changes in foreign currency exchange rates. Transactions are entered into, in part, in currencies other than the applicable functional currency.

A significant portion of our reporting entities use the Euro as their functional currency. Our reporting currency is the U.S. Dollar. The translation gains or losses that result from the process of translating the Euro denominated financial statements to U.S. Dollars are deferred in AOCI until such time as those assets are realized. Changes in the value of the U.S. Dollar relative to the Euro can therefore have a significant impact on comprehensive income. We generally do not attempt to minimize or mitigate the foreign currency risks resulting from the translation of assets and liabilities of foreign operations into our reporting currency.

Some of our operations enter into transactions denominated in other than their functional currency. This results in exposure to foreign currency risk for financial instruments, including, but not limited to third party and intercompany receivables and payables, intercompany loans and third party debt. We maintain risk management control systems intended to monitor foreign currency risk attributable to inter-company and third party outstanding foreign currency balances. The control systems involve the centralization of foreign currency exposure management, offsetting exposures and estimating the expected impacts of changes in foreign currency rates on our earnings. We enter into foreign currency forward contracts to reduce the effects of our net currency exchange exposures. Since June 30, 2010, our policy has been to maintain an approximately balanced position in foreign currencies to minimize exchange gains and losses arising from changes in exchange rates. This position is monitored weekly. A 10% fluctuation compared to the U.S. dollar in the underlying currencies would result in an additional impact to earnings of no more than \$2.5 million in any reporting period.

For 2011, the 2010 Successor and Predecessor periods and the year ended December 31, 2009, other income (loss), net, in the Consolidated Statements of Income reflected a loss of \$17 million, a gain of \$18 million, losses of \$258 million and gains of \$123 million, respectively, in net exchange rate gains and losses. The \$258 million loss in the 2010 Predecessor period and the \$123 million gain in 2009 were primarily the result of the revaluation of third party debt of certain of our subsidiaries due to changes in the foreign exchange rates in effect during those periods. Such debt was denominated in currencies other than the functional currencies of the subsidiaries and was refinanced upon emergence from bankruptcy. For forward contracts that economically hedge recognized monetary assets and liabilities in foreign currencies, no hedge accounting is applied. Changes in the fair value of foreign currency forward contracts are reported in the Consolidated Statements of Income and offset the currency exchange results recognized on the assets and liabilities.

### **Interest Rate Risk**

We are exposed to interest rate risk with respect to variable rate debt. Our variable rate debt consists of our \$2,000 million U.S. asset-based facility and our 450 million receivable securitization facility. At December 31, 2011, there were no outstanding borrowings under these facilities.

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

**Index to the Consolidated Financial Statements**

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**MANAGEMENT'S REPORT ON INTERNAL CONTROL**

**OVER FINANCIAL REPORTING**

Management of the Company, including the Chief Executive Officer and the Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) of the Securities Exchange Act of 1934, as amended. Internal control over financial reporting is a process designed by, or under the supervision of, our Chief Executive Officer and Chief Financial Officer, 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. Our internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit the preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

We conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2011 based on the Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation, management has concluded that our internal control over financial reporting was effective as of December 31, 2011.

The effectiveness of our internal control over financial reporting as of December 31, 2011 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Stockholders of LyondellBasell Industries N.V.,

In our opinion, the accompanying consolidated balance sheets as of December 31, 2011 and 2010 and the related consolidated statements of income, of stockholders' equity and of cash flows for the year ended December 31, 2011 and for the period from May 1, 2010 through December 31, 2010 present fairly, in all material respects, the financial position of LyondellBasell Industries N.V. and its subsidiaries (the Company or the Successor) at December 31, 2011 and 2010 and the results of their operations and their cash flows for the year ended December 31, 2011 and for the period from May 1, 2010 through December 31, 2010 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our audits (which was an integrated audit in 2011). We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As discussed in Note 22 to the consolidated financial statements, in 2009 LyondellBasell Industries AF S.C.A. (the Predecessor Company), its U.S. subsidiaries and a German subsidiary, each filed a voluntary petition with the United States Bankruptcy Court for reorganization under the provisions of Chapter 11 of the United States Bankruptcy Code. The Predecessor Company's Third Amended and Restated Plan of Reorganization was confirmed on April 23, 2010 and the debtors emerged from Chapter 11 protection on April 30, 2010. As of the emergence date, the Predecessor Company's equity interests in its indirect subsidiaries terminated and the Successor Company now owns and operates, directly and indirectly, substantially the same business as the Predecessor Company owned and operated prior to emergence from the bankruptcy cases. In connection with its emergence from bankruptcy, the Company adopted fresh start accounting on May 1, 2010.

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

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Houston, Texas

February 29, 2012



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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Stockholders of LyondellBasell Industries N.V.,

In our opinion, the accompanying consolidated statements of income, of stockholders' equity and of cash flows for the period from January 1, 2010 through April 30, 2010 and for the year ended December 31, 2009 present fairly, in all material respects the results of operations and cash flows for the period from January 1, 2010 through April 30, 2010 and for the year ended December 31, 2009 of the Predecessor of LyondellBasell Industries N.V. and its subsidiaries (the Predecessor Company) in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Predecessor Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As discussed in Note 22 to the consolidated financial statements, in 2009 the Predecessor Company, its U.S. subsidiaries and a German subsidiary, each filed a voluntary petition with the United States Bankruptcy Court for reorganization under the provisions of Chapter 11 of the United States Bankruptcy Code. The Predecessor Company's Third Amended and Restated Plan of Reorganization was confirmed on April 23, 2010 and the debtors emerged from Chapter 11 protection on April 30, 2010. As of the emergence date, the Predecessor Company's equity interests in its indirect subsidiaries terminated and LyondellBasell Industries N.V. (the Successor Company) now owns and operates, directly and indirectly, substantially the same business as the Predecessor Company owned and operated prior to emergence from the bankruptcy cases. In connection with its emergence from bankruptcy, the Successor Company adopted fresh start accounting on May 1, 2010.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Houston, Texas

March 17, 2011, except for the guarantor information presented in Note 26 to the consolidated financial statements, as to which the date is June 20, 2011, and except for Revision II described in Note 2 (not presented herein) to the consolidated financial statements appearing on Form S-4/A filed on September 6, 2011, as to which the date is August 12, 2011

**Table of Contents****LYONDELLBASELL INDUSTRIES N.V.****CONSOLIDATED STATEMENTS OF INCOME**

	Successor		Predecessor	
	For the Year Ended December 31, 2011	May 1 through December 31, 2010	January 1 through April 30, 2010	For the Year Ended December 31, 2009
Millions of dollars, except earnings per share				
<b>Sales and other operating revenues:</b>				
Trade	\$ 49,919	\$ 26,961	\$ 13,260	\$ 30,207
Related parties	1,116	723	207	621
	51,035	27,684	13,467	30,828
<b>Operating costs and expenses:</b>				
Cost of sales	45,913	24,767	12,414	29,516
Selling, general and administrative expenses	928	564	308	850
Research and development expenses	196	99	55	145
	47,037	25,430	12,777	30,511
Operating income	3,998	2,254	690	317
Interest expense	(1,044)	(545)	(713)	(1,795)
Interest income	38	17	5	18
Other income (expense), net	25	(103)	(265)	320
Income (loss) before equity investments, reorganization items and income taxes	3,017	1,623	(283)	(1,140)
Income (loss) from equity investments	216	86	84	(181)
Reorganization items	(45)	(23)	7,388	(2,961)
Income (loss) before income taxes	3,188	1,686	7,189	(4,282)
Provision for (benefit from) income taxes	1,048	170	(1,315)	(1,411)
Income (loss) from continuing operations	2,140	1,516	8,504	(2,871)
Income from discontinued operations		64		
<b>Net income (loss)</b>	<b>2,140</b>	<b>1,580</b>	<b>8,504</b>	<b>(2,871)</b>
Net loss attributable to non-controlling interests	7	7	60	6
Net income (loss) attributable to the Company	\$ 2,147	\$ 1,587	\$ 8,564	\$ (2,865)
<b>Earnings per share:</b>				
<b>Net income</b>				
Basic:				
Continuing operations	\$ 3.76	\$ 2.68		
Discontinued operations		0.11		
	3.76	2.79		

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Diluted:

Continuing operations	\$ 3.74	\$ 2.67
Discontinued operations		0.11
	3.74	2.78

See Notes to the Consolidated Financial Statements.

**Table of Contents****LYONDELLBASELL INDUSTRIES N.V.****CONSOLIDATED BALANCE SHEETS**

Millions, except shares and par value data	December 31, 2011	December 31, 2010
<b>ASSETS</b>		
Current Assets:		
Cash and cash equivalents	\$ 1,065	\$ 4,222
Restricted cash	53	11
Accounts receivable:		
Trade, net	3,582	3,482
Related parties	196	265
Inventories	5,499	4,824
Prepaid expenses and other current assets	1,040	975
Total current assets	11,435	13,779
Property, plant and equipment, net	7,333	7,190
Investments and long-term receivables:		
Investment in PO joint ventures	412	437
Equity investments	1,559	1,587
Related party receivables	4	14
Other investments and long-term receivables	68	67
Goodwill	585	595
Intangible assets, net	1,177	1,360
Other assets	266	273
Total assets	\$ 22,839	\$ 25,302

See Notes to the Consolidated Financial Statements.

**Table of Contents****LYONDELLBASELL INDUSTRIES N.V.****CONSOLIDATED BALANCE SHEETS**

Millions, except shares and par value data	December 31,	
	2011	2010
<b>LIABILITIES AND EQUITY</b>		
Current liabilities:		
Current maturities of long-term debt	\$ 4	\$ 4
Short-term debt	48	42
Accounts payable:		
Trade	2,562	1,968
Related parties	852	793
Accrued liabilities	1,242	1,705
Deferred income taxes	310	319
Total current liabilities	5,018	4,831
Long-term debt	3,980	6,036
Other liabilities	2,277	2,183
Deferred income taxes	917	656
Commitments and contingencies		
Stockholders' equity:		
Ordinary shares, 0.04 par value, 1,275 million shares authorized, 573,390,514 and 565,676,222 shares issued, respectively	31	30
Additional paid-in capital	10,272	9,837
Retained earnings	841	1,587
Accumulated other comprehensive income (loss)	(427)	81
Treasury stock, at cost, 4,051,013 and 1,122,651 ordinary shares, respectively	(124)	
Total Company share of stockholders' equity	10,593	11,535
Non-controlling interests	54	61
Total equity	10,647	11,596
Total liabilities and equity		