BRASKEM SA Form 20-F April 14, 2014

As filed with the Securities and Exchange Commission on April 14, 2014

# **UNITED STATES**

# SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

# **FORM 20-F**

" REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

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

For the fiscal year ended December 31, 2013

OR

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

OR

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

Commission file number: 001-14862

# BRASKEM S.A.

(Exact Name of Registrant as Specified in its Charter)

N/A

The Federative Republic of Brazil

(Translation of Registrant's Name into English)

(Jurisdiction of Incorporation or Organization)

Rua Lemos Monteiro, 120 – 24° andar

Butantã—São Paulo—SP, CEP 05501-050, Brazil

(Address of Principal Executive Offices)

Mário Augusto da Silva

Braskem S.A.

Rua Lemos Monteiro, 120 – 24° andar

Butantã—São Paulo—SP, CEP 05501-050, Brazil

Telephone: + (55 11) 3576-9000

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(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

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

**Title of Each Class** 

Name of Each Exchange on which Registered

Preferred Shares, Class A, without par value per share, each represented by American Depositary Receipts

New York Stock Exchange

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

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None

The total number of issued shares of each class of stock of Braskem S.A. as of December 31, 2013 was:

451,688,652 Common Shares, without par value

345,002,878 Preferred Shares, Class A, without par value

593,818 Preferred Shares, Class B, without par value

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

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes "No x

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 x No "

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes "No"

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

Large accelerated filer x Accelerated filer "Non-accelerated filer "

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP International Financial Reporting Other "
Standards as issued by the International
Accounting Standards Board x

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow. "Item 17" Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes " No  $\bf x$ 

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#### PRESENTATION OF FINANCIAL AND OTHER INFORMATION

All references herein to the "real," "reais" or "R\$" are to the Brazilian real, the official currency of Brazil. All references to "U.S. dollars," "dollars" or "US\$" are to U.S. dollars, the official currency of the United States.

All references herein (1) to "we," "us" or "our company" are references to Braskem S.A., its consolidated subsidiaries and jointly controlled entities, and (2) to "Braskem" are references solely to Braskem S.A. All references herein to "Braskem Europe" mean Braskem Europe GmbH and its consolidated subsidiaries, including Braskem America, Inc., or Braskem America.

On April 10, 2014, the exchange rate for *reais* into U.S. dollars was R\$2.1987 to US\$1.00, based on the selling rate as reported by the Central Bank of Brazil (*Banco Central do Brasil*), or the Central Bank. The selling rate was R\$2.3426 to US\$1.00 on December 31, 2013, R\$2.0435 to US\$1.00 on December 31, 2012 and R\$1.876 to US\$1.00 on December 31, 2011, in each case, as reported by the Central Bank. The *real*/U.S. dollar exchange rate fluctuates widely, and the selling rate on April 10, 2014 may not be indicative of future exchange rates. See "Item 3. Key Information—Exchange Rates" for information regarding exchange rates for the *real* since January 1, 2009.

Solely for the convenience of the reader, we have translated some amounts included in "Item 3. Key Information—Selected Financial and Other Information" and elsewhere in this annual report from *reais* into U.S. dollars using the selling rate as reported by the Central Bank as of December 31, 2013 of R\$2.3426 to US\$1.00. These translations should not be considered representations that any such amounts have been, could have been or could be converted into U.S. dollars at that or at any other exchange rate. Such translations should not be construed as representations that the *real* amounts represent or have been or could be converted into U.S. dollars as of that or any other date.

#### **Financial Statements**

We maintain our books and records in reais. Our consolidated financial statements as of December 31, 2013 and 2012 and for the three years ended December 31, 2013 have been audited, as stated in the report appearing herein, and are included in this annual report.

We have prepared our consolidated financial statements included in this annual report in accordance with International Financial Reporting Standards, as issued by the International Accounting Standards Board, or IFRS.

## **Market Share and Other Information**

We make statements in this annual report about our market share in the petrochemical industry in Brazil and our production capacity relative to that of other petrochemical producers in Brazil, Latin America, the United States and the world. We have made these statements on the basis of information obtained from third-party sources that we believe are reliable. We have calculated our Brazilian market share with respect to specific products by dividing our domestic net sales volumes of these products by the total Brazilian domestic consumption of these products as

estimated by the Brazilian Chemical Industry Association (*Associação Brasileira da Indústria Química*), or ABIQUIM. We derive information regarding the production capacity of other companies in the Brazilian petrochemical industry and the estimated total Brazilian domestic consumption of petrochemical products principally from reports published by ABIQUIM. We derive information regarding the production capacity of other companies in the global petrochemical industry, the United States petrochemical industry and the Latin American petrochemical industry, international market prices for petrochemicals products and per capita consumption in certain geographic regions, principally from reports published by IHS, Inc., or IHS. We derive information regarding the size of the chemical distribution industry and our market share in this industry principally from reports published by the Brazilian Chemical and Petrochemical Distributors Association (*Associação Brasileira dos Distribuidores de Produtos Químicos e Petroquímicos*). We derive information relating to Brazilian imports and exports from the System for Analyzing International Trade (*Sistema de Análise das Informações de Comércio Exterior*), or ALICE-Web, produced by the Brazilian Secretary of International Trade (*Secretaria de Comércio Exterior*) and the Brazilian Secretary of Development, Industry and Trade (*Ministério do Desenvolvimento, Indústria e Comércio Exterior*).

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We have no reason to believe that any of this information is inaccurate in any material respect. However, we have not independently verified the production capacity, market share, market size or similar data provided by third parties or derived from industry or general publications.

We provide information regarding domestic apparent consumption of some of our products, based on information available from the Brazilian government, Institute of Applied Economic Research (*Instituto de Pesquisa Econômica Aplicada*), or IPEA, and ABIQUIM. Domestic apparent consumption is equal to domestic production plus imports minus exports. Domestic apparent consumption for any period may differ from actual consumption because this measure does not give effect to variations of inventory levels in the petrochemical supply chain.

# **Production Capacity and Sales Volume**

As used in this annual report:

- "production capacity" means the annual nominal capacity for a particular facility, calculated based upon operations for 24 hours each day of a year and deducting scheduled downtime for regular maintenance; and
- "ton" means a metric ton, which is equal to 1,000 kilograms or 2,204.62 pounds.

## **Rounding**

We have made rounding adjustments to some of the amounts included in this annual report. As a result, numerical figures shown as totals in some tables may not be arithmetic aggregations of the amounts that precede them.

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# CAUTIONARY STATEMENT WITH RESPECT TO FORWARD-LOOKING STATEMENTS

This annual report contains forward-looking statements. Some of the matters discussed concerning our business operations and financial performance include forward-looking statements within the meaning of the U.S. Securities Act of 1933, as amended, or the Securities Act, or the U.S. Securities Exchange Act of 1934, as amended, or the Exchange Act.

Statements that are predictive in nature, that depend upon or refer to future events or conditions or that include words such as "expects," "anticipates," "intends," "plans," "believes," "estimates" and similar expressions are forward-looking statements. Although we believe that these forward-looking statements are based upon reasonable assumptions, these statements are subject to several risks and uncertainties and are made in light of information currently available to us.

Our forward-looking statements may be influenced by numerous factors, including the following:

- general economic, political and business conditions in the markets in which we operate, including demand and prices for petrochemical products;
- interest rate fluctuations, inflation and exchange rate movements of the *real* in relation to the U.S. dollar;
- the cyclical nature of the global petrochemical industry;
- competition in global petrochemical industry;
- prices of naphtha, natural gas, propylene and other raw materials;
- actions taken by our major shareholders;
- our ability to implement our financing strategy and to obtain financing on satisfactory terms;
- our progress in integrating the operations of companies or assets that we may acquire in the future, so as to achieve the anticipated benefits of these acquisitions;
- changes in laws and regulations, including, among others, laws and regulations affecting tax and environmental matters and import tariffs in other markets in which we operate or to which we export our products;
- future changes in Brazilian policy and related actions undertaken by the Brazilian government;
- a deterioration in the world economy that could negatively impact demand for petrochemicals;
- decisions rendered in major pending or future tax, labor and other legal proceedings; and
- other factors identified or discussed under "Item 3. Key Information—Risk Factors."

Our forward-looking statements are not guarantees of future performance, and our actual results or other developments may differ materially from the expectations expressed in the forward-looking statements. As for

forward-looking statements that relate to future financial results and other projections, actual results will be different due to the inherent uncertainty of estimates, forecasts and projections. Because of these uncertainties, potential investors should not rely on these forward-looking statements.

Forward-looking statements speak only as of the date they are made, and we do not undertake any obligation to update them in light of new information or future developments or to release publicly any revisions to these statements in order to reflect later events or circumstances or to reflect the occurrence of unanticipated events.

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# **PART I**

# ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

#### ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

# **ITEM 3. KEY INFORMATION**

#### **Selected Financial and Other Information**

The following selected information should be read in conjunction with "Presentation of Financial and Other Information," "Item 5. Operating and Financial Review and Prospects" and our audited consolidated financial statements and the related notes thereto, which are included in this annual report.

The selected financial data as of December 31, 2013 and 2012 and for the three years ended December 31, 2013 have been derived from our audited consolidated financial statements, prepared in accordance with IFRS, and included in this annual report. The selected financial data as of December 31, 2011, 2010 and 2009 and for the year ended December 31, 2010 and 2009 have been derived from our audited consolidated financial statements, prepared in accordance with IFRS, which are not included in this annual report.

We have included information with respect to the dividends and/or interest attributable to shareholders' equity paid to holders of our common shares and preferred shares since January 1, 2009 in *reais* and in U.S. dollars translated from *reais* at the commercial market selling rate in effect as of the payment date under the caption "Item 8. Financial Information—Dividends and Dividend Policy—Payment of Dividends." We prepare individual financial statements in accordance with Brazilian GAAP for certain purposes, including for the calculation of dividends.

For the Year Ended December 31,							
2013(1)	2013	2012(2)	2011(3)	2010 (4)	2009(5)		
(in millions							
of US\$,							
except per							
share data							
and as							
indicated)	(in million	s of <i>reais</i> , exc	ept per shar	e data and a	s indicated)		

# **Statement of Operations Data:**

Net sales revenue	17,488.9	40,969.5	36,160.3	33,086.5	25,025.7	16,136.1
Cost of products sold	(15,291.0)	(35,820.8)	(32,709.1)	(29,265.0)	(21,028.9)	(13,529.7)
Gross profit	2,197.9	5,148.7	3,451.2	3,821.5	3,996.8	2,606.4
Income (expenses):						

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Selling and Distribution	(427.2)	(1,000.7)	(990.4)	(820.0)	(689.1)	(599.5)
General and administrative	(460.1)	(1,077.9)	(1,071.0)	(1,008.1)	(931.1)	(648.3)
Research and development	(49.4)	(115.8)	(106.2)	(99.1)	(78.8)	(63.1)
Results from equity investments	(1.4)	(3.2)	(25.8)	(1.0)	18.2	3.2
Results from business combinations			_	- 30.0	975.3	102.1
Other operating income (expenses), net	(90.1)	(211.1)	333.5	2.9	(96.6)	3.7
Operating profit	1,169.6	2,740.0	1,591.3	1,926.2	3,194.7	1,404.5
Financial results:						
Financial expenses	(1,088.1)	(2.549.1)	(3,926.2)	(3,560.5)	(1,692.0)	685.4
Financial income	330.0	773.0	532.0	759.0	364.9	(331.3)
Profit (loss) before income tax and social contribution	411.5	963.9	(1,802.9)	(875.3)	1,867.6	1,758.6
Income tax and social contribution	(195.0)	(456.9)	783.1	359.5	6.1	(1,359.9)
Profit (loss) from continuing operations	216.4	507.0	(1,019.8)	(515.8)	1,873.7	398.7
Results from discontinued operations	210.4	307.0	- 281.5	27.6	1,873.7	390.7
Profit (loss)	216.4	507.0	(738.3)	(488.2)	1,889.5	398.7
Fiolit (loss)	210.4	307.0	(736.3)	(400.2)	1,009.3	390.7
Net income attributable to shareholders		509.7	(731.1)	(496.5)	1,895.3	398.5
of the company	217.6					
Net income attributable to		(2.7)	(7.2)	8.3	(5.8)	
non-controlling interest	(1.2)					
Earnings (loss) per share (6):						
Basic:						
Common shares		0.6403	(1.2718)	(0.6566)	2.6816	0.7551
Preferred class "A" shares		0.6403	(1.2718)	(0.6566)	2.5683	0.7842
Preferred class "B" shares		0.6062	0	0	0.6029	0.6315
ADS (6)		1.2806	(2.5436)	(1.3132)	5.1366	1.5684
Diluted:						
Common shares		0.6403	(1.2718)	(0.6566)	2.6816	0.7551
Preferred class "A" shares		0.6403	(1.2718)	(0.6566)	2.5683	0.7842
Preferred class "B" shares		0.6062	Ó	Ó	0.6029	0.6315
ADS		1.2806	(2.5436)	(1.3132)	5.1366	1.5684

<sup>(1)</sup> Translated for convenience only using the selling rate as reported by the Central Bank as of December 31, 2013 for *reais* into U.S. dollars of R\$2.3426=US\$1.00.

<sup>(2)</sup> As a result of our decision to maintain IQ Soluções & Química, or QuantiQ, and Ipiranga Química Armazéns Gerais Ltda., or and IQAG, which previously represented the Chemical Distribution segment before we temporarily offered them for sale last year, we have restated our financials to include the Chemical Distribution segment as of 2011. Our financial information for 2012 has been restated to reflect the impacts of the adoption of IAS 19—Employee Benefits. See note 2.1.1. of our audited consolidated financial statements elsewhere in this annual report.

<sup>(3)</sup> The financial information for 2012, 2011 and 2010 was restated to reflect the impacts of the discontinued operations of Cetrel S.A., Distribuidora de Água Camaçari (formerly Braskem Distribuidora S.A., or Braskem Distribuidora).

- (4) Includes Braskem America as from April 1, 2010, Quattor Participações S.A., or Quattor (whose name was subsequently changed to Braskem Qpar S.A., or Braskem Qpar), and the subsidiaries, Unipar Comercial e Distribuidora S.A., or Unipar Comercial, and Polibutenos S.A. Indústrias Químicas, or Polibutenos, as from May 1, 2010. The financial information for 2010 has not been restated to reflect the impacts of our decision to maintain QuantiQ and IQAG before we temporarily offered them for sale last year because such impacts did not have a material effect in 2010.
- (5) The financial information for 2009 has not been restated to reflect the impacts of the discontinued operations described above in footnote 3 because such impacts did not have a material effect in 2009.
- (6) American depositary shares (ADS) are U.S. dollar-denominated equity shares of a foreign-based company on an American stock exchange. In our case, each ADS represents two class A preferred shares.

At and For the Year Ended December 31,	
2013(1) 2013 2012 2011 2010(2) (in millions of US\$, except as	2009
indicated) (in millions of <i>reais</i> , except as indicated)	
Balance Sheet Data:	
Cash, cash equivalents and 1,850.9 4,335.9 3,287.6 2,986.8 2,624.3 available-for-sale investments	2,945.0
Short-term trade accounts receivable 1,199.7 2,810.5 2,326.5 1,843.8 1,894.6	1,666.5
Inventories 2,198.5 5,150.3 4,102.1 3,623.5 3,015.7	1,721.8
Non-current assets held for sale 16.1 37,7 277,8 — —	
Property, plant and equipment, net 10,848.4 25,413.5 21,176.8 20,622.7 19,366.3	10,947.7
Total assets 20,637.8 48,346.1 41,170.0 37,397.2 34,477.5	23,371.8
Short-term borrowings (including 533.1 1,248.8 1,836.0 1,391.8 1,206.4	1,890.5
current portion of long-term	
borrowings)	
Short-term debentures (including — — — 517.7	316.7
current portion of debentures)	
Non-current liabilities held for sale — 109.8 — — —	— 7.424.0
Long-term borrowings 7,407.9 17,353.7 15,675.6 13,753.0 11,004.3	7,434.9
Long-term debentures — — — — — — — — — — — — — — — — — — —	5,473.2
Share capital       3,433.5       8,043.2       8,043.2       8,043.2       8,043.2         Shareholders' equity (including       3,279.0       7,681.3       8,652.0       9,979.9       10,408.3	3,473.2 4,978.6
non-controlling interest)	4,976.0
non-controlling interest)	
Other Financial and Operating Information:	
Cash Flow Information:	
Net cash provided by (used in):	
Operating activities 1,049.2 2,457.8 2,571.8 2,777.5 2,720.4	598.7
Investing activities (2,114.8) (4,954.2) (2,834.3) (2,866.5) (2,387.6)	(824.7)
Financing activities 1,542.8 3,614.2 633.9 494.7 (388.3)	495.3
Other Information: Capital expenditures:	
Property, plant and equipment 2,414.6 5,656.4 2,792.9 2,252.5 1,689.0	811.7
Investments in other companies — — — 619.2 939.4	(1.5)

# Domestic Sales Volume Data (in thousands of tons) (3):

Ethylene	3,360.0	3,329.3	3,097.4	2,949.9	2,253.2
Propylene	1.187.7	1,170.4	1,123.1	1,212.1	994.6
Polyethylene	1,765.7	1,668.2	1,524.9	1,546.8	1,048.4
Polypropylene	1,268.9	1,233.3	1,149.8	1,086.9	698.5
Polyvinyl chloride (PVC)	636.5	560.9	484.0	504.9	457.4

<sup>(1)</sup> Translated for convenience only using the selling rate as reported by the Central Bank as of December 31, 2013 for *reais* into U.S. dollars of R\$2.3426=US\$1.00.

<sup>(2)</sup> Includes Braskem America as from April 1, 2010, Quattor and the subsidiaries, Unipar Comercial and Polibutenos as from May 1, 2010.

<sup>(3)</sup> Including intra-company sales within our company. Intra-company sales of ethylene totaled approximately 2,828,200 tons in 2013, 2,805,500 in 2012, 2,606,100 in 2011, 2,511,500 tons in 2010 and 1,928,300 tons in 2009. Intra-company sales of propylene totaled approximately 977,900 tons in 2013, 950,000 tons in 2012, 905,400 tons in 2011, 926,300 tons in 2010 and 628,800 tons in 2009.

# **Exchange Rates**

The Brazilian foreign exchange system allows the purchase and sale of foreign currency and the international transfer of *reais* by any person or legal entity, regardless of the amount, subject to certain regulatory procedures.

Since 1999, the Central Bank has allowed the U.S. dollar-*real* exchange rate to float freely, and, since then, the U.S. dollar-*real* exchange rate has fluctuated considerably.

In the past, the Central Bank has intervened occasionally to control unstable movements in foreign exchange rates. We cannot predict whether the Central Bank or the Brazilian government will continue to permit the *real* to float freely or will intervene in the exchange rate market through the return of a currency band system or otherwise. The *real* may depreciate or appreciate against the U.S. dollar substantially. Furthermore, Brazilian law provides that, whenever there is a serious imbalance in Brazil's balance of payments or there are serious reasons to foresee a serious imbalance, temporary restrictions may be imposed on remittances of foreign capital abroad. We cannot assure you that such measures will not be taken by the Brazilian government in the future. See "—Risk Factors—Risks Relating to Brazil—Brazilian government exchange control policies could increase the cost of servicing our foreign currency-denominated debt, adversely affect our ability to make payments under our foreign currency-denominated debt obligations and impair our liquidity" and "—Risk Factors—Risks Relating to Our Class A Preferred Shares and the ADSs—If holders of the ADSs exchange them for class A preferred shares, they may risk temporarily losing, or being limited in, the ability to remit foreign currency abroad and certain Brazilian tax advantages."

The following table shows the selling rate for U.S. dollars for the periods and dates indicated. The information in the "Average" column represents the average of the exchange rates on the last day of each month during the periods presented.

		Reais per U.S. Dollars				
<u>Year</u>	High	Low	Average	Period End		
2009	R\$2.422	R\$1.702	R\$1.990	R\$1.741		
2010	1.881	1.655	1.759	1.666		
2011	1.902	1.535	1.675	1.876		
2012	2.112	1.702	1.955	2.043		
2013	2.446	1.953	2.161	2.343		

	<i>Reais</i> per U.S	S. Dollars
<u>Month</u>	High	Low
October 2013	2.2087	2.1611
November 2013	2.3362	2.2426
December 2013	2.3817	2.3102
January 2014	2.4397	2.3335
February 2014	2.4238	2.3334
March 2014	2.3649	2.2603
April 2014 (through April 10)	2.2811	2.1974

Source: Central Bank

#### **Risk Factors**

#### Risks Relating to Our Company and the Petrochemical Industry

The cyclical nature of the petrochemical industry may reduce our net sales revenue and gross margin.

The petrochemical industry, including the markets in which we compete, is cyclical and sensitive to changes in global supply and demand. This cyclicality may reduce our net sales revenue and gross margin, including as follows:

- downturns in general business and economic activity may cause demand for our products to decline;
- when global demand falls, we may face competitive pressures to lower our prices; and
- if we decide to expand our plants or construct new plants, we may do so based on an estimate of future demand that never materializes or materializes at levels lower than we predicted.

Historically, the international petrochemical markets have experienced alternating periods of limited supply, which have caused prices and profit margins to increase, followed by expansion of production capacity, which has resulted in oversupply and reduced prices and profit margins. Prices in the Brazilian petrochemical industry follow the global

petrochemical industry, and we establish the prices for the products we sell in Brazil with reference to international market prices. Therefore, our net sales revenue and gross margin are increasingly linked to global industry conditions that we cannot control.

Global macroeconomic factors have had, and may continue to have, adverse effects on the margins that we realize on our products.

Our results of operations may be materially affected by adverse conditions in the financial markets and depressed economic conditions generally. Economic downturns in geographic areas in which we sell our products may 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.

The global economy showed signs of recovery in 2013, with a positive impact on the global demand for petrochemicals, which increased by 3.7% in 2013. In 2013, the Brazilian economy registered GDP growth of 2.3% as compared to 1.0% in 2012 and 2.7% in 2011 and demand for thermoplastic resins in Brazil grew by 8.4%.

Our ability to export to other countries is a function of the level of economic growth in these countries and other economic conditions, including prevailing inflation and interest rates. In addition, disruptions in the global balance between supply and demand may impair our ability to export our products in response to a decline in domestic demand for these products. Prolonged volatility in economic activity in our key export markets could continue to reduce demand for some of our products and lead to increased margin pressure by importers into Brazil, which would adversely affect our results of operations.

We face competition from producers of polyethylene, polypropylene, PVC and other petrochemical products.

We face competition in Brazil from foreign producers of polyethylene, polypropylene, PVC and other petrochemical products. Our U.S. operations face competition in the United States from other U.S. producers of polypropylene. Our German operations face competition in Europe and the other export markets that it serves from European and other foreign producers of polypropylene. We generally set the prices for our second generation products sold in Brazil with reference to the prices charged for these products by foreign producers in international markets and set the prices for polypropylene sold in the United States with reference to industry indices or based on negotiations with its customers. We generally set the prices for our second generation products exported from Brazil based on international spot market prices. As a result of the announced commissioning of new ethylene capacity, particularly in the Middle East and in China, coupled with the increased competitiveness of gas-based ethylene producers in United States as a result of their relatively lower raw material costs, we anticipate that we may experience increasing competition from other producers of second generation products in the markets in which we sell these products. In addition, the appreciation of the *real* against the U.S. dollarincreases the competitiveness of prices of imported products in *reais*, which may increase the competition in Brazil from other producers of second generation products. Some of our foreign competitors are substantially larger and have greater financial, manufacturing, technological and marketing resources than our company.

Higher raw materials costs would increase our cost of sales and services rendered and may reduce our gross margin and negatively affect our overall financial performance.

Naphtha, a crude oil derivative, is the principal raw material used by our Basic Petrochemicals Unit and, indirectly, in our other business units. Naphtha accounted, directly and indirectly, for approximately 48.9% of our consolidated cost of sales and services rendered in 2013.

We purchase naphtha for use by our Basic Petrochemical Unit from Petróleo Brasileiro S.A.—Petrobras, or Petrobras, at prices based on a variety of factors, including the Amsterdam-Rotterdam-Antwerp market prices of naphtha and a variety of other petrochemical derivatives, the volatility of the prices of these products in the international markets, the *real*/U.S. dollar exchange rate, and the level of paraffinicity of the naphtha that is delivered.

The price of naphtha that we purchase from other international suppliers is also linked to the Amsterdam-Rotterdam-Antwerp market price. The Amsterdam-Rotterdam-Antwerp market price of naphtha fluctuates primarily based on changes in the U.S. dollar-based price of crude oil in the international markets.

The average Amsterdam-Rotterdam-Antwerp market price of naphtha in U.S. dollars declined by 3.5% to US\$903 per ton in 2013 from US\$936 per ton in 2012 and US\$931 per ton in 2011. The price of naphtha in U.S. dollars has been, and may continue to be, volatile. In addition, the fluctuations of the U.S. dollar in the future may effectively increase our naphtha costs in reais. Any increase in naphtha costs would reduce our gross margin and negatively affect our overall financial performance to the extent we are unable to pass on these increased costs to our customers and could result in reduced sales volumes of our products.

Political volatility in the Middle East has had and may continue to have negative effects on oil production and price volatility, consequently driving naphtha and petrochemical prices higher worldwide. Volatility of the price of naphtha and the upward trend in the price of petroleum and naphtha have effects on the price competitiveness of our naphtha-based crackers and our resins. Because pricing trends for naphtha and ethane have diverged in recent years to a greater extent than has been the case historically, producers of ethylene and resin products derived from ethane generally have experienced lower unit raw material costs than naphtha-based producers of these products. As a consequence, significant increases in the pricing differential between naphtha and gas increases the competitiveness of products derived from ethane and may result in pricing pressure in the international markets and the vulnerability of our company to increasing competition in Brazil from imported products.

Natural gas reserves in North America may reduce the global prices of polyethylene, which would reduce our gross margin and negatively affect our overall financial performance.

In recent years, the use of ethane as a feedstock for the production of ethylene has increased as a result of its increasing availability and the divergence between the cost of natural gas and oil (from which naphtha and condensate are derived). Natural gas reserves have increased, particularly in North America, as the technology to extract gas from shale has improved. In order to improve their global competitiveness, most U.S. ethylene producers with the raw material flexibility to use ethane as a feedstock have converted to the use of the ethane feedstocks.

As a result of the increase in natural gas reserves in North America, (1) ethane has returned as a low-cost alternative to oil-based products and (2) additional gas production has resulted in an increasingly competitive ethane price. North American polyethylene producers have benefited from the low-cost position of natural gas prices, and the resulting increased competitiveness of North American polyethylene producers could decrease the global and domestic price of polyethylene, which would reduce our gross margin and negatively affect our overall financial performance.

We do not hedge against changes in the price of naphtha, so we are exposed to fluctuations in the price of our primary raw material.

We currently do not hedge our exposure to fluctuations in U.S. dollar or *real* prices of naphtha. Although we attempt to pass on increases in naphtha prices through higher prices for our products, in periods of high volatility in the U.S. dollar price of naphtha or in the *real/U.S.* dollar exchange rate, there is usually a lag between the time that the U.S. dollar price of naphtha increases or the *real* depreciates against the U.S. dollar and the time that we may effectively pass on those increased costs in *reais* to our customers in Brazil. As a result, if the U.S. dollar price of naphtha increases precipitously, or if the *real* depreciates against the U.S. dollar, as has occurred in recent years, we may not immediately be able to pass on all of the corresponding increases in our naphtha costs to our customers in Brazil, which would likely reduce our gross margin and net income.

We depend on Petrobras to supply us with a substantial portion of our naphtha, ethane and propane requirements.

Petrobras is the only Brazilian supplier of naphtha and has historically supplied approximately 70% of the naphtha consumed by our Basic Petrochemicals Unit. Petrobras produces most of the naphtha it sells to us and imports the balance. Petrobras currently is also the only Brazilian supplier of ethane and propane and has historically supplied all of the ethane and propane consumed by our subsidiary Rio Polímeros S.A., or RioPol, which operates the petrochemical complex located in Duque de Caxias in the State of Rio de Janeiro, or the Rio de Janeiro Complex.

Our production volume and net sales revenue would likely decrease and our overall financial performance would likely be negatively affected in the event of the following:

- significant damage to Petrobras' refineries or to the port facilities through which Petrobras imports naphtha, or to any of the pipelines connecting our plants to Petrobras' facilities, whether as a consequence of an accident, natural disaster, fire or otherwise; or
- any termination by Petrobras of the naphtha, ethane or propane supply contracts with our company, which provide that Petrobras may terminate the contracts for certain reasons described in "Item 4. Information on the Company—Basic Petrochemicals Unit—Raw Materials of Our Basic Petrochemicals Unit."

In addition, although regulatory changes have ended Petrobras' monopoly in the Brazilian naphtha market and have allowed us to import naphtha, any reversal in the continuing deregulation of the oil and gas industry in Brazil could increase our production costs.

Our Polyolefins Unit and Vinyls Unit depend on our basic petrochemicals plants to supply them with their ethylene and propylene requirements.

Our Basic Petrochemicals Unit is the only supplier of ethylene to our Vinyls Unit, the only supplier of ethylene to the polyethylene plants of our Polyolefins Unit and the principal supplier of propylene to the polypropylene plants of our Polyolefins Unit. Because the cost of storing and transporting ethylene is substantial and there is inadequate infrastructure in Brazil to permit the importing of large quantities of ethylene and propylene, our polyolefins plants in Brazil and our Vinyls Unit are highly dependent on the supply of these products by our basic petrochemicals plants. Consequently, our production volumes of, and net sales revenue from, polyolefins and vinyls products would decrease, and our overall financial performance would be negatively affected, in the event of the following:

- any significant damage to the facilities of our Basic Petrochemicals Unit through which ethylene or propylene is produced, or to the pipeline or other facilities that connect our polyolefins plants or vinyls plants to our basic petrochemicals plants, whether as a consequence of an accident, natural disaster, fire or otherwise;
- any significant reduction in the supply of naphtha to our Basic Petrochemicals Unit, as naphtha is the principal raw material used by our Basic Petrochemicals Unit in the production of ethylene and propylene; or
- any significant reduction in the supply of ethane or propane to our subsidiary RioPol, as ethane and propane are the principal raw materials used by RioPol in the production of ethylene and propylene.

We depend on Petrobras for a significant portion of the propylene that we use in Brazil to produce polypropylene.

During 2013, 44.5% of the propylene used by our Polyolefins Unit was supplied by Petrobras. Because the cost of storing and transporting propylene is substantial and there is inadequate infrastructure in Brazil to permit the importation of large quantities of these products, we are highly dependent on propylene supplied by Petrobras and production volumes of, and net sales revenue from, polypropylene products would decrease, and our overall financial performance would be negatively affected, in the event of the following:

• significant damage to Petrobras' refineries or to any of the pipelines connecting our polypropylene plants to Petrobras' facilities, whether as a consequence of an accident, natural disaster, fire or otherwise; or

• any termination by Petrobras of the supply contracts with our company, which provide that Petrobras may terminate the contracts for a number of reasons described in "Item 4. Information on the Company—Polyolefins Unit—Raw Materials of Our Polyolefins Unit."

Any downgrade in the ratings of our company or our debt securities would likely result in increased interest and other financial expenses related to our borrowings and debt securities and could reduce our liquidity.

Standard & Poor's Ratings Services, a division of The McGraw-Hill Companies, Inc., or Standard & Poor's, Moody's Investors Service, or Moody's, and Fitch, Inc., or Fitch, maintain ratings of our company and our debt securities. Currently, Standard & Poor's, Moody's and Fitch maintain ratings of our company on a local and a global basis. On a global basis, Standard & Poor's maintains a local currency rating for our company of "BBB - (stable)," Moody's maintains a local currency rating for our company of "Baa3 (negative)," and Fitch maintains a local currency rating for our company of "BBB-/Negative Outlook" and foreign currency rating for our company of "BBB-/Negative Outlook." Any decision by these agencies to downgrade the ratings of our company or of our debt securities in the future would likely result in increased interest and other financial expenses relating to our borrowings and debt securities and the inclusion of financial covenants in the instruments governing new indebtedness, and could significantly reduce our ability to obtain such financing on satisfactory terms or in amounts required by us and our liquidity.

Some of our shareholders may have the ability to determine the outcome of corporate actions or decisions, which could affect the holders of our class A preferred shares and the ADSs.

Odebrecht S.A., or Odebrecht, directly or through its wholly-owned subsidiary Odebrecht Serviços e Participações S.A., or OSP, owns 38.38% of our outstanding share capital, including 50.11% of our voting share capital. Designees of Odebrecht constitute a majority of the members of our board of directors. Under a shareholders' agreement to which OSP and Petrobras are parties, which we refer to as the Petrobras Shareholders' Agreement, we have agreed to undertake certain actions only after Odebrecht and Petrobras have reached a consensus with respect to those actions and Odebrecht will have the sole power to approve the business plan of our company, as described under "Item 7. Major Shareholders and Related Party Transactions—Major Shareholders—Shareholders' Agreements." As a result, Odebrecht will have the ability to determine the outcome of most corporate actions or decisions requiring the approval of our shareholders or our board of directors — in certain instances, with the consent of Petrobras — which could affect the holders of our class A preferred shares and the American Depositary Shares, or ADSs.

We may face conflicts of interest in transactions with related parties.

We maintain trade accounts receivable and current and long-term payables with some of our affiliates and other related parties, including Petrobras, which is our sole domestic supplier of naphtha. Petrobras holds 36.2% of our outstanding share capital, including 47.0% of our voting share capital. These accounts receivable and accounts payable balances result mainly from purchases and sales of goods, which are at prices and on terms equivalent to the average terms and prices of transactions that we enter into with third parties, other than the prices that we pay under our naphtha purchase agreements with Petrobras, which we believe are more suitable to the products that we receive from Petrobras compared to products and prices available in transactions that we enter into with other third parties. We also engage in financial and other transactions with some of our direct and indirect shareholders. These and other commercial and financial transactions between us and our affiliates could result in conflicting interests between our company and these shareholders.

We may make significant acquisitions which, if not successfully integrated with our company, may adversely affect our operating results.

We may make significant acquisitions in the future. Acquisitions involve risks, including the following:

- failure of the acquired businesses to achieve expected results;
- possible inability to retain or hire key personnel of the acquired businesses;
- possible inability to achieve expected synergies and/or economies of scale;
- unanticipated liabilities; and
- antitrust considerations.

If we are unable to integrate or manage acquired businesses successfully, we may not realize anticipated cost savings, revenue growth and levels of integration, which may result in reduced profitability or operating losses.

We may face unforeseen challenges in the implementation of Project Ethylene XXI which could result in this project failing to provide expected benefits to our company.

In 2012, we began construction of an olefins complex, or the Mexico Complex, to be located in the Mexican state of Veracruz. For more information about this project, which we refer to as Project Ethylene XXI, see "Item 4. Information on the Company—Capital Expenditures—Joint Venture Projects—Project Ethylene XXI."

Braskem Idesa S.A.P.I., or Braskem Idesa, our joint venture with Grupo Idesa, S.A. de C.V., or Idesa, one of Mexico's leading petrochemical groups, to develop Project Ethylene XXI will undertake significant capital expenditure programs to implement this project. Our ability to achieve our strategic objectives relating to this project will depend on, in large part, the successful, timely and cost-effective implementation of this project. Factors that could affect this implementation include the following:

- the outcome of negotiations with governments, suppliers, customers or others;
- the ability of Braskem Idesa to complete the project's milestones in order obtain future disbursements under our project finance facilities that are necessary for the implementation of this project;
- difficulties in obtaining necessary licenses and or complying with applicable regulations;
- the occurrence of unforeseen technical difficulties (including technical problems that may delay start-up of, or interrupt production from, Project Ethylene XXI or lead to unexpected downtime of the plants of Braskem Idesa);
- delays in the delivery of third-party equipment or services by Braskem Idesa's vendors;
- the failure of the equipment supplied by these vendors to comply with the expected capabilities of this equipment; and
- delays resulting from the failure of third-party suppliers or contractors to meet their obligations in a timely and cost-effective manner.

Although we believe that the cost estimate and implementation schedule of Project Ethylene XXI is reasonable, we cannot assure you that the actual costs or time required to complete the implementation of this project will not substantially exceed our current estimates. Any significant cost overrun or delay could hinder or prevent the implementation of our business plan, as originally conceived, and result in revenues and net income being less than expected.

Future adjustments in tariffs on imports that compete with our products could cause us to lower our prices.

We currently benefit from tariffs imposed by the Brazilian government on imports that allow us to charge prices for our polyolefins and vinyls products in the domestic market that include a factor based on the tariffs levied on comparable imports of those products. However, the Brazilian government has in the past used import and export tariffs to effect economic policies, with the consequence that tariffs can vary considerably, especially tariffs on petrochemical products. For example, in September 2012, the Brazilian government increased import duties on 100 products related to various industries, including an increase on the import tariff for polyethylene. In October 2012, it

increased the import tariff for polyethylene from 14% to 20% and in October 2013, it reduced the import tariff for polyethylene to 14%. Future adjustments of tariffs could lead to increase competition from imports and cause us to lower our domestic prices, which would likely result in lower net sales revenue and could negatively affect our overall financial performance. Additionally, the products we produce in the United States and Europe are subject to tariffs in the amount of 6.5% in each jurisdiction. These tariffs generally favor our products produced locally and any future adjustments to these tariff structures could negatively impact our sales in these jurisdictions.

Our business is subject to stringent environmental regulations, and the imposition of new regulations could require significant capital expenditures and increase our operating costs.

We, like other Brazilian petrochemical producers, are subject to stringent Brazilian federal, state and local environmental laws and regulations concerning human health, the handling and disposal of solid and hazardous wastes and discharges of pollutants into the air and water. Petrochemical producers are sometimes subject to unfavorable market perceptions as a result of the environmental impact of their business, which can have an adverse effect on their results of operations.

Our operations in the United States and Germany are subject to extensive U.S. and German federal, state and local laws, regulations, rules and ordinances relating to pollution, protection of the environment and the generation, storage, handling, transportation, treatment, disposal and remediation of hazardous substances and waste materials. U.S. environmental laws and regulations may impose liability on us for the conduct of third parties, or for actions that complied with applicable requirements when taken, regardless of negligence or fault. Of particular significance to us are (1) regulatory programs to be established to implement air quality standards under the National Ambient Air Quality Standards for ozone and fine particles promulgated by the U.S. Environmental Protection Agency, or the EPA, and (2) various legislative and regulatory measures in the United States which are under review, discussion or implementation to address greenhouse gas emissions.

Costs and capital expenditures relating to environmental, health or safety matters are subject to evolving regulatory requirements and will depend on the timing of the promulgation and enforcement of specific standards which impose the requirements. Moreover, changes in environmental regulations could inhibit or interrupt our operations, or require modifications to our facilities. Accordingly, environmental, health or safety regulatory matters may result in significant unanticipated costs or liabilities.

We manufacture products that are subject to the risk of fire, explosions and other hazards.

Our operations are subject to hazards, such as fires, explosions and other accidents, associated with the manufacture of petrochemicals and the storage and transportation of feedstocks and petrochemical products. These hazards can cause personal injury and loss of life, severe damage to or destruction of property and equipment and environmental damage. A sufficiently large accident at one of our plants or storage facilities could force us to suspend our operations temporarily and result in significant remediation costs and lost net sales revenue. For example, in May 2011, our Alagoas chlor-alkali plant experienced a chlorine leak and rupture of equipment caused by an abnormal and unpredictable increase in the concentration of trichloramine generated in this plant's production process. As a result of the chlorine leak, approximately 150 local residents were examined for respiratory contamination by the emergency room of a local hospital. All were released within 24 hours. The equipment rupture resulted in the hospitalization of five employees of Mills Estruturas e Serviços de Engenharia S.A. working at this plant, three of whom were released from the hospital the following day. As a result of these incidents, our chlor-alkali plant was temporarily shut down for approximately two weeks.

Although we maintain insurance coverage for losses due to fire damage and for losses of income resulting from shutdowns due to fire, explosion or electrical damage, those insurance proceeds may not be available on a timely basis and may be insufficient to cover all losses, which could have a material adverse effect on our financial performance.

Unfavorable outcomes in pending or future litigation may reduce our liquidity and negatively affect our financial performance and financial condition.

We are, and in the future may be, involved in numerous tax, civil and labor disputes, among others, involving monetary claims. If unfavorable decisions are rendered in one or more of these lawsuits, we could be required to pay substantial amounts. For some of these lawsuits, we have not established any provision on our balance sheet or have established provisions only for part of the amounts in question, based on our judgments as to the likelihood of winning these lawsuits. For more information about our legal proceedings, see "Item 8. Financial Information—Legal Proceedings."

Labor unrest may materially and adversely affect our operations.

Labor unrest in our plants and facilities may have a material adverse effect on our financial condition or results of operations. For example, in August 2010, the unionized employees at our Neal, West Virginia plant went on strike. During the strike, the plant operated under the supervision of management until May 2011, when Braskem America entered into a new collective bargaining agreement. Although we believe that we maintain good relations with our employees, future labor actions, including strikes, could have a material adverse effect on our financial performance.

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Natural disasters, severe weather and climate conditions could have a material adverse effect on our overall business.

Some of our facilities are located in places that could be affected by natural disasters, such as floods, earthquakes, hurricanes, tornados and other natural disasters, which could disrupt our operations or the operations of our customers and could damage or destroy infrastructure necessary to transport our products as part of the supply chain. Such events could require maintenance shutdowns, delay shipments of existing inventory or result in costly repairs, replacements or other costs, all of which could have a material adverse effect on our financial performance.

Additionally, approximately 70% of Brazil's installed electric generation capacity is currently dependent upon hydroelectric generation facilities. If the amount of water available to energy producers becomes increasingly scarce due to drought or diversion for other uses as has happened in recent years, the cost of energy, which represented approximately 2.4% of our total cost of goods sold in 2013, may increase. Such conditions could have a material adverse effect on our sales and margins.

# Risks Relating to Brazil

Brazilian political and economic conditions, and the Brazilian government's economic and other policies, may negatively affect demand for our products as well as our net sales revenue and overall financial performance.

The Brazilian economy has been characterized by frequent and occasionally extensive intervention by the Brazilian government and unstable economic cycles. The Brazilian government has often changed monetary, taxation, credit, tariff and other policies to influence the course of Brazil's economy. The Brazilian government's actions to control inflation and implement other policies have at times involved wage and price controls, blocking access to bank accounts, imposing capital controls and limiting imports into Brazil.

Our results of operations and financial condition may be adversely affected by factors such as:

- fluctuations in exchange rates;
- exchange control policies;
- interest rates;
- inflation;
- tax policies;
- expansion or contraction of the Brazilian economy, as measured by rates of growth in GDP;
- liquidity of domestic capital and lending markets; and
- other political, diplomatic, social and economic developments in or affecting Brazil.

Uncertainty over whether possible changes in policies or rules affecting these or other factors may contribute to economic uncertainties in Brazil and to heightened volatility in the Brazilian securities markets and securities issued

abroad by Brazilian issuers. The President of Brazil has considerable power to determine governmental policies and actions that relate to the Brazilian economy and, consequently, affect the operations and financial performance of businesses, such as our company. We cannot assure you that the policies that may be implemented by the Brazilian federal or state governments will not adversely affect our business, results of operations and financial condition.

Future changes in industrial policy and related actions undertaken by the Brazilian government may negatively affect demand for our products as well as our net sales revenue and overall financial performance.

We currently benefit from certain industrial policies and related actions undertaken by the Brazilian government intended to strengthen the domestic economic and certain local industries. Some of these policies and actions have recently included reductions in payroll taxes for plastic manufacturers, a program to improve the competitiveness of Brazilian plastics producers in the export markets by refunding the federal taxes levied on their export sale, intervention of the federal government to limit uniform import tariffs at local ports, increases in import duties on certain products, including polyethylene, and the reduction in the rates of Social Integration Program (*Programa de Integração Social*), or PIS, a federal value-added tax, and Contribution for Social Security Financing (*Contribuição para Financiamento da Seguridade Social*), or COFINS, taxes on feedstock purchases by first- and second-generation petrochemical producers, which are scheduled to be reduced to 1% by 2015 but increase to 3% in 2016, 5% in 2017 and 5.6% in 2018. Such industrial policies may be of limited duration and may be renewed or discontinued at the discretion of the Brazilian government. We cannot predict or control which policies will be renewed or discontinued and whether future changes to Brazilian industrial policy will be proposed and enacted in the future. If industrial policies that benefit us expire, or policies detrimental to us are implemented, our business, results of operations and financial condition may be adversely affected.

Fluctuations in the real/U.S. dollar exchange rate could increase inflation in Brazil, raise the cost of servicing our foreign currency-denominated debt and negatively affect our overall financial performance.

The exchange rate between the *real* and the U.S. dollar and the relative rates of depreciation and appreciation of the *real* have affected our results of operations and may continue to do so.

The Brazilian currency has been devalued on several occasions during the last four decades. Throughout this period, the Brazilian government has implemented various economic plans and various exchange rate policies, including sudden devaluations, periodic mini-devaluations (during which the frequency of adjustments has ranged from daily to monthly), exchange controls, dual exchange rate markets and a floating exchange rate system. From time to time, there have been significant fluctuations in the exchange rate between the Brazilian currency and the U.S. dollar and other currencies. In 2008, primarily as a result of the international financial volatility, foreign investors removed billions of reais from the Brazilian Securities, Commodities and Futures Exchange (*BM&FBOVESPA S.A. – Bolsa de Valores, Mercadorias e Futuros*), or the BM&FBOVESPA, resulting in the depreciation of the *real* by 31.9% against the U.S. dollar. The *real* appreciated against the U.S. dollar by 25.5% during 2009 and by 4.3% during 2010. The *real* depreciated by 12.6% against the U.S. dollar during 2011, by 9.0% during 2012 and by 14.6% during 2013.

Depreciation of the *real* relative to the U.S. dollar also could result in inflationary pressures in Brazil by generally increasing the price of imported products and services. On the other hand, the appreciation of the *real* against the U.S. dollar may lead to a deterioration of the country's current account and the balance of payments and may dampen export-driven growth.

We had total foreign currency-denominated debt obligations, all of which were denominated in U.S. dollars, in an aggregate amount of R\$12,940.1 million (US\$5,523.8 million) as of December 31, 2013, representing 69.6% of our consolidated indebtedness, not including transaction costs or the aggregate amount of R\$4,731.4 million (US\$2,030.8 million) outstanding as of December 31, 2013 in connection with the project finance debt related to Project Ethylene XXI. As of December 31, 2013, we had US\$1,058.3 million in foreign currency-denominated cash and cash

equivalents.

A significant depreciation of the *real* in relation to the U.S. dollar or other currencies could increase our financial expenses as a result of foreign exchange losses that we must record and could reduce our ability to meet debt service requirements of our foreign currency-denominated obligations. To enable us to more efficiently manage the effects of exchange rate fluctuations on our results, in 2013 we decided to designate part of our dollar-denominated liabilities as a hedge for our future exports. See "Item 5. Operating and Financial Review and Prospects—Year Ended December 31, 2013 Compared with Year Ended December 31, 2012—Financial Results" for more information.

The prices of naphtha, our most important raw material, and of some of our other raw materials, are denominated in or linked to the U.S. dollar. Naphtha accounted, directly and indirectly, for 48.9% of our consolidated cost of sales and services rendered in 2013. When the *real* depreciates against the U.S. dollar, the cost in *reais* of our U.S. dollar-denominated and U.S. dollar-linked raw materials increases, and our operating income in *reais* may decrease to the extent that we are unable to pass on these cost increases to our customers.

The Brazilian government's actions to combat inflation may contribute significantly to economic uncertainty in Brazil and reduce demand for our products.

Historically, Brazil has experienced high rates of inflation. Inflation, as well as government efforts to combat inflation, had significant negative effects on the Brazilian economy, particularly prior to 1995. The inflation rate, as measured by the General Price Index—Internal Availability (*Índice Geral de Preços—Disponibilidade Interna*), or the IGP-DI, reached 2,708% in 1993. Although inflation rates have been substantially lower since 1994 than in previous periods, inflationary pressures persist. Inflation rates, as measured by the IGP-DI, were (1.4)% in 2009, 11.3% in 2010, 5.0% in 2011, 8.10% in 2012 and 5.53% in 2013. The Brazilian government's measures to control inflation have often included maintaining a tight monetary policy with high interest rates, thereby restricting availability of credit and reducing economic growth. Inflation, actions to combat inflation and public speculation about possible additional actions also may contribute to economic uncertainty in Brazil and to heightened volatility in the Brazilian securities markets.

Brazil may experience high levels of inflation in future periods. Increasing prices for petroleum, the depreciation of the *real* and future governmental measures seeking to maintain the value of the *real* in relation to the U.S. dollar may trigger increases in inflation in Brazil. Periods of higher inflation may slow the rate of growth of the Brazilian economy, which would lead to reduced demand for our products in Brazil and decreased net sales revenue. Inflation is also likely to increase some of our costs and expenses, which we may not be able to pass on to our customers and, as a result, may reduce our profit margins and net income. In addition, high inflation generally leads to higher domestic interest rates, and, as a result, the costs of servicing our *real* denominated debt may increase, causing our net income to be reduced. Inflation and its effect on domestic interest rates can, in addition, lead to reduced liquidity in the domestic capital and lending markets, which could adversely affect our ability to refinance our indebtedness in those markets. Any decline in our net sales revenue or net income and any deterioration in our financial condition would also likely lead to a decline in the market price of our class A preferred shares and the ADS.

Fluctuations in interest rates could raise the cost of servicing our debt and negatively affect our overall financial performance.

Our financial expenses are affected by changes in the interest rates that apply to our floating rate debt. As of December 31, 2013, we had, among other debt obligations, R\$2,119.8 million of loans and financing and debentures that were subject to the Long-Term Interest Rate (*Taxa de Juros de Longo Prazo*), or TJLP, R\$2,367.6 million of loans and financing and debentures that were subject to the Interbank Deposit Certificate (*Certificado de Depósito Interbancário*), or CDI rate, and R\$4,979.6 million of loans and financing that were subject to the London Interbank Offered Rate, or LIBOR.

The TJLP includes an inflation factor and is determined quarterly by the Central Bank. In particular, the TJLP and the CDI rate have fluctuated significantly in the past in response to the expansion or contraction of the Brazilian economy, inflation, Brazilian government policies and other factors. See "Item 11. Quantitative and Qualitative Disclosures about Market Risk." A significant increase in any of these interest rates could adversely affect our financial expenses and negatively affect our overall financial performance.

Brazilian government exchange control policies could increase the cost of servicing our foreign currency-denominated debt, adversely affect our ability to make payments under our foreign currency-denominated debt obligations and impair our liquidity.

The purchase and sale of foreign currency in Brazil is subject to governmental control. Many factors could cause the Brazilian government to institute more restrictive exchange control policies, including the extent of Brazil's foreign currency reserves, the availability of sufficient foreign exchange on the date a payment is due, the size of Brazil's debt service burden relative to the economy as a whole, Brazil's policy towards the International Monetary Fund and political constraints to which Brazil may be subject. A more restrictive policy could increase the cost of servicing, and thereby reduce our ability to pay, our foreign currency-denominated debt obligations and other liabilities. Our foreign-currency debt denominated in dollars represented an aggregate of 69.6% of our indebtedness on a consolidated basis as ofDecember 31, 2013, not including transaction costs or the aggregate amount of R\$4,731.4 million (US\$2,030.8 million) outstanding as ofDecember 31, 2013 in connection with the project finance debt related to Project Ethylene XXI. If we fail to make payments under any of these obligations, we will be in default under those obligations, which could reduce our liquidity as well as the market price of our class A preferred shares and the ADS.

Changes in tax laws may result in increases in certain direct and indirect taxes, which could reduce our gross margin and negatively affect our overall financial performance.

The Brazilian government implements from time to time changes to tax regimes that may increase our and our customers' tax burdens. These changes include modifications in the rate of assessments and, on occasion, enactment of temporary taxes, the proceeds of which are earmarked for designated governmental purposes. We cannot predict the changes to Brazilian tax law that may be proposed and enacted in the future. However, future changes in Brazilian tax law may result in increases in our overall tax burden, which could reduce our gross margin and negatively affect our overall financial performance.

## Risks Relating to Our Class A Preferred Shares and the ADSs

Holders of our class A preferred shares or the ADSs may not receive any dividends or interest on shareholders' equity.

According to our by-laws and Brazilian corporate law, we must generally pay our shareholders at least 25% of our annual net income as dividends or interest on shareholders' equity, as calculated and adjusted under Brazilian GAAP (which, for this purpose, is identical to IFRS). This adjusted net income may be capitalized, used to absorb losses or otherwise retained as allowed under Brazilian GAAP and may not be available to be paid as dividends or interest on shareholders' equity. The Brazilian Corporation Law allows a publicly traded company like ours to suspend the mandatory distribution of dividends in any particular year if our board of directors informs our shareholders that such distributions would be inadvisable in view of our financial condition or cash availability. Holders of our class A preferred shares or the ADSs may not receive any dividends or interest on shareholders' equity in any given year if our board of directors makes such a determination or if our operations fail to generate net income.

Our class A preferred shares and the ADSs have limited voting rights and are not entitled to vote to approve corporate transactions, including mergers or consolidations of our company with other companies, or the declaration of dividends.

Under the Brazilian Corporation Law and our by-laws, holders of our class A preferred shares and, consequently, the ADSs are not entitled to vote at meetings of our shareholders, except in very limited circumstances. These limited circumstances directly relate to key rights of the holders of class A preferred shares, such as modifying basic terms of our class A preferred shares or creating a new class of preferred shares with superior rights. Holders of preferred shares without voting rights are entitled to elect one member and his or her respective alternate to our board of directors and our fiscal council. Holders of our class A preferred shares and the ADSs are not entitled to vote to approve corporate transactions, including mergers or consolidations of our company with other companies, or the declaration of dividends. See "Item 10. Additional Information—Description of Our Company's By-laws—Voting Rights."

Holders of the ADSs may find it difficult to exercise even their limited voting rights at our shareholders' meetings.

Under Brazilian law, only shareholders registered as such in our corporate books may attend our shareholders' meetings. All class A preferred shares underlying the ADSs are registered in the name of the depositary. ADS holders may exercise the limited voting rights with respect to our class A preferred shares represented by the ADSs only in accordance with the deposit agreement relating to the ADSs, which provides that voting rights are only available to ADS holders at our discretion. There are practical limitations upon the ability of ADS holders to exercise their voting

rights due to the additional steps involved in communicating with ADS holders. For example, we are required to publish a notice of our shareholders' meetings in certain newspapers in Brazil. To the extent that holders of our class A preferred shares are entitled to vote at a shareholders' meeting, they will be able to exercise their voting rights by attending the meeting in person or voting by proxy. By contrast, holders of the ADSs will receive notice of a shareholders' meeting by mail from the depositary following our notice to the American Depositary Receipt, or ADR, depository requesting the ADR depository to do so. To exercise their voting rights, ADS holders must instruct the depositary on a timely basis. This noticed voting process will take longer for ADS holders than for holders of class A preferred shares. If it fails to receive timely voting instructions for all or part of the ADSs, the depositary will assume that the holders of those ADSs are instructing it to give a discretionary proxy to a person designated by us to vote their ADSs, except in limited circumstances.

In the limited circumstances in which holders of the ADSs have voting rights, they may not receive the voting materials in time to instruct the depositary to vote the class A preferred shares underlying their ADSs. In addition, the depositary and its agents are not responsible for failing to carry out the voting instructions of the holders of the ADSs or for the manner of carrying out those voting instructions. Accordingly, holders of the ADSs may not be able to exercise their voting rights, and they will have no recourse if the class A preferred shares underlying their ADSs are not voted as requested.

If holders of the ADSs exchange them for class A preferred shares, they may risk temporarily losing, or being limited in, the ability to remit foreign currency abroad and certain Brazilian tax advantages.

The Brazilian custodian for the preferred shares underlying the ADSs must obtain an electronic registration number with the Central Bank to allow the depositary to remit U.S. dollars abroad. ADS holders benefit from the electronic certificate of foreign capital registration from the Central Bank obtained by the custodian for the depositary, which permits it to convert dividends and other distributions with respect to the class A preferred shares into U.S. dollars and remit the proceeds of such conversion abroad. If holders of the ADSs decide to exchange them for the underlying preferred shares, they will only be entitled to rely on the custodian's certificate of registration with the Central Bank for five business days after the date of the exchange. Thereafter, they will be unable to remit U.S. dollars abroad unless they obtain a new electronic certificate of foreign capital registration in connection with the preferred shares, which may result in expenses and may cause delays in receiving distributions. See "Item 10. Additional Information—Exchange Controls."

Also, if holders of the ADSs that exchange the ADSs for our Class A preferred shares do not qualify under the foreign investment regulations, they will generally be subject to less favorable tax treatment of dividends and distribution on, and the proceeds from any sale of, our preferred shares. See "Item 10. Additional information—Exchange Controls" and "Item 10. Additional Information—Taxation—Brazilian Tax Considerations."

Holders of the ADSs may face difficulties in protecting their interests because we are subject to different corporate rules and regulations as a Brazilian company and our shareholders may have fewer and less well-defined rights.

Holders of the ADSs are not direct shareholders of our company and are unable to enforce the rights of shareholders under our by-laws and the Brazilian Corporation Law.

Our corporate affairs are governed by our by-laws and the Brazilian Corporation Law, which differ from the legal principles that would apply if we were incorporated in a jurisdiction in the United States, such as the State of Delaware or New York, or elsewhere outside Brazil. Even if a holder of ADSs surrenders its ADSs and becomes a direct shareholder, its rights as a holder of the class A preferred shares underlying the ADSs under the Brazilian Corporation Law to protect its interests relative to actions by our board of directors may be fewer and less well-defined than under the laws of those other jurisdictions.

Although insider trading and price manipulation are crimes under Brazilian law and are the subject of continuously evolving regulations promulgated by the CVM, the Brazilian securities markets are not as highly regulated and supervised as the U.S. securities markets or the markets in some other jurisdictions. In addition, rules and policies against self-dealing or for preserving shareholder interests may be less well-defined and enforced in Brazil than in the United States and certain other countries, which may put holders of our class A preferred shares and the ADSs at a potential disadvantage. Corporate disclosures also may be less complete or informative than for a public company in

the United States or in certain other countries.

Actual or anticipated sales of a substantial number of class A preferred shares could decrease the market prices of our class A preferred shares and the ADSs.

Sales of a substantial number of our class A preferred shares could negatively affect the market prices of our class A preferred shares and the ADSs. If, in the future, substantial sales of shares are made through the securities markets by OSP, Petrobras or other existing or future holders of class A preferred shares, the market price of our class A preferred shares and, by extension, the ADSs may decrease significantly. As a result, holders of the ADSs may not be able to sell the ADSs at or above the price they paid for them.

Holders of the ADSs or class A preferred shares in the United States may not be entitled to the same preemptive rights as Brazilian shareholders have, pursuant to Brazilian legislation, in the subscription of shares resulting from capital increases made by us.

Under Brazilian law, if we issue new shares in exchange for cash or assets as part of a capital increase, subject to certain exceptions, we must grant our shareholders preemptive rights at the time of the subscription of shares, corresponding to their respective interest in our share capital, allowing them to maintain their existing shareholding percentage. We may not legally be permitted to allow holders of ADSs or class A preferred shares in the United States to exercise any preemptive rights in any future capital increase unless (1) we file a registration statement for an offering of shares resulting from the capital increase with the U.S. Securities and Exchange Commission, or the SEC, or (2) the offering of shares resulting from the capital increase qualifies for an exemption from the registration requirements of the Securities Act. At the time of any future capital increase, we will evaluate the costs and potential liabilities associated with filing a registration statement for an offering of shares with the SEC and any other factors that we consider important in determining whether to file such a registration statement. We cannot assure the holders of the ADSs or class A preferred shares in the United States that we will file a registration statement with the SEC to allow them to participate in any of our capital increases. As a result, the equity interest of such holders in our company may be diluted.

Brazilian tax laws may have an adverse impact on the taxes applicable to the disposition of our ADSs and preferred shares.

According to Law No. 10,833, enacted on December 29, 2003, if a nonresident of Brazil disposes of assets located in Brazil, the transaction will be subject to taxation in Brazil, even if such disposition occurs outside Brazil or if such disposition is made to another nonresident. Dispositions of our ADSs between nonresidents, however, are currently not subject to taxation in Brazil. Nevertheless, in the event that the concept of "disposition of assets" is interpreted to include the disposition between nonresidents of assets located outside Brazil, this tax law could result in the imposition of withholding taxes in the event of a disposition of our ADSs made between nonresidents of Brazil. Due to the fact that as of the date of this annual report Law No. 10,833/2003 has no judicial guidance as to its application, we are unable to predict whether an interpretation applying such tax laws to dispositions of our ADSs between nonresidents could ultimately prevail in Brazilian courts. See "Item 10. Additional Information—Taxation—Brazilian Tax Considerations."

The relative volatility and liquidity of the Brazilian securities markets may adversely affect holders of our class A preferred shares and the ADSs.

The Brazilian securities markets are substantially smaller, less liquid and more volatile than major securities markets in the United States and other jurisdictions, and may be regulated differently from the manner in which U.S. investors are accustomed. Factors that may specifically affect the Brazilian equity markets may limit the ability of holders of the ADSs to sell class A preferred shares underlying ADSs at a price and at a time when they wish to do so and, as a result, could negatively impact the market price of the ADSs themselves.

Developments in other emerging markets may decrease the market price of our class A preferred shares and the ADSs.

The market price of our class A preferred shares and the ADSs may decrease due to declines in the international financial markets and world economic conditions. Although economic conditions are different in each country, investors' reaction to developments in one country can affect the securities markets and the securities of issuers in other countries, including Brazil. Brazilian securities markets are, to varying degrees, influenced by economic and market conditions in other emerging market countries. Any adverse economic developments in other emerging markets may adversely affect investor confidence in securities issued by Brazilian companies, causing their market price and liquidity to suffer. Any such developments could immediately affect our ability to raise capital when needed and the market price of our class A preferred shares and the ADSs.

The imposition of IOF taxes may indirectly influence the price and volatility of our ADSs and preferred shares.

Brazilian law imposes the IOF/Exchange Tax, on the conversion of *reais* into foreign currency and on the conversion of foreign currency into *reais*. The objective of this tax is to slow the pace of speculative inflows of foreign capital into the Brazilian market and the appreciation of the *real* against the U.S. dollar. The imposition of this tax may discourage foreign investment in shares of Brazilian companies, including our company, due to higher transaction costs, and may negatively impact the price and volatility of our ADSs and preferred shares on the NYSE and the Brazilian Securities, Commodities and Futures Exchange, or BM&FBOVESPA. See "Item 10. Additional information—Taxation—Brazilian Tax Considerations."

## ITEM 4. INFORMATION ON THE COMPANY

We are the largest producer of thermoplastic resins in the Americas, based on annual production capacity of our 29 plants in Brazil, five plants in the United States and two plants in Germany as of December 31, 2013. We are the only producer of ethylene, polyethylene and polypropylene in Brazil. We produce a diversified portfolio of petrochemical and thermoplastic products and have a strategic focus on thermoplastic resins, including polyethylene, polypropylene and PVC. We are also the third largest Brazilian-owned private sector industrial company, based on net sales revenue in 2012 (the latest year for which such information is available). We recorded net sales revenue of R\$40,969.5 million and a net profit of R\$507.0 million during the year ended December 31, 2013.

As of December 31, 2013, our business operations were organized into five production business units, which corresponded to our principal production processes, products and services. Our business units were as follows:

- Basic Petrochemicals, which includes our production and sale of basic petrochemicals at the petrochemical complex located in Camaçari in the State of Bahia, or the Northeastern Complex, the petrochemical complex located in Triunfo in the State of Rio Grande do Sul, or the Southern Complex, the petrochemical complex located in Capuava in the State of São Paulo, or the São Paulo Complex and the Rio de Janeiro Complex and our supply of utilities produced at these complexes to second generation producers, including some producers owned or controlled by our company. This segment accounted for net sales revenue of R\$25,037.8 million, or 48.0% of the net sales revenue of all reportable segments, including net sales to our other business units, and had an operating margin of 7.5% in 2013;
- Polyolefins, which includes the production and sale of polyethylene, including the production of "green polyethylene" from renewable resources, and polypropylene produced by our company in Brazil. This segment accounted for net sales revenue of R\$16,944.7 million, or 32.5% of the net sales revenue of all reportable segments, including net sales to our other business units, and had an operating margin of 8.1% in 2013;
- Vinyls, which includes our production and sale of PVC and caustic soda. This segment accounted for net sales revenue of R\$2,581.1 million, or 4.9% of the net sales revenue of all reportable segments, including net sales to our other business units, and had a negative operating margin of 0.4% in 2013;
- USA and Europe, which includes the operations of Braskem Europe, and consists of the production and sale of polypropylene in the United States and the operations of the polypropylene business in the United States and Germany. This segment accounted for net sales revenue of R\$6,748.5 million, or 12.9% of the net sales revenue of all reportable segments, including net sales to our other business units, and had an operating margin of 0.1% in 2013; and
- Chemical Distribution, which includes the operations of QuantiQ and IQAG and distributes petrochemical products manufactured by our company and other domestic and international companies. This segment accounted for net sales revenue of R\$891.7 million, or 1.7% of the net sales revenue of all reportable segments, including net sales to our other business units, and had a negative operating margin of 3.1% in 2013.

#### **Strategy of Our Company**

Our strategic objective is to satisfy our customers in the plastics value chain and the chemical industry in Brazil and the Americas, while maximizing return on the capital invested by shareholders.

The key elements of our strategy include:

• Differentiation of Our Business. We recognize the cyclical nature of the markets for our petrochemical products and believe that, by focusing on relationships with our customers, we can foster customer loyalty even during periods of lower demand. For instance, we offer our customers more flexible delivery options and credit terms than importers, which typically offer deliveries only through port facilities financed through letters of credit. Our growth strategy is centered on increasing the consumption of our products, enabling customers to substitute non-plastic materials with thermoplastic resins. We are seeking to establish close, long-term relationships with our customers and are committed to providing technological support and solutions to our customers through our research centers in Rio Grande do Sul (Brazil), and in Pittsburgh, Pennsylvania (United States), which develop processes, products and applications for the petrochemical sector and which, as of December 31, 2013, collectively had 333 employees.

• Acquisition of Feedstocks at Competitive Prices. In order to obtain feedstocks at competitive prices, we are constantly seeking to diversify our feedstock profile and to negotiate purchases of feedstocks at competitive prices.

As part of our efforts to acquire feedstock at competitive prices, in 2012 we acquired from Sunoco Chemicals, in the United States, a propylene splitter that was integrated into its unit in Marcus Hook, Pennsylvania. This acquisition provides a long-term solution to the unit's propylene supply. Additionally, we have created a partnership with Enterprise Products in the United States, which will supply approximately 65% of the propylene feedstock required by our three plants in the U.S. Gulf region. In addition to guaranteeing the supply of this feedstock for 15 years, the partnership establishes Enterprise's obligation to build a propane dehydrogenation plant (PDH) that will use shale gas and other untraditional feedstock sources, giving Braskem access to competitive opportunities in gas-based feedstock in the region.

With respect to the diversification of our feedstock profile, we have advanced in the construction of the Ethylene XXI Project, a complex in Mexico that will include a cracker using ethane as feedstock and three integrated polyethylene plants with annual capacity of 1.05 million tons, with startup slated for 2015. Developed through a joint venture with the Mexican group Idesa, Braskem Idesa has entered into a long-term supply contract to purchase ethane from Pemex Gas y Petroquímica Básica, or Pemex Gas, a state-owned Mexican company, under competitive commercial conditions.

Additionally, Odebrecht Ambiental, a subsidiary of Odebrecht, is leading a feasibility study of a project for the production of ethylene in the state of West Virginia in the United States, in which we expect to participate. This project, called the Appalachian Shale Cracker Enterprise, or Ascent, contemplates the involvement of third party investors. The role of each participant and business model of the project has not yet been determined will be subject to board approval if the initial findings of the study are positive.

• Expansion in Selected International Markets. As part of the continuous evaluation of our business and plans, we regularly consider a range of strategic options and transactions. From time to time, we consider a variety of potential strategic transactions to expand our presence in the global petrochemicals market. We plan to expand the production capacity of our business units during the next several years by constructing new facilities (greenfield projects) with access to competitive raw material sources independently or in conjunction with third parties and/or through the acquisition of petrochemical producers that currently compete with us or produce complementary products.

We believe that additional capacity purchased or developed by us together with joint venture partners will enable us to maintain and expand our leadership position in the Americas and support the growth of our main markets.

- *New Business Opportunities*. We are pursuing business opportunities by developing new and specialized products and technologies, including the following:
- $\emptyset$  We are expanding and converting one of our polyethylene production lines in Bahia to produce metallocene-based linear low density polyethylene. This resin has distinctive characteristics for the flexible packaging industry, including greater resistance to impact and punctures, higher polish and greater transparency;
- $\emptyset$  We are continuously evaluating opportunities to improve our existing products and to act as partner or supplier in connection with the manufacture of new value-added products;

Ø We are seeking a strong position in the technological development of sustainable chemistry by investing in research, development and innovation focused on technologies that have been proven from a technical standpoint but are still unavailable for purchase in the market and technologies that are available for purchase in the market, which we use to maintain and improve the competitiveness of our existing business;

- Ø We are intensifying our program to develop and produce new technologies through research and development, including certain catalysts for use in our plants that are otherwise available only from a single source or a small number of suppliers; and
- Ø We are continuing to develop manufacturing processes to produce "green" polymers made out of renewable raw materials in an effort to maintain our leadership in the production of environmentally sustainable resins.

## **History and Development of Our Company**

We were founded in 1972 as Petroquímica do Nordeste Copene Ltda. to plan, execute and coordinate the activities of the petrochemical complex located in Camaçari in the State of Bahia, or the Northeastern Complex. The construction of the Northeastern Complex formed part of a development policy of the Brazilian government implemented in the early 1970's to diversify the geographical distribution of industrial assets and to promote economic growth across different regions of Brazil. On June 18, 1974, we were incorporated as a corporation under the laws of Brazil (registered with the Board of Trade of the State of Bahia under company registry No. 29300006939) and were renamed Copene Petroquímica do Nordeste S.A. In 2002, we changed our corporate name to Braskem S.A.

The following discussion highlights the important developments in our business since January 1, 2013.

#### Acquisition of Interest in Odebrecht Comercializadora de Energia S.A.

In July 2013, we acquired 2,000 shares, or 20%, of the capital of Odebrecht Comercializadora de Energia. Odebrecht Comercializadora de Energia is also owned by Odebrecht Energia S.A., Odebrecht Agroindustrial S.A., Odebrecht Ambiental S.A. (currently Foz do Brasil S.A.) and Odebrecht Transport S.A, each holding an equal interest of 20%. In July 2013, the shareholders of Odebrecht Comercializadora de Energia entered into a shareholders' agreement governing the rights and obligations of all parties.

## Joint Venture with Styrolution

In October 2013, we signed a memorandum of understanding with Styrolution Group GmbH, or Styrolution, a global leader in the production of styrene, to assess the economic feasibility of forming a joint venture in Brazil. If approved, this joint venture would build and operate a plant with an expected annual production capacity of 100,000 tons of the copolymers acrylonitrile butadiene styrene and styrene acrylonitrile. We expect that the joint venture would market these copolymers to customers in Brazil and throughout South America. The memorandum of understanding contemplates that Styrolution would hold a 70% controlling interest in the joint venture and would contribute its expertise in developing and producing styrene, obtaining the necessary technology licenses and leveraging its existing acrylonitrile butadiene styrene and styrene acrylonitrile businesses in the region. The memorandum of understanding contemplates that Braskem would hold a 30% interest in the joint venture and would contribute supply chain infrastructure and the site of the plant. The implementation of this joint venture is subject to, among other things, the negotiation of definitive agreements among the parties with respect to the joint venture and regulatory and antitrust approval. If this joint venture is implemented, we expect that construction will commence in early 2015 and that this plant would commence operations in 2017.

## Investment in Metallocene-based LLDPE

In October 2013, we announced that we intend to invest approximately R\$50 million in one of our polyethylene production lines in the Northeastern Complex to (1) expand the annual production capacity of this line by 30,000 tons and (2) convert 100,000 tons of the annual production capacity of this line to the production of metallocene-based LLDPE. We expect to sell this resin, which takes advantage of the development of more modern technology, primarily to manufacturers of plastic films. We expect this production line to begin operations in 2015.

## Solvay Indupa Acquisition

On December 17, 2013, we entered into an agreement to acquire from Solvay Argentina S.A. 292,453,490 shares of Solvay Indupa, representing 70.6% of its total share and voting capital for an initial purchase price of approximately US\$25.0 million. Solvay Indupa produces PVC and caustic soda and has integrated PVC and caustic soda plants in Santo André, in the state of São Paulo, Brazil, and Bahía Blanca, in the province of Buenos Aires, Argentina. The Santo André plant has annual production capacity of 300,000 tons of PVC and 170,000 tons of caustic soda and the Bahía Blanca has annual production capacity of 240,000 tons of PVC and 180,000 tons of caustic soda. We do not expect to materially increase our debt in connection with this transaction. Closing is expected to occur in 2014, subject to certain conditions precedent, including approval by the Brazilian antitrust authorities, which have 330 days to analyze the acquisition starting on January 31, 2014. Upon completion of this acquisition, we will establish an industrial presence in Argentina, which is one of the largest consumer markets in South America, and we will become the only producer of PVC in Brazil.

## Sale of Southern Complex Water Treatment Assets

On December 31, 2013, we entered into a share purchase agreement relating to all of our shares of Distribuidora de Água Triunfo S.A., or DAT, which represented all of its outstanding shares, for an aggregate principal amount of R\$315.0 million. This sale occurred in January 2014. Pursuant to this agreement, we sold DAT, which owned our water treatment assets located in our Southern Complex, to Odebrecht Ambiental, which is part of Odebrecht. In connection with this agreement, we entered into a long-term agreement with Odebrecht Ambiental for the supply of industrial water.

#### **Our Corporate Structure**

The following chart presents our ownership structure and the corporate structure of our principal subsidiaries as of the date of this annual report. The percentages in bold italics represent the direct or indirect percentage of the voting share capital owned by each entity, and the percentages not in bold italics represent the direct or indirect percentage of the total share capital owned by each entity.

(1) Braskem America is wholly owned by Braskem Europe GmbH, or Braskem Europe, which is wholly owned by Braskem Netherlands B.V.

#### **Basic Petrochemicals Unit**

As of December 31, 2013, our Basic Petrochemicals Unit's facilities had one of the largest annual production capacities of all first generation producers in Latin America. Including net sales to our other business units, our Basic Petrochemicals Unit generated net sales revenue of R\$25,037.8 million in 2013, or 48.0% of the net sales revenue of all reportable segments. Net sales revenue generated by sales to our other business units was R\$11,378.2 million during 2013, representing 45.4% of the net sales revenue of our Basic Petrochemicals Unit.

Our Basic Petrochemicals Unit is comprised of the basic petrochemicals operations conducted by our company in the Northeastern Complex, the Southern Complex, the São Paulo Complex and the Rio de Janeiro Complex.

Our Basic Petrochemicals Unit produces:

- olefins, such as ethylene, polymer and chemical grade propylene, butadiene, isoprene and butene-1;
- BTX products;
- fuels, such as automotive gasoline and liquefied petroleum gas, or LPG;
- intermediates, such as cumene; and
- other basic petrochemicals, such as ethyl tertiary butyl ether, or ETBE, solvent C9 and pyrolysis C9.

The products of our Basic Petrochemicals Unit are used primarily in the manufacture of intermediate second generation petrochemical products, including those manufactured by our Polyolefins Unit and our Vinyls Unit. Our Basic Petrochemicals Unit also supplies utilities to other second generation producers in each of the petrochemical complexes in which we operate and other companies located outside of these complexes, and renders services to those producers. In 2013, 82.3% of our Basic Petrochemicals Unit's net sales revenue (including intra-company sales) was derived from the sale of basic petrochemicals, 6.3% from the sale of naphtha and condensate, 5.6% from the sale of fuels, 3.6% from the sale of intermediates, and 2.3% from the sale of utilities and services. In 2013, 45.4% of our Basic Petrochemicals Unit's net sales revenue from sales of basic petrochemicals was derived from sales made to our Polyolefins and Vinyls Units.

#### Products of Our Basic Petrochemicals Unit

Our other business units and third-party petrochemical producers use ethylene and propylene produced by our Basic Petrochemicals Unit to produce second generation products such as polyethylene, polypropylene and PVC. We also sell butadiene, a variety of aromatics, including BTX products, and intermediates, such as cumene, to third-party petrochemical producers for use as raw materials in the production of a variety of second generation products, including synthetic rubber, elastomers, resins, nylon fibers, ethyl benzene (which is used to make styrene monomer/polystyrene), linear alkyl benzene, purified terephthalic acid, dimethyl terephthalate, bisphenol A, a feedstock for the production of polycarbonate resins, phthalic anhydride, plasticizers and paint.

The following table sets forth the sales volume of basic petrochemicals by our Basic Petrochemicals Unit (excluding our intra-company sales) for the periods indicated.

	Year Ended December 31,		
	2013	2012	2011
	(thousands of tons)		
Domestic sales:			
Ethylene	531.8	523.8	491.3
Propylene	209.9	220.4	217.7
Cumene	234.1	250.5	290.9
Butadiene	210.8	216.4	252.9
BTX products(1)	686.3	744.4	679.6
Others	395.0	400.9	463.0
Total domestic sales of basic petrochemicals	2,267.9	2,356.4	2,395.4
Total export sales of basic petrochemicals	1,274.6	1,208.0	1,087.5
Total sales of basic petrochemicals	3,542.5	3,564.4	3,482.9

<sup>(1)</sup> Includes benzene, toluene, ortho xylene, para xylene and mixed xylenes.

In addition, we had the following intra-company sales:

	Year Ended December 31,			
	2013	2012	2011	
	(thou	(thousands of tons)		
Ethylene	2,828.2	2,805.5	2,606.1	
Propylene	977.9	950.0	905.4	
Benzene	7.5	36.9	152.7	

## Production Facilities of Our Basic Petrochemicals Unit

We believe that the technological processes we use at our basic petrochemicals plants are among the most advanced in the world. Our Basic Petrochemicals Unit currently owns and operates:

- five major basic petrochemicals units in the Northeastern Complex (two olefins units, two aromatics units and one utilities unit);
- four major basic petrochemicals units in the Southern Complex (two olefins units, one aromatics unit, and one utilities unit);
- three basic petrochemicals units in the São Paulo Complex (one olefins unit, one aromatics unit and one utilities unit); and
- two basic petrochemicals units in the Rio de Janeiro Complex (one olefins unit and one utilities unit).

We define the term "unit" to mean several production lines that are linked together to produce olefins, aromatics or utilities.

The table below sets forth the primary products of our Basic Petrochemicals Unit, annual production capacity as of December 31, 2013 and annual production for the years presented.

	Annual Production	Production For the Year Ended December 31,		
Primary Products	Capacity	2013	2012	2011
	(in tor	ns, except automotive gasoline)		
Olefins:				
Ethylene	3,752,000	3,372,825	3,329,758	3,119,158
Propylene	1,585,000	1,505,595	1,349,142	1,411,098
Butadiene(1)	477,000	389,854	355,703	314,534
Aromatics:				
BTX products(2)	1,503,000	1,287,831	1,079,644	1,165,437

<sup>(1)</sup> Includes revenue generated from sales of butadiene by our butadiene plant in the Southern Complex which has an annual production capacity of 103,000 tons and commenced operations in September 2012.

<sup>(2)</sup> Consists of benzene, toluene, para-xylene and ortho-xylene.

## Raw Materials of Our Basic Petrochemicals Unit

## Naphtha

Naphtha is the principal raw material that we use to produce our basic petrochemical products and represents the principal production and operating cost of our Basic Petrochemicals Unit. We also use condensate as a raw material in our basic petrochemical units in the Southern Complex.

The price of naphtha and condensate that we purchase varies primarily based on changes in the U.S. dollar-based international price of crude oil. Naphtha and condensate accounted for 72.7% of the total cost of sales of our Basic Petrochemicals Unit during 2013, and naphtha accounted for 48.9% of our direct and indirect consolidated cost of sales and services rendered during 2013.

The following table shows the average Amsterdam-Rotterdam-Antwerp market price of naphtha for the periods indicated.

	2014	2013	2012	2011
Average(1)	US\$916.12	US\$903.01	US\$1,031.57	US\$931.15
Month ended:				
January	918.58	932.95	950.61	854.71
February	913.65	991.86	1,026.88	881.64
March	911.40	910.29	1,068.84	981.43
April	_	815.70	1,029.51	1,052.68
May	_	833.20	877.11	986.41
June	_	843.60	729.49	933.32
July	_	876.79	825.40	979.80
August	_	913.88	935.18	940.13
September	_	929.81	966.06	940.05
October	_	901.87	954.59	882.35
November	_	929.33	930.99	864.61
December	_	956.78	938.06	876.69

<sup>(1)</sup> The information in the "Average" row represents the mean average monthly naphtha prices during each respective year.

Source: IHS

### Supply Contracts and Pricing of the Basic Petrochemicals Unit

#### Naphtha

The following table shows the distribution of the naphtha purchases by our Basic Petrochemicals Unit for the periods indicated by geographic location of the suppliers.

	Year Ended December 31,			
	2013	2012	2011	
Brazil	72.4%	73.0%	74.6%	
Algeria	13.0%	10.3%	10.4%	
Venezuela	9.0%	5.2%	4.6%	
Argentina	0.8%	4.0%	6.4%	
Others	13.9%	12.7%	8.6%	
Total	100%	100%	100%	

## Supply Contracts with Petrobras

In July 2009, we and Petrobras entered into a Petrochemical Naphtha Purchase and Sale Contract, which we have operated under since March 2009. This contract replaced the naphtha supply contract between our company and Petrobras for the supply of naphtha to our basic petrochemicals plants located in the Northeastern Complex, which was terminated in June 2008, and superseded the naphtha supply contract between our company and Petrobras for the supply of naphtha to our basic petrochemicals plants located in the Southern Complex. This contract had a term of five years and expired in March 2014. We are currently in negotiations to renew this contract, and we and Petrobras have agreed to continue to operate under the terms of this contract during these negotiations.

#### Under the terms of this contract:

- Petrobras has agreed to sell and deliver naphtha to our basic petrochemicals plants in the Northeastern Complex and the Southern Complex exclusively for our use as a raw material;
- we are required to purchase a minimum monthly volume of naphtha;
- we provide Petrobras with a firm commitment order for naphtha each month, together with an estimate of the volume of naphtha that we will purchase over the following six months;
- we may request volumes of naphtha that exceed a monthly firm commitment order, which Petrobras may supply at its discretion;
- since March 2009, the price that we pay for naphtha is based on a variety of factors, including the market prices of naphtha and a variety of petrochemical derivatives, the volatility of the prices of these products in the international markets, the *real/*U.S. dollar exchange rate, and the level of paraffinicity of the naphtha that is delivered;

- the contract will be amended in the event that unforeseen extraordinary events occur that cause a disruption in the economic-financial equilibrium of the contract; and
- Petrobras may terminate the contract, without prior notice, in the event of: (1) our failure to cure any breach of the contract following a 30 day grace period; (2) a force majeure event that continues for more than 90 days; (3) we transfer or offer as a guaranty all or part of our rights and obligations under the contract to a third party without Petrobras' consent; (4) an alteration of our ownership or corporate purposes that conflicts with the object of the contract; or (5) our dissolution, bankruptcy or liquidation.

In May 2006, Quattor Química (currently known as Braskem Qpar) and Petrobras entered into a Petrochemical Naphtha Purchase and Sale Contract for the supply of naphtha to our basic petrochemicals plants located in São Paulo Complex, which superseded a previous naphtha supply agreement between the parties. In October 2010, this contract was amended to extend the term of this contract until February 2014, when it expired. We are currently in negotiations to renew this contract, and we and Petrobras continue to operate under the terms of this contract during these negotiations.. Under the terms of our amended naphtha supply contract:

- Petrobras agrees to sell and deliver naphtha to our basic petrochemicals plants in the São Paulo Complex exclusively for use as a raw material;
- we are required to purchase a minimum annual volume of naphtha;
- we agree to provide Petrobras with a firm commitment order for naphtha each year;
- the price that we pay for naphtha under this contract is based on a variety of factors, including the market prices of naphtha and a variety of petrochemical derivatives, the volatility of the prices of these products in the international markets, the *reall* U.S. dollar exchange rate, and the level of paraffinicity of the naphtha that is delivered;
- the contract will be amended in the event that unforeseen extraordinary events occur that cause a disruption in the economic-financial equilibrium of the contract; and
- Petrobras may terminate the contract, without prior notice, in the event of: (1) our failure to cure any breach of the contract following a 30-day grace period; (2) a *force majeure* event that continues for more than 180 days; (3) we transfer or offers as a guaranty all or part of its rights and obligations under the contract to a third party without Petrobras' consent; (4) an alteration of Braskem Qpar's ownership or corporate purposes that conflicts with the object of the contract; (5) a change of entity type, merger, sale, spin-off or any other corporate reconstruction of Braskem Qpar that may conflict with the execution of contract's object; or (6) the dissolution, bankruptcy or liquidation of Braskem Qpar.

#### Supply Arrangements with SONATRACH

La Société Nationale pour la Recherche, la Production, le Transport, la Transformation et la Commercialisation des Hydrocarbures, or SONATRACH (an Algerian national petroleum company), is one of our suppliers of imported naphtha and condensate. We have imported naphtha supplied by SONATRACH since 2002. On an annual basis, we negotiate the minimum and maximum volumes of naphtha and condensate that we will purchase from SONATRACH. In the event that we were unable to renew our supply arrangements with SONATRACH, we believe that we could purchase sufficient quantities of naphtha from other suppliers from other sources to meet the supply needs of our basic petrochemicals plants in the Northeastern Complex and the Southern Complex.

## Other Supply Contracts

As part of our strategy to diversify our sources of supply of naphtha, we are acquiring naphtha under annual supply arrangements with suppliers in Argentina, Venezuela and other countries in Latin America and North Africa.

## Spot Market Purchases of Naphtha

In addition to our supplies of naphtha under the agreements described above, we purchase naphtha on the spot market from time to time from foreign suppliers located in North Africa and South America.

## Ethane and Propane

Ethane and propane are the principal raw materials that we use to produce its basic petrochemical products in the Rio de Janeiro Complex and represents the principal production and operating cost of the basic petrochemical unit in the Rio de Janeiro Complex. The price of ethane and propane that we purchase varies primarily based on changes in the U.S. dollar-based international price of these feedstocks.

In December 2000, RioPol and Petrobras entered into an ethane and propane supply agreement. The initial term of this contract expires in 2020 and this agreement is automatically renewable for one two-year period, unless either party notifies the other party in writing, at least one year prior to the expiration of the contract, that it does not intend to renew this agreement. Under the terms of this agreement:

- Petrobras agrees to sell and deliver ethane and propane to our basic petrochemical plant in the Rio de Janeiro Complex exclusively for use as a raw material;
- we are required to purchase and Petrobras is required to deliver a minimum annual volume of ethane and/or propane;
- we agree to provide Petrobras with a firm commitment order for ethane and propane each month, together with an estimate of the volume of ethane and propane that we will purchase over the immediately succeeding four months;
- the price for ethane and propane is based on the US Marketscan Mont Belvieu price;
- the contract will be amended in the event that unforeseen extraordinary events occur that cause a disruption in the economic-financial equilibrium of the contract; and
- Petrobras may terminate the contract, without prior notice, in the event of: (1) our failure to cure any breach of the contract following a 60-day grace period; (2) a force majeure event that continues for more than 365 days; (3) we transfer or offer as a guaranty all or part of our rights and obligations under the contract to a third party without Petrobras' consent; and (4) the dissolution, bankruptcy or liquidation of RioPol.

## Light Refinery Hydrocarbons

In January 2005, Quattor and Petrobras entered into an agreement for the purchase and sale of a chain of light refinery hydrocarbons, from which we separate ethylene and propylene. This agreement provides that we and Petrobras will negotiate the renewal of this agreement prior to its expiration in 2020 and that, in the event that Petrobras does not intend to renew this agreement, it must notify us at least two years prior to the expiration of this agreement and must perform under the terms and conditions of this agreement until 2028. Under the terms of this agreement:

- Petrobras agrees to sell and deliver light refinery hydrocarbons to our basic petrochemical plant in the São Paulo Complex exclusively for use as raw materials;
- we are required to purchase a minimum daily volume of light refinery hydrocarbons;
- the price for light refinery hydrocarbons is based on a variety of market indices;
- the contract will be amended in the event that unforeseen extraordinary events occur that cause a disruption in the economic-financial equilibrium of the contract; and
- Petrobras may terminate the contract, without prior notice, in the event of: (1) our failure to cure any breach of the contract following a 30-day grace period; (2) a *force majeure* event that prevents the execution of the contract; (3) we transfer or offers as a guarantee all or part of its rights, obligations and credits under the contract to a third party

without Petrobras' consent, unless the third party is a member of our economic group; (4) the dissolution or bankruptcy of Braskem Qpar; and (5) a change of entity type, merger, sale, spin-off or any other corporate reconstruction of Braskem Qpar that conflicts with or impedes the execution of contract's object.

#### Utilities

We self-generate approximately 35% of the Northeastern Complex's energy consumption requirements, and the remainder is furnished by Companhia Hidro Elétrica do São Francisco, or CHESF, a Brazilian government-owned electric power generation company located in the State of Bahia, and by Companhia de Eletricidade do Estado da Bahia—COELBA.

We self-generate approximately 32% of the Southern Complex's energy consumption requirements, and the remainder is acquired primarily under auction contracts in the free market for energy (*Mercado Livre de Energia*) from several companies.

We self-generate approximately 18% of the São Paulo Complex's energy consumption requirements, and the remainder is acquired primarily under auction contracts in the free market for energy (*Mercado Livre de Energia*) from Tractebel Energia S.A.

We purchase substantially all of the energy consumption requirements of the Rio de Janeiro Complex's from Petrobras Energia and Ampla under long-term contracts, which expire in 2015 and 2021, respectively.

## Sales and Marketing of Our Basic Petrochemicals Unit

Domestic Sales of Basic Petrochemicals

We sell our basic petrochemical products principally in Brazil, mainly to second generation petrochemical producers, including our other business units, as well as to customers in the United States, Europe, South America and Asia.

As is common with other first generation petrochemical producers, our Basic Petrochemicals Unit has a high concentration of sales to a limited number of customers. Net sales to our Basic Petrochemicals Unit's 10 largest customers (excluding intra-company sales) accounted for 43.3% of our Basic Petrochemicals Unit's total net sales revenue (excluding intra-company sales) during the year ended December 31, 2013.

The following table sets forth our net sales revenue derived from domestic and export sales, excluding inter-company sales, by our Basic Petrochemicals Unit for the years indicated:

	For the Year Ended December 31,				
	2013	2012	2011		
	(in millions of reais)				
Net sales revenue:					
Domestic sales	R\$7,786.3	R\$7,705.7	R\$7,271.0		
Export sales	5,661.7	6,022.7	7,101.5		
	R\$13,448.0	R\$13,728.4	R\$14,372.5		

As part of our commercial strategy, our Basic Petrochemicals Unit focuses on developing longer-term relationships with our customers and entering into long-term supply contracts that provide for minimum and maximum quantities to be purchased and monthly deliveries. We determine the domestic prices that we charge for ethylene by reference to Western European contract prices. We determine the domestic prices that we charge for propylene based on a formula

under which 34% of the price is determined by reference to Northwest Europe prices and the remaining 66% is determined by reference to the North American contract prices. We determine the domestic price of butadiene by reference to the U.S. Gulf contract price, and our price for butadiene, unlike our prices for our other basic petrochemical products, include freight costs. We set the domestic prices of our BTX products, including benzene, para-xylene, ortho-xylene and toluene by reference to North American spot market prices. We set the domestic prices of solvents by reference to international market prices and we determine the domestic prices for our other olefins and aromatics products with reference to several market indicators.

Export Sales of Basic Petrochemicals

We export basic petrochemicals mainly to customers in the United States and in Europe. We set export prices for:

- benzene, toluene and para-xylene with reference to market prices prevailing in the U.S. Gulf market; and
- propylene, ETBE, ortho-xylene, butene-l and isoprene with reference to market prices prevailing in the European market.

We are focused on maintaining our leading position in the Brazilian market, while continuing to use our exports to hedge our operations and adjust the imbalances between demand and production. Export net sales of our Basic Petrochemicals Unit represented 22.6% of our Basic Petrochemicals Unit's net sales revenue during 2013.

Additionally, we have applied our expertise in commodities trading to increase our resale operations of naphtha and oil derivatives in the international markets. In order to meet our crackers' naphtha requirements (in terms of timing, pricing and quality), we maintain an excess supply of naphtha and resell the surplus on the spot market. During 2013, we reached average resale operations of R\$926.3 million per month.

## Competition

Our basic petrochemical customers, which are mostly second generation petrochemical producers with plants located in the Brazilian petrochemical complexes, would have difficulty obtaining their feedstocks from other sources at lower prices due to the high cost of transportation of these products, as well as other logistical difficulties. In addition, because Brazil produces sufficient quantities of olefins to meet domestic demand, imports of these products are generally sporadic and usually related to scheduled plant maintenance shutdowns or to meet unsatisfied domestic demand.

During the past several years, as the relative cost of naphtha and gas as feedstocks for petrochemical crackers has diverged, many crackers using gas as a feedstock have become low-cost producers in the global markets and have seen their margins improve substantially as compared to naphtha crackers, such as our company. However, as gas crackers are able to produce fewer of the co-products and byproducts that naphtha crackers generate, such as propylene, butadiene and BTX products, and in smaller quantities, the prices of these products in the international markets have increased. As a result of the increased prices available for these co-products and byproducts, our net sales revenue from export sales of these products increased and we believe that this increase in net sales revenue from exports of these products will continue in future periods in which the relative competitiveness of cracker feedstocks is disrupted. Competition in the international markets for these products is primarily based on the price of delivered products and competition has increased since mid-2008 as the balance between supply and demand was disrupted due to the impact of the global economic downturn on consumers of these products. In the international markets for our basic petrochemical products, we compete with a large number of producers, some of which are substantially larger and have substantially greater financial, manufacturing, technological and marketing resources than our company.

## **Polyolefins Unit**

As of December 31, 2013, our polyolefins production facilities had the largest annual production capacity of all second generation producers of polyolefins products in Latin America. Our Polyolefins Unit generated net sales revenue of R\$16,944.7 million during 2013, or 32.5% of the net sales revenue of all reportable segments.

Our Polyolefins is comprised of the operations conducted by our company at thirteen polyethylene plants and six polypropylene plants located in the Northeastern Complex, the Southern Complex, the São Paulo Complex and the Rio de Janeiro Complex.

## Products of Our Polyolefins Unit

Our Polyolefins Unit produces:

- polyethylene, including LDPE, LLDPE, HDPE, UHMWP, EVA and "green polyethylene" from renewable resources; and
- polypropylene.

We manufacture a broad range of polyolefins products for use in consumer and industrial applications, including:

- plastic films for food and industrial packaging;
- bottles, shopping bags and other consumer goods containers;
- automotive parts; and
- household appliances.

The following table sets forth a breakdown of the sales volume of our Polyolefins Unit by product line and by market for the years indicated.

	Year Ended December 31,		
	2013	2012	2011
	(thousands of tons)		
Domestic sales:			
Polyethylene (1)	1,765.7	1,660.5	1,510.2
Polypropylene	1,268.9	1,233.3	1,149.8
Other	19.6	21.5	20.1
Total domestic sales	3,054.2	2,915.3	2,680.1
Total export sales	1,150.3	1,334.8	1,334.3
Total Polyolefins Unit sales	4,204.5	4,250.1	4,014.4

### (1) Includes EVA.

We provide technical assistance to our customers to meet their specific needs by adapting and modifying our polyethylene and polypropylene products. In particular, we develop customized value-added polypropylene compounds for use by our customers in their specialized applications. We believe that the variety of technological processes at our polyolefins plants provides us with a competitive advantage in meeting our customers' needs.

## Production Facilities of Our Polyolefins Unit

As of December 31, 2013, our Polyolefins Unit owned 19 production facilities. Our Polyolefins Unit operates seven plants located in the Southern Complex, five plants located in the Northeastern Complex, five plants located in the

São Paulo Complex and two plants located in the Rio de Janeiro Complex.

The table below sets forth for each of our primary polyolefins products, our annual production capacity as of December 31, 2013 and annual production for the years presented.

	Annual Production	Production For the Year Ended December 31,		
Primary Products	Capacity (in tons)	2013	2012 (in tons)	2011
Polyethylene:	,			
LDPE/EVA(1)	801,000	697,540	702,625	687,964
HDPE/LLDPE/UHMWP(2)	2,230,000	1,960,394	1,910,685	1,703,171
Polypropylene(3)	1,965,000	1,627,142	1,646,618	1,565,493

<sup>(1)</sup> Represents capacity and production at five plants with swing line capable of producing two types of resins.

<sup>(2)</sup> Represents capacity and production at eight plants with swing line capable of production two types of resins. Capacity varies depending on actual production demands.

<sup>(3)</sup> Represents capacity and production at six plants.

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In September 2010, we commenced production of ethylene at a new plant located in the Southern Complex that produces "green" ethylene using sugar cane ethanol received through the Santa Clara Terminal as its primary raw material. This plant has an annual production capacity of 200,000 tons of ethylene.

## Raw Materials of Our Polyolefins Unit

## Ethylene and Propylene

The most significant direct costs associated with our production of polyethylene and polypropylene are the costs of purchasing ethylene and propylene, which together accounted for 87.3% of our Polyolefins Unit's total variable cost of production during 2013. Our Polyolefins Unit purchases ethylene and propylene from our Basic Petrochemicals Unit at prices determined by reference to international market prices for ethylene. During 2013, our Polyolefins Unit purchased all of its ethylene requirements and 59.3% of its propylene requirements from our Basic Petrochemicals Unit.

## Propylene Contracts with Petrobras and its Subsidiaries

In August 2013, we entered into a twelve-month propylene supply contract with Petrobras, on behalf of its subsidiary Refinaria Alberto Pasqualini S.A., or REFAP, a refinery that is owned and operated by Petrobras. This contract took effect in July August 2013 and expires in June 2014, with optional renewal for an additional 12-month term upon the agreement of both parties. Under this contract, we will purchase an annual supply of 92,500 tons of propylene.

#### Under this contract:

- REFAP has agreed to sell and deliver propylene to us exclusively for our use as a raw material; and
- we agreed to purchase, and REFAP agreed to sell, at prices determined by reference to U.S. Gulf Coast prices for propylene.

This volume will be used to supply the existing plants of our Polyolefins Unit in the Southern Complex and will be available to meet additional demand that arises through the expansion of these plants and the acquisition of additional plants.

In September 2005, we entered into a 20-year propylene supply contract, effective since May 2008, with Petrobras for our Paulínia plant. This contract is automatically renewable for consecutive two-year terms following the initial term, unless terminated by one of the parties. Under this contract, we purchase 300,000 tons of propylene per year. Under this contract:

- Petrobras has agreed to sell and deliver propylene to us exclusively for our use as a raw material; and
- we agreed to purchase, and Petrobras agreed to sell, at prices determined by reference to U.S. Gulf Coast prices for propylene.

Between May 2001 and February 2006, Quattor Petroquímica and Petrobras entered into five propylene supply contracts. These contracts have initial terms expiring at various dates between May 2016 through February 2026 and two of these contracts are automatically renewable for additional five-year terms, unless either party notifies the other party in writing, at least six months prior to the expiration of the contract, that it does not intend to renew the contract. Under the terms of these contracts:

- Petrobras has agreed to sell and deliver propylene to our polypropylene plants in the States of São Paulo and Rio de Janeiro exclusively for use as a raw material;
- Petrobras has agreed to supply an aggregate of 440,000 tons of propylene to us annually;
- we agree to provide Petrobras with a firm commitment order for propylene each month, together with an estimate of the volume of propylene that we will purchase over the immediately succeeding three or four months;
- the price that we pay for propylene under these contracts is based primarily on ICIS-LOR's prices for propylene in the U.S. Gulf Coast; and
- the contract will be amended in the event that unforeseen extraordinary events occur that cause a disruption in the economic-financial equilibrium of the contract.

Petrobras may terminate the contract, without prior notice, in the event of: (1) our failure to cure any breach of the contract following a 30-day grace period; (2) a force majeure event occurs, although some of these contracts require that the force majeure event continues for more than 180 days; (3) we transfer or offer as a guaranty all or part of its rights and obligations under the contract to a third party without Petrobras' consent; (4) an alteration of Braskem Petroquímica's management or corporate purposes that conflicts with the object of the contract; (5) the dissolution, bankruptcy or liquidation of Braskem Petroquímica; and (6) a change of entity type, merger, sale, spin-off or any other corporate reconstruction of Braskem Petroquímica that conflicts with or impedes the execution of contract's object.

## **Ethanol Supply Contracts**

In March 2010, we entered into an ethanol supply contract with a major producer of ethanol to supply our new facility that produces ethylene using sugar cane ethanol. This agreement took effect in August 2010 and expires in July 2015, with optional renewal upon the agreement of both parties. In March 2013, this agreement was amendedwe entered into negotiations to extend a portion of the supply obligations to July 2016. In November 2013, we entered into negotiations for a new contract with a major producer of ethanol, which will we expect to become effective in May 2014 and expires expire in March 2016. Under these contracts, we are or will be required to purchase an annual supply of ethanol sufficient to meet approximately 50% of the capacity of this ethylene plant. The price that we pay under these contracts are is or will be determined by reference to the monthly price of combustible hydrated alcohol as published by the Center for Advanced Studies in Applied Economics of the Superior School of Agriculture (Centro de Estudos Avançados em Economia Aplicada da Escola Superior de Agricultura – CEPEA/ESALQ).

We also purchase ethanol on the spot market from time to time to supplement the supplies that we obtain under these contracts. The price that we pay for ethanol under most of these contracts is determined by reference to market indexes.

#### Other Materials and Utilities

In addition to overhead costs such as labor and maintenance, our other costs associated with the production of polyethylene and polypropylene include our purchase of chemical catalysts, solvents and utilities, such as electric power, water, steam, compressed air and nitrogen.

Our Polyolefins Unit uses butene and hexane as raw materials in the production of HDPE and LLDPE. Butene is supplied by our Basic Petrochemicals Unit, and we import hexane from suppliers located in South Africa.

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Our Unipol® plants in the Northeastern Complex and Rio de Janeiro Complex use catalysts supplied to us by Univation Technologies. Our HDPE plant in the São Paulo Complex uses catalysts supplied to us by W.R. Grace & Co. Our HDPE slurry plant in the Northeastern Complex produces its own catalysts, and we purchase the inputs that we need to produce our own catalysts from various suppliers at market prices. We purchase most of the catalysts that we use in our Polyolefins Unit's polypropylene plants from Basell Polyolefins Company N.V., or Basell, and we also import some catalysts from suppliers in the United States and Europe. We purchase the catalysts that our Polyolefins Unit uses in its swing line LLDPE/HDPE plants from Basell. We produce our own catalysts for our HDPE plants in the Southern Complex using Hoechst technology, and we purchase the inputs that we need to produce these catalysts from various suppliers at market prices.

Our Basic Petrochemicals Unit supplies most of the steam and water requirements of our Polyolefins Unit's facilities. We purchase steam and water for our polyethylene plant in the Rio de Janeiro Complex from Lanxess. We purchase water for our polyethylene plants located in Santo André from Petrobras' Refinaria de Capuava (RECAP) or Serviço Municipal de Saneamento Ambiental de Santo André (SEMASA).

We purchase electric power for each of our polyolefins plants, other than our plants in the Northeastern Complex, from third parties pursuant to long-term power purchase agreements. In the Northeastern Complex, our polyolefins plants purchase their electric power requirements from our Basic Petrochemicals Unit. Our polyolefins plants in the Northeastern Complex are able to purchase electric power from alternative sources if our Basic Petrochemicals Unit is unable to meet our total demand for electric power.

In general, we believe that there are sufficient alternative sources available at reasonable prices for each of these other inputs used in our polyolefins production process such that the loss of any single supplier would not have a material adverse effect on our operations.

### Sales and Marketing of Our Polyolefins Unit

Our Polyolefins Unit sells polyethylene and polypropylene products to approximately 1,250 customers. We have a diversified product mix that allows us to serve a broad range of end users in several industries. The customers of our Polyolefins Unit generally are third generation petrochemical producers that manufacture a wide variety of plastic-based consumer and industrial goods.

Net sales revenue to the 10 largest customers of our Polyolefins Unit accounted for 14.3% of our Polyolefins Unit's total net sales revenue during 2013. No customer of our Polyolefins Unit accounted for more than 3.0% of our total net sales revenue in 2013, 2012 or 2011.

The following table sets forth our net sales revenue derived from domestic and export sales by our Polyolefins Unit for the years indicated:

For the Year Ended December 31, 2013 2012 2011 (in millions of *reais*)

Net sales revenue: Domestic sales

R\$12,848.6 R\$10,427.3 R\$9,174.1

2,093.2	2,073.1	1,726.8
905.2	944.2	968.7
642.9	655.1	710.2
166.0	245.8	217.0
288.8	111.3	58.2
4,096.1	4,029.5	3,680.9
16,944.7	R\$14,456.8	R\$12,855.0
	905.2 642.9 166.0 288.8 4,096.1	905.2 944.2 642.9 655.1 166.0 245.8 288.8 111.3 4,096.1 4,029.5

#### Domestic Sales

We are focused on developing longer-term relationships with our customers. Given the cyclical nature of the markets for our polyolefins products, we believe that we can strengthen customer loyalty during periods of reduced demand for polyethylene or polypropylene by providing a reliable source of supply to these customers during periods of high demand. We work closely with our customers to determine their needs, to provide technical assistance and to coordinate the production and delivery of our products. Customers submit annual proposals giving their estimated monthly requirements for the upcoming year for each of our polyolefins products, including technical specifications, delivery terms and proposed payment conditions. We evaluate these proposals on a monthly basis to make any required adjustments and to monitor and attempt to ensure adequate supply for each customer.

In addition to direct sales of polyolefins to our customers, our Polyolefins Unit sells products in Brazil through exclusive independent distributors. Our Polyolefins Unit is served by six distributors, through wich we distribute our products pursuant to which are governed by formal agreements and spot market purchases transactions.

We have selected our distributors based on their ability to provide full service to their customers, including the ability to prepare our products on a customized basis. These distributors sell our polyethylene and polypropylene products to manufacturers with lower production requirements and are able to aggregate multiple orders for production and delivery to customers that would otherwise be uneconomical for us to serve. Furthermore, by serving smaller customers through a network of distributors, our account managers focus their efforts on delivering high quality service to a smaller number of large, direct customers.

# Export Sales

Our volume of polyolefins export sales has generally varied based upon the level of domestic demand for our products. Our Polyolefins Unit has a sales office in Argentina which we use to consolidate our marketing efforts in Argentina. Our Polyolefins Unit has a sales office in the Netherlands which we use to support our European customers, improve our knowledge of the European market, optimize our logistics process in this market and develop regional partners. In addition to our offices in Argentina and the Netherlands, our Polyolefins Unit maintains an office in the United States that is focused on further developing the market for engineering plastics under the UTEC<sup>TM</sup> brand. We also maintain a sales office in Chile, Peru and Colombia.

We have established a strategic position in the polyolefins business in South America and Europe through regular direct sales, local distributors and agents who understand their respective markets. Our strategy to increase our presence in these foreign markets is intended, among other things, to reduce our exposure to the cyclicality of the international spot market for polyolefins through the development of long-term relationships with customers in neighboring countries.

The main focus of our Polyolefins Unit is to maintain our leading position in the Brazilian market while continuing to export in order to manage the relationship between our production capacity and domestic demand for our products. We believe that our continued presence in export markets is essential to help manage any overcapacity in the Brazilian market and to maintain our position as leader in the supply of polyolefins in South America.

Prices and Sales Terms

We determine the domestic prices for polyethylene by reference to North American contract prices and our domestic prices for polypropylene by reference to Northeast Asian spot market prices. Our customers in Brazil may pay in full on delivery or elect credit terms that require payment in full within seven to 56 days following delivery. We charge interest based on prevailing market rates to our Brazilian customers that elect to pay on credit.

Over the last few years, some Brazilian states have encouraged imports of polyethylene and polypropylene, as well as final products made from these polymers, by providing tax benefits on imported goods. However, on January 1, 2013, federal legislation took effect reducing the maximum *Imposto sobre Circulação de Mercadorias e Serviços*, or ICMS tax (a state value-added tax on sales and services) tax that states can charge from a rate of 12% to 4% on interstate sales of imported raw materials and other goods that are not wholly or partially manufactured in Brazil. As a result, Brazilian states are no longer able to attempt to attract imports at local ports by offering tax benefits in the form of reduced ICMS tax rates. For more information, see "Item 5. Operating and Financial Review and Prospects—Principal Factors Affecting Our Results of Operations—Effects of Brazilian Industrial Policy—Import Tariffs at Local Ports."

Our Polyolefins Unit generally conducts export sales to buyers in countries outside the Southern Cone through the international spot market. Our customer base in these markets consists primarily of trading houses and distributors, most of which have operations in Europe, the United States or in Asia, principally Hong Kong. Pricing is based on international spot market prices. We make all sales in these markets with letters of credit. Export prices for polyethylene and polypropylene sales in the Southern Cone countries by our Polyolefins Unit are primarily based on regional prices and sales are generally made either with letters of credit or through direct bank collections.

# Competition

We are the only producer of polyethylene and polypropylene in Brazil. We compete with polyolefins producers located in South America and with other importers of these products. In 2013, Brazilian polyethylene and polypropylene imports resulted in a 14.7% increase and represented 25.9% of Brazilian polyolefin consumption.

We compete for export sales of our polyolefins products in other countries in Latin America and in markets in the United States, Asia and Europe. Our export business is a commodities business and we compete with a variety of resin producers, some of which have greater financial, research and development, production and other resources than our company. Our competitive position in the export markets that we serve is primarily based on raw material costs, selling prices, product quality and customer service and support.

## Vinyls Unit

We are the leading producer of PVC in Brazil, based on sales volumes in 2013. As of December 31, 2013, our PVC production facilities had the third largest annual production capacity in Latin America. Our Vinyls Unit generated net sales revenue of R\$2,581.1 million in 2013, or 4.9% of our net sales revenue of all reportable segments.

Our Vinyls Unit is the only vertically integrated producer of PVC in Brazil. Our PVC production is integrated through our production of chlorine, ethylene and other raw materials. Our Vinyls Unit also manufactures caustic soda, which is used by producers of aluminum and paper and chlorine.

In 2013, we had an approximate 49.8% share of the Brazilian PVC market, based on sales volumes of our Vinyls Unit.

# Products of Our Vinyls Unit

The following table sets forth a breakdown of the sales volume of our Vinyls Unit by product line for the years indicated.

	For the Year Ended December 31,		
	2013	2012	2011
	(thousands of tons)		
PVC	636.4	560.9	484.0
Caustic soda	475.0	471.6	422.1
Other(1)	127.6	118.3	135.7
Total Vinyls Unit sales	1,239.0	1,150.8	1,041.8

<sup>(1)</sup> Includes chlorine, hydrogen, caustic soda flake, sodium hypochlorite and exports

# Production Facilities of Our Vinyls Unit

We own five vinyls production facilities. Two of our facilities are located in the Northeastern Complex, and three others are located in the State of Alagoas.

The table below sets forth for each of our primary vinyls products, our annual production capacity as of December 31, 2013 and annual production for the years presented.

	Annual Production	Production For the Year Ended December 31,		
Primary Products	Capacity	2013	2012	2011
		(in ton	as)	
PVC(1)	710,000	582,579	498,621	438,895
Caustic Soda(2)	539,000	437,334	393,940	366,923

<sup>(1)</sup> Represents capacity at three plants and production at four plants, including production during 2012 at our new PVC plant in Alagoas that has an annual production capacity of 200,000 tons and commenced operations in August 2012.

(2) Represents capacity and production at two plants.

# Raw Materials of Our Vinyls Unit

#### Ethylene

The most significant direct cost associated with the production of PVC is the cost of ethylene, which accounted for 56.2% of our Vinyls Unit's total cost of sales in 2013. Our Basic Petrochemical Unit supplies all of the ethylene required by our Vinyls Unit.

# Electric Power

Electric power is a significant cost component in our production of chlorine and caustic soda. Electric power accounted for 15.0% of our Vinyls Unit's total cost of sales in 2013. Our Vinyls Unit obtains its electric power requirements from various generators under long-term power purchase agreements. Our caustic soda plants at Camaçari and Alagoas and our PVC plant at Camaçari purchase their electric power requirements from CHESF under a long-term contract that expires in 2015. Companhia Energética de Alagoas S.A., or CEAL, distributes electric power to our PVC plant in Alagoas. The power purchase agreement with CEAL is renewable contracts with automatic rolling one-year extensions. These agreements provide us with the option to purchase our total electric power requirements based on an annual estimate. The price terms of this contract are based upon tariffs regulated by the Brazilian National Electrical Energy Agency (*Agência Nacional de Energia Elétrica*).

#### Salt

We used approximately 797,900 tons of salt during 2013. Salt accounted for 0.4% of our Vinyls Unit's total cost of sales in 2013. We have exclusive salt exploration rights at a salt mine located near our Alagoas plant. We estimate that the salt reserves of this mine are sufficient to allow us to produce chlorine at expected rates of production for approximately 35 to 45 years. We enjoy significant cost advantages when compared to certain of our competitors due to the low extraction costs of rock salt (particularly compared to sea salt), and low transportation costs due to the proximity of the salt mine to our production facility.

#### Sales and Marketing of Our Vinyls Unit

Net sales to our 10 largest Vinyls Unit customers accounted for 44.0% of our Vinyls Unit's total net sales revenue during 2013. One customer accounted for 13.3% of our Vinyl Unit's total sales revenue in 2013, 13.2% in 2012 and 15.0% in 2011. One customer accounted for 60.9% of our total external sales of and ethylene dichloride, or EDC, in 2011. Our Vinyls Unit produces EDC, the principal feedstock used in the production of PVC. In 2013, we used our EDC production for further processing into PVC.

There is a structural link between the PVC and caustic soda markets that exists because caustic soda is a byproduct of the production of chlorine required to produce PVC. When demand for PVC is high, then greater amounts of caustic soda are produced, leading to an increase in supply and generally lower prices for caustic soda. Conversely, when demand for PVC is low, prices for caustic soda tend to rise.

We make most of our sales of PVC and caustic soda directly to Brazilian customers without the use of third party distributors. However, our Vinyls Unit maintains contractual relationships with three distribution centers located in Paulínia and Barueri, both in the State of São Paulo, and Joinville in the State of Santa Catarina that provide logistical support. In addition, we operate three warehouse facilities for PVC and six terminal tank facilities for caustic soda strategically located along the Brazilian coast to enable us to deliver our products to our customers on a "just-in-time" basis. Our Vinyls Unit develops its business through close collaboration with its customers, working together to improve existing products as well as to develop new applications for PVC. Our marketing and technical assistance groups also advise customers and potential customers that are considering the installation of manufacturing equipment for PVC end products.

#### Prices and Sales Terms

We determine the domestic prices for our PVC resins with reference principally to the prices paid by third generation producers in Brazil for imports of PVC, which generally reflect the Northeast Asian spot market price, plus additional service charges and transportation costs. Delivery time, quality and technical service also affect the levels of sales of PVC resins. We establish our domestic price for caustic soda based on North American spot market prices, taking into account any import duties and freight costs. Approximately 29.5% of our caustic soda sales in 2013 were effected pursuant to agreements that are generally for one- to three-year terms and may include minimum and maximum prices.

Prices that we charge for our PVC and caustic soda products in the Brazilian market are traditionally higher than the prices that we could obtain if we exported these products. The difference in prices between the Brazilian and export markets results generally from:

- transportation costs;
- tariffs, duties and other trade barriers;
- a pricing premium reflecting the tighter demand/supply relationship in Brazil; and
- our reliability of supply, coupled with the technical support that we provide.

Our customers in Brazil may pay in full on delivery or elect credit terms that require payment in full within seven to 90 days following delivery. We charge interest based on prevailing market rates to our customers in Brazil that elect longer payment options. In the event we export PVC and caustic soda products, terms for exports generally require payment between 90 and 120 days following delivery. We require irrevocable letters of credit for export sales made on the spot market.

# Competition

#### PVC

We and Solvay are the only two producers of PVC in Brazil. Solvay's total Brazilian installed annual production capacity is 300,000 tons, compared to our annual production capacity of 710,000 tons. Solvay's production facilities are located in São Paulo and, therefore, are closer than our facilities to the primary PVC market in Brazil. However,

we believe that our vertically integrated production capabilities, our modern PVC suspension plants, our strong relationship with our customers and our technical assistance programs enable us to compete effectively with Solvay.

We also compete with importers of PVC. Solvay, which has a plant in Argentina in addition to its plants in Brazil, is also our principal competitor in the Brazilian PVC market. Imports accounted for approximately 29.4% of Brazilian PVC consumption in 2013. Domestically produced PVC is currently competitively priced with imported PVC after taking into account transportation costs and import duties.

In addition, we compete with other producers of thermoplastics that manufacture the same PVC products or substitutes for products in our PVC product line. Thermoplastics principally consist of polyethylene and polypropylene and are used in certain applications as substitutes for PVC. Wood, glass and metals also are used in some cases as substitutes for PVC.

#### Caustic Soda

The four largest Brazilian producers of caustic soda accounted for 91.0% of Brazilian production in 2013. Our company and another international petrochemical company operate in this market throughout Brazil, while the other domestic producers of caustic soda generally operate on a local or regional basis. Imports accounted for 44.5% of Brazil's total caustic soda consumption in 2013.

Our principal competitors in the caustic soda market elsewhere in South America are other international petrochemical companies operating in Brazil and producers located on the U.S. Gulf Coast.

# **USA and Europe Unit**

Our USA and Europe Unit includes:

- the operations of Braskem America, which consist of five polypropylene plants in the United States; and
- the operations of two polypropylene plants in Germany.

As of December 31, 2013, our USA and Europe Unit's facilities had the largest annual polypropylene production capacity in the United States. Our USA and Europe Unit generated net sales revenue of R\$6,748.5 million during 2013, or 12.9% of the net sales revenue of all reportable segments.

Products of Our USA and Europe Unit

Our USA and Europe Unit produces polypropylene. The sales volume of polypropylene by this unit was approximately 1,790,700 tons in 2013, 1,744,100 tons in 2012 and 1,016,800 tons in 2011. For a description of the uses of our polypropylene products, see "—Polyolefins Unit."

#### Production Facilities of our USA and Europe Unit

The table below sets forth the annual production capacity as of December 31, 2013 of the USA and Europe Unit's polypropylene plants in the United States and Germany and the annual production for the years presented (including, as noted below, production of the plants that we have acquired prior to our acquisition of these plants).

	Annual Production		Production For the Year Ended December 31,		
<u>Plant</u>	Capacity	2013	2012	2011	
	(in tons)				
United States(1)	1,425,000	1,306,863	1,264,772	1,246,790	
Germany(2)	545,000	479,075	492,294	523,097	

<sup>(1)</sup> In the United States, we acquired production capacity of 505,000 tons of polypropylene per year which has been included in our results of operations as from October 1, 2011, as a result of the Dow Acquisition.

(2) In Germany, we acquired production capacity of 545,000 tons of polypropylene per year which has been included in our results of operations as from October 1, 2011, as a result of the Dow Acquisition.

# Raw Materials of Our USA and Europe Unit

# Propylene

The most significant direct cost associated with the production of polypropylene by our USA and Europe Unit is the cost of purchasing propylene.

We acquire propylene for our polypropylene plants in the Unites States under a variety of long-term supply agreements and through the spot market. As of December 31, 2013, we had long-term supply agreements with multiple suppliers. The pricing formulas for propylene under these supply agreements are generally based on market prices. A portion of the propylene supplied to our gulf coast plants is provided by a limited partnership that we formed with a leading basic petrochemicals producer, under which we acquire propylene produced by an ethylene facility of that producer in La Porte, Texas. Under the terms of the partnership agreement, the partnership has agreed to provide us with sufficient propylene to produce up to 35% of our U.S. gulf coast plants' current annual production capacity through 2018, at prices calculated a cost-based formula that includes a fixed discount that declines until 2018.

As a result of rising natural gas production, U.S. crackers have shifted to lighter feeds, which lowered the production of propylene. Recently, several companies have announced plans to build propane dehydrogenation (PDH) plants, which would produce on-purpose propylene. Braskem has secured a long-term propylene agreement with one of those companies, Enterprise Products, which plans to build a PDH plant in Texas with an annual capacity of 750,000 tons. We expect this agreement with an established producer to provide us with a competitive, long-term supply of propylene, using shale gas and other nontraditional sources as its feedstock. This plant is expected to commence operations in 2015. Under this arrangement, following completion of this plan, Enterprise Products will supply us with sufficient propylene to produce approximately 65% of our U.S. gulf coast plants' current annual production capacity under a long-term contract with a term of 15 years. Pricing under this contract will be based on market prices for propane and other market costs.

In June 2012, we acquired the propylene splitter assets at Sunoco's Marcus Hook refinery, which we are currently using to convert refinery grade propylene to polymer grade propylene for use at our Marcus Hook polypropylene plant.

We acquire propylene for our polypropylene plants in Germany under long-term supply agreements that provide for the supply of all of the propylene requirements of these plants. One of these supply agreements expires in December 2016 and is renewable until December 2021, and the other supply agreement expires in March 2021, and is automatically renewable for consecutive one-year terms, unless cancelled by one of the parties. The pricing formula for propylene under these supply agreements is based on market prices.

#### Sales and Marketing of Our USA and Europe Unit

Our USA and Europe Unit sells polypropylene products to approximately 330 customers. We have a diversified product mix that allows us to serve a broad range of end users in several industries. The customers of our USA and Europe Unit generally are third generation petrochemical producers that manufacture a wide variety of plastic-based consumer and industrial goods.

Net sales revenue to the 10 largest customers of our USA and Europe Unit accounted for 49.1% of our USA and Europe Unit's total net sales revenue during 2013.

The following table sets forth our net sales revenue derived from sales of our USA and Europe Unit for the years indicated:

	For the Year Ended December 31,		
	2013	2012	2011
	(in millions of reais)		
Net sales revenue:			
Europe	1,690.1	1,587.3	322.2
North America	5,058.4	3,877.9	2,961.6
	R\$6,748.5	R\$5,465.2	R\$3,283.8
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Approximately 50% of the sales of polypropylene by the USA and Europe Unit are made under long-term supply agreements with our customers. These supply contracts generally have an initial two-year term and are automatically renewable for one-year periods unless one party notifies the other of its intention not to renew. These contracts also provide for minimum and maximum quantities to be purchased and monthly deliveries.

We market the remainder of the polypropylene production of the USA and Europe Unit through (1) our direct sales force that seeks to establish supply relationships with customers, (2) a select number of distributors authorized to represent the Braskem brand in the U.S. and European markets, (3) resellers that trade these products under private labels in the North American and European markets, and (4) traders that resell these products in the export markets.

#### Competition

The USA and Europe Unit is largely a commodities business and competes with local, regional, national and international companies, some of which have greater financial, research and development, production and other resources than our company. Although competitive factors may vary among product lines, our competitive position is primarily based on raw material and production costs, selling prices, product quality, product technology, manufacturing technology, access to new markets, proximity to the market and customer service and support.

Our primary competitors for sales in the polypropylene industry in North America are other large international petrochemical companies. In general, demand is a function of economic growth in North America and elsewhere in the world. Braskem's total market share in North America in 2013 was 17.6%.

Our primary competitors for sales in the polypropylene industry in Europe are other large international petrochemical companies. In general, demand is a function of economic growth in Europe and elsewhere in the world.

#### **Chemical Distribution Unit**

Our Chemical Distribution Unit generated net sales revenue of R\$891.7 million during 2013, or 1.7% of the net sales revenue of all reportable segments. Our Chemical Distribution Unit distributes products manufactured by our Basic Petrochemicals Unit, as well as products from more than 100 domestic and international companies. Our Chemical Distribution Unit distributes products in a broad range of market segments, including agrochemicals, rubber and general purpose chemicals; food and feed; flavor and fragrance; cosmetics and pharmaceuticals; household and other industrial segments; engineering plastics; and paints, resins, adhesives and civil construction.

# Products Distributed by Our Chemical Distribution Unit

Our Chemical Distribution Unit distributes a large and diverse portfolio of products consisting of more than 1,000 products. We classify the products distributed by our Chemical Distribution Unit as:

- solvents, including aliphatic solvents, aromatic solvents, synthetic solvents and ecologically-friendly solvents (having lower toxicity and greater biodegradability than standard solvents);
- engineering plastics;
- hydrocarbonic solvents and isoparafins; and

• general purpose chemicals, including process oils, chemical intermediates, blends, specialty chemicals, pharmaceuticals and santoprene.

The following table sets forth a breakdown of the sales volume of our Chemical Distribution Unit by product for the periods presented.

	For the Year Ended December 31,		
	2013	2012	2011
	(thousands of tons)		
Solvents	149.5	222.9	194.3
General purpose chemicals	122.7	111.1	114.8
Total net sales	271.3	334.3	309.1

# **Distribution Agreements**

Our Chemical Distribution Unit has commercial relationships with more than 100 domestic and international companies, under which our Chemical Distribution Unit distributes specified products, including:

- Conoco-Phillips for the distribution of hydrocarbon solvents;
- Sasol Solvents for the distribution of synthetic solvents;
- Lubrizol for the distribution of additives for lubricants;
- Wacker Chemie GmbH for the distribution of silicone-derived products;
- RT Vanderbilt for the distribution of specialty chemicals for the rubber, cosmetics and lubricants industries;
- Sasol Wax for the distribution of waxes:
- DCC for the distribution of pigments;
- Emerald Kalama for the distribution of chemical intermediates and specialty chemicals; and
- Sandoz for the distribution of active pharmaceutical ingredients.

Our Chemical Distribution Unit also has entered into distribution agreements that provide it with exclusive rights to distribute specified products in Brazil, including distribution agreements with:

- Ergon for the distribution of naphtenic oils;
- SK for the distribution of paraffinics GIII; and
- RT Vanderbilt for the distribution of specialty chemicals for the rubber, cosmetics and lubricants industries, under which QuantiQ may not distribute products for Vanderbilt's competitors.

Generally, our Chemical Distribution Unit initiates distribution activities for a producer with a letter of intent with a term of one-year and, following this period, extends these commercial relationships or distribution agreements for an indefinite period. Distribution agreements with our Chemical Distribution Unit generally may be terminated by either party on 30 to 180 days' notice.

Our distribution agreements are generally local stock agreements, indent sales agreements or agreements that combine the features of both. Under our local stock agreements, we purchase chemicals for resale to its customers. These agreements do not contain minimum volume or maximum margin requirements. Sales to us under these agreements are at prices negotiated between us and the producer. Our distribution agreement with Petrobras provides that we are eligible to receive a discount on purchases based on the volume of products purchased. Under our indent sales agreements, we act as a sales agent and receive a commission on the total sales revenue (FOB price) generated for the producer by these sales.

# Sales and Marketing by Our Chemical Distribution Unit

Our Chemical Distribution Unit distributes products to chemical retailers, third generation petrochemical producers and other manufacturers. We determine the prices for the products distributed by reference to several market factors, including the prices paid by third generation producers for imports of these products and prevailing market prices in Brazil.

We serve approximately 5,000 active clients in more than 50 market segments, through 7business units supported by eight sales offices throughout Brazil. We operate five distribution centers that include warehouses and tank farms. We own our distribution centers in Guarulhos in the State of São Paulo, Canoas in the State of Rio Grande do Sul, Duque de Caxias in the State of Rio de Janeiro and Mauá in the State of São Paulo.

Our Chemical Distribution Unit distributes products in a broad range of market segments. No customer represented more than 10% of the net sales revenue of our Chemical Distribution Unit during 2013, 2012 or 2011.

#### **Competition**

The chemical distribution industry in Brazil had revenues of US\$6.6 billion in 2013, according to preliminary data published by the Brazilian Chemical and Petrochemical Distributors Association. The chemical distribution industry in Brazil is highly fragmented, with a small number of large distributors, such as Bandeirantes Brazmo, M Cassab, Coremal, Arinos, Makeni Química and Brenntag, and a large number of small distributors. The Brazilian Chemical and Petrochemical Distributors Association estimates that 14% of the companies in this industry have annual sales of more than US\$150 million while 75% have annual sales of less than US\$50 million. The customer base for chemical distributors is primarily composed of customers that consume small volumes of any distributed product.

# Technology, Research and Development

#### Technology Licenses

Our Basic Petrochemicals Unit uses engineering process technology under non-exclusive arrangements from a variety of sources for specific production processes. We have entered into several non-exclusive agreements with a number of leading petrochemical companies to use certain technology and catalysts for our Polyolefins Unit. Some of the license agreements used by our Polyolefins Unit allow us to use the licensed technology in both existing and future plants. We have entered into several non-exclusive agreements with a number of leading petrochemical companies to use technology for our Vinyls Unit. We have entered into several non-exclusive agreements with a number of leading petrochemical companies to use certain technology and catalysts for the polypropylene production of our USA and Europe Unit. Some of the license agreements used by our USA and Europe Unit allow us to use the licensed technology in both existing and future plants. If any of the arrangements or licenses under which we use third-party technology were terminated or no longer available to us, we believe that we would be able to replace this technology with comparable or better technology from other sources.

We do not pay any continuing royalties under any of the arrangements or licenses used by our Basic Petrochemicals Unit or our Vinyls Unit. Most of the license agreements used by our Polyolefins Unit or our USA and Europe Unit do not require us to pay any continuing royalties. Under the license agreements that require continuing royalty payments, we pay royalties on a quarterly basis based on the volume of the products produced using the licensed technology.

In October, 2013, we entered into an agreement with Genomatica, Inc., a company based in California, for joint development of butadiene from renewable feedstock. Under this agreement we agreed to jointly carry out a pilot project and demonstration plant with Genomatica, and if the results are successful we will receive certain rights to exclusivily use this technology in the Americas.

Our chlor-alkali plant in the Northeastern Complex uses mercury cell technology to produce chlorine and caustic soda, which technology can no longer be used in new petrochemical production facilities under Brazilian legislation due in part to environmental concerns regarding mercury emissions resulting from this manufacturing process. The Brazilian government may require us to shift to newer diaphragm technology, which we use in our Alagoas chlor-alkali plant, or membrane technology. We have not shifted to these newer technologies yet, in part because the return from the capital expenditures associated with this shift would not be as high as those from other potential investments that we may undertake.

# Research and Development

Our ability to compete in the Brazilian and foreign markets that we serve depends on our ability to integrate new production processes developed by our company and third parties in order to lower our costs and offer new thermoplastic products. In addition, our relationships with our customers are enhanced by our ability to develop new products and customize existing products to meet their needs.

To meet these challenges, we maintain a research and development program that is primarily implemented at two research centers that we operate: the Braskem Center for Technology and Innovation located in the Southern Complex and the Braskem America Technology Center located in Pittsburgh, Pennsylvania. Through these research centers, we coordinate and maintain our research and development program, which includes the operation of (1) pilot plants, (2) catalysis, polymerization and polymer sciences laboratories, and (3) process engineering and automation centers. Our investments in research and development, which are classified as expenses, totaled R\$115.8 million in 2013, R\$106.2 million in 2012 and R\$99.1 million in 2011.

# **Capital Expenditures**

In 2013, our total investments on property, plant and equipment and intangible assets totaled R\$5,682.2 million, consisting primarily of (1) a capital expenditure of R\$1,535.3 million (excluding capitalized interest) on our various projects and in maintaining and improving our assets; and (2) a R\$4,053.0 million disbursement for our Project Ethylene XXI. Our total investments on property, plant and equipment and intangible assets in 2012 and 2011 totaled R\$2,808.6 million and R\$2,264.0 million, respectively. Additionally, we invested R\$619.2 million in other companies in 2011.

# Capital Expenditure Budget

We currently are budgeting total capital expenditures of approximately R\$2,664.5 million for 2014. Our principal capital expenditures for 2014 will consist of, in addition to the projects referred to in the following paragraphs:

- approximately R\$1,475.9 million for maintenance shutdowns and other maintenance of our plants;
- approximately R\$704.0 million for our equity contribution in Project Ethylene XXI in Mexico;
- approximately R\$226.2 million for health, environmental and quality improvement projects; and
- approximately R\$258.5 million for new projects.

#### **Acquisitions**

Dow Polypropylene Acquisition

On September 30, 2011, we acquired the polypropylene business of Dow under a purchase agreement that we had entered into in July 2011. For more information concerning the Dow Polypropylene Acquisition, see "—History and Development of Our Company—Dow Polypropylene Acquisition."

Acquisition of Interest in Odebrecht Comercializadora de Energia S.A.

In July 2012, we acquired 2,000 shares, or 20%, of the capital of Odebrecht Comercializadora de Energia. Odebrecht Comercializadora de Energia is also owned by Odebrecht Energia S.A., Odebrecht Agroindustrial S.A., Odebrecht Ambiental S.A. (currently Foz do Brasil S.A.) and Odebrecht Transport S.A, each holding an equal interest of 20%. In July 2013, the shareholders of Odebrecht Comercializadora de Energia entered into a shareholders' agreement governing the rights and obligations of all parties.

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#### Solvay Acquisition

On December 17, 2013, we entered into an agreement to acquire from Solvay Argentina S.A. 292,453,490 shares of Solvay Indupa, representing 70.6% of its total share and voting capital for an initial purchase price of US\$24.7 million, subject to adjustments. Solvay Indupa produces PVC and caustic soda and has integrated PVC and caustic soda plants in Santo André, in the state of São Paulo, Brazil, with an annual production capacity of 300,000 tons of PVC and 170,000 tons of caustic soda, and Bahía Blanca, in the province of Buenos Aires, Argentina, with an annual production capacity of 240,000 tons of PVC and 180,000 tons of caustic soda. Closing is expected to occur in 2014, subject to certain conditions precedent, including approval by the Brazilian antitrust authorities. Upon completion of this acquisition, we will establish an industrial presence in Argentina, which is one of the largest consumer markets in South America, and we will become the only producer of PVC in Brazil.

## **Greenfield Plants**

## Alagoas PVC Plant

In May 2010, we commenced construction of a new PVC plant in Alagoas. This plant, which commenced production in August 2012, has an annual production capacity of 200,000 tons. The total cost of this project was approximately R\$1,000 million.

#### Butadiene Plant

In March 2011, we commenced construction of a new butadiene plant in the Southern Complex. This plant, which commenced production in September 2012, has an annual production capacity of 103,000 tons. The total cost of this project was approximately R\$300 million.

# Joint Venture Projects

#### Project Ethylene XXI

Braskem and Idesa formed Braskem Idesa in April 2010 to develop, construct and operate the Mexico Complex, to be located in the Mexican state of Veracruz. The Mexico Complex is expected to include an ethylene cracker that produces 1.05 million tons of ethylene per year from ethane based on Innovene S technology licensed from Technip Italy S.p.A, or Technip, and is expected to include two high density polyethylene plants based on technology licensed from Ineos Commercial Services UK Limited (as successor to Ineos Europe Limited) and a low density polyethylene plant based on Lupotech T technology licensed from Basell Polyolefin GmbH. The three polyethylene plants are expected to have a combined annual production capacity of 1.0 million tons of HDPE and LDPE.

Braskem Idesa (as successor to us and Idesa) is party to an ethane supply agreement with Pemex Gas dated February 19, 2010, pursuant to which Pemex Gas will provide 66,000 barrels per day of ethane to the Mexico Complex for a period of 20 years at prices based on the Mont Belvieu purity ethane price. Beginning on the date of scheduled completion of the project, Braskem Idesa will be required to purchase, and Pemex Gas will be required to deliver, the minimum daily volume of ethane provided for under the supply agreement.

In February 2010, we and Idesa entered into the Braskem Idesa shareholders' agreement to govern our relationship with respect to Braskem Idesa, which was amended in November 2012 and December 2012. The Braskem Idesa shareholders' agreement, as amended, sets forth the understanding of the parties regarding the implementation of this

project and the relationship of Braskem and Idesa as shareholders of Braskem Idesa. Under the Braskem Idesa shareholders' agreement, as amended:

• the parties agree that the polyethylene production of Braskem Idesa shall be used primarily to supply the Mexican market;

- the parties agree to use their best efforts to use Braskem Idesa as their commercialization vehicle for polyethylene in Mexico;
- we have the right to appoint four members and Idesa has the right to appoint two members of Braskem Idesa's board of directors; decisions considered at Braskem Idesa's ordinary shareholders meetings or by Braskem Idesa's board of directors require the approval by a simple majority; prior to the start-up of the project, so long as Idesa holds at least 20% of the voting capital of Braskem Idesa, Braskem Idesa's financial manager will be nominated by Idesa, subject to board approval; and Braskem Idesa's chief executive officer, construction, corporate, industrial and commercial managers will be nominated by Braskem, subject to board approval;
- upon the failure of Braskem and Idesa to agree to vote in favor of certain matters requiring a supermajority vote in an extraordinary shareholders meeting, (1) we will have the right to seek approval of such matters by a simple majority vote of Braskem Idesa's shareholders, (2) in the event that such matters are approved by a simple majority vote of Braskem Idesa's shareholders, we will have the option to purchase all of the shares then held by Idesa, and (3) in the event that we do not exercise this right, Idesa will have the option to sell all of its shares of Braskem Idesa to us; and
- any disputes between Braskem and Idesa arising out of or in connection with the Braskem Idesa shareholders' agreement will be resolved through arbitration.

The Braskem Idesa shareholders' agreement also contains rights of first refusal, tag along rights and drag along rights in connection with the disposition of Braskem Idesa shares.

The estimated total cost of the Mexico Complex is approximately US\$4.5 billion, including financial costs during construction and initial working capital requirements. We anticipate that (1) we and Idesa will contribute an aggregate of approximately 30% of the total costs as equity in proportion to our ownership interests in Braskem Idesa, and (2) the remainder will be borrowed by Braskem Idesa under project finance arrangements, collateralized by the assets of this project, with multilateral credit agencies, export credit agencies, development banks and private banks. See "Item 4. Information on the Company—Capital Expenditures—Joint Venture Projects—Project Ethylene XXI."

Construction of the Mexico Complex began in 2012 and we expect that it will begin production in 2015.

Financing Agreements Relating to Project Ethylene XXI

In December 2012, Braskem Idesa entered into a common terms agreement with certain financial institutions to finance the development, design, construction and initial operation of the Mexico Complex. This will include an ethane cracker with annual capacity of 1.05 million tons to produce ethylene, two high density polyethylene plants and a low density polyethylene plant. Proceeds from the initial disbursement were used to pay all outstanding amounts under an intercompany bridge loan that we have entered into in connection with the project. In connection with the common terms agreement, Braskem Idesa entered into eight separate financing agreements with Brazilian and international financial institutions and development banks in an aggregate principal amount of up to US\$3.2 billion.

All amounts under these credit facilities are secured by Braskem's shares in Braskem Idesa. The conditions precedent to the initial disbursement and each subsequent disbursement under the common terms agreement include a debt to base equity ratio after disbursement, as calculated under the common terms agreement, no greater than 70:30.

In July 2013, Braskem Idesa received the initial disbursement of US\$1,483.9 million (R\$3,316.2 million) under these credit facilities and in November 2013, it received the second disbursement in the amount of US\$546.9 million (R\$1,246.1 million) under credit facilities. The financing consists of two tranches. The interest rates on the first tranche are fixed within a range of 4.33% to 6.17%. The interest rates on the second tranche are floating within a range of LIBOR plus 2.73% to LIBOR plus 4.65%. To reduce the interest rate risk, the second tranche is hedged through several swap agreements. Interest on both tranches is payable quarterly in arrears and principal is amortized quarterly. The final maturity date of these loans is February 15, 2029 with amortizations beginning in April 2016. Braskem Idesa used the proceeds from the first disbursement to repay indebtedness incurred to fund Project Ethylene XXI project before this disbursement, including the repayment of bridge loans with Braskem in the amount of US\$648.8 million (R\$1,449.8 million) and Idesa Group in the amount of US\$216.3 million (R\$483.3 million).

# Equity Support Agreement Relating to Project Ethylene XXI

In December 2012, we, Braskem Idesa, Etileno XXI, S.A. de C.V., and Idesa entered into an equity support agreement pursuant to which Braskem Idesa's shareholders agreed to make and guarantee payment of certain equity contributions to Braskem Idesa. Pursuant to the equity support agreement, the parties are required to make a base equity commitment of US\$1.4 billion in proportion to their percentage ownership in Braskem Idesa (Braskem 75% and Idesa 25%). Base equity payments must be made ten days prior to loan disbursements made under the project financing agreements (discussed above), in amounts calculated pursuant to the equity support agreement. In the event that project cost exceeds the US\$4.5 billion currently contemplated, the shareholders have also assumed the obligation of making certain primary and secondary contingent equity payments to cover any additional amounts necessary to complete the project. The primary contingent equity amount is approximately US\$344 million, to be funded in proportion to the parties' ownership percentages. Currently, we have not provided credit support for our obligation to fund our portion of such primary contingent equity obligations and the entirety of the secondary contingent equity payments, but in the event that we cease to have an investment grade rating prior to the release of our base and contingent equity obligations, we will be required to provide cash collateral or letters of credit in an amount equal to any such equity contributions that we may be required to make under the agreement.

Engineering, Procurement and Construction Contract Relating to Project Ethylene XXI

In September 2012, Braskem Idesa, as owner, and Ethylene XXI Contractors, S.A.P.I. de C.V. and Etileno XXI Services B.V., as contractors, entered into an alliance engineering, procurement and construction contract, or the EPC contract. This contract was amended and restated in December 2012. Each contractor consists of a joint venture among Odebrecht Industrial Engineering B.V., ICA Fluor Petroquímica, S.A. de C.V. and Technip Italy S.p.A. Payments under the EPC contract are made on a "cost-plus" basis, in which Braskem Idesa reimburses costs of the contractors and pays a profit margin. Payments of costs are made prior to the beginning of each month based on an estimate of costs expected to be incurred during that month and are reconciled with costs actually incurred in the following month, and payments of the profit margin are made based on the achievement of milestones defined under the contract. Any cost overrun will be borne equally between Braskem Idesa and the contractors and any cost savings will be shared equally by Braskem Idesa and the contractors, in each case up to a maximum amount as calculated pursuant to the EPC contract. The contract provides for a guaranteed completion date of June 30, 2015 for the Mexico Complex and contains certain other performance guarantees and provisions for damages in case completion does not occur on or prior to the scheduled completion date.

Amendments to Braskem Idesa Shareholders' Agreement Relating to Project Ethylene XXI

In February 2010, Braskem and Idesa entered into a shareholders' agreement, which we refer to as the Braskem Idesa shareholders' agreement, to govern our relationship with respect to Braskem Idesa. In November 2012, Braskem and Idesa entered into the first amendment to the Braskem Idesa shareholders' agreement, under which our ownership interest in Braskem Idesa was increased to 75% minus one share of the equity interest in Braskem Idesa and Idesa's ownership interest in Braskem Idesa was reduced to 25% plus one share of the equity interest. In December 2012, we and Idesa entered into the second amendment to the Braskem Idesa shareholders' agreement, under which we agreed to fund up to 100% of the secondary contingent equity commitment under the equity support agreement. The secondary contingent equity commitment is approximately US\$40 million.

COMPERJ Project

In connection with the Quattor Acquisition, on January 22, 2010, we entered into an Association Agreement with Odebrecht, OSP, Petroquisa and Petrobras regarding the continued development of the Rio de Janeiro Petrochemical Complex which we refer to as the COMPERJ Petrochemical Facility and which is part of the COMPERJ Complex (*Complexo Petroquímica do Rio de Janeiro*), an integrated refinery and petrochemical complex, under development by Petrobras to be located in Itaboraí in the State of Rio de Janeiro.

Under the Association Agreement, Braskem entered into negotiations with the other parties to the Association Agreement to continue the development of, and assume control of, the COMPERJ Petrochemical Facility.

On December 14, 2011 we entered into a non-binding memorandum of understanding with Odebrecht, OSP and Petrobras that governs the development of the COMPERJ Petrochemical Facility. According to the memorandum of understanding, Braskem and Petrobras will jointly prepare the development of the COMPERJ Petrochemical Facility related to thermoplastic resins and will continue negotiations to reach the most efficient structure based on the analysis of all technical, environmental, financial, legal and tax aspects involved in the project. This will include an evaluation of whether Braskem will assume control of the existing assets of the COMPERJ Petrochemical Facility. We have concluded the initial engineering phase and expect to continue advancing in subsequent engineering phases in order to submit the project to our board of directors in 2015.

## Joint Venture with Styrolution

In October 2013, we signed a memorandum of understanding with Styrolution, a global leader in the production of styrene, to assess the economic feasibility of forming a joint venture in Brazil. If approved, this joint venture would build and operate a plant with an expected annual production capacity of 100,000 tons of the copolymers acrylonitrile butadiene styrene and styrene acrylonitrile. The implementation of this joint venture is subject to, among other things, the negotiation of definitive agreements among the parties with respect to the joint venture and regulatory and antitrust approval. If this joint venture is implemented, we expect that construction will commence in early 2015 and that this plant would commence operations in 2017.

#### Other Investments

In October 2013, we announced that we intend to invest approximately R\$50 million in one of our polyethylene production lines in the Northeastern Complex to (1) expand the annual production capacity of this line by 30,000 tons and (2) convert 100,000 tons of the annual production capacity of this line to the production of metallocene-based LLDPE, which we intend to sell under the brand "Braskem Flexus." We expect to sell this resin, which takes advantage of the development of more modern technology, primarily to manufacturers of plastic films. We expect this production line to begin operations in the first half of 2015.

Additionally, we have projects in less advanced stages in Peru, Bolivia and Venezuela.

#### Maintenance

Most of our maintenance is performed by third-party service providers. For example, we have contracts with CNO, Asea Brown Boveri Ltd., Cegelec Ltda., Rip Serviços Industriais S.A., Cl Engenharia Ltda. and other service providers to perform maintenance for our basic petrochemical plants in the Northeastern Complex and in the Southern Complex. We also perform some of our ordinary course maintenance with our small team of maintenance technicians, which also coordinate the planning and execution of maintenance services performed by third parties.

#### **Basic Petrochemicals Plants**

Regular basic petrochemicals plant maintenance requires complete plant shutdowns from time to time, and these shutdowns usually take approximately 30 days to complete. We occasionally undertake brief shutdowns of the basic petrochemical operations at our basic petrochemical plants that do not materially affect our production output, primarily for maintenance purposes, catalyst regeneration and equipment cleaning. In addition, because we have two

independent Olefins units and two independent Aromatics units at the Northeastern Complex and two independent Olefins units at the Southern Complex, we may continue production of basic petrochemicals at these complexes without interruption, even while we perform certain maintenance services.

The next scheduled general maintenance shutdown of:

- the São Paulo Complex's Olefins and Aromatics units are scheduled to occur in 2014;
- the Southern Complex's Olefins 1 and Aromatics 1 units are scheduled to occur in 2014;
- the Southern Complex's Olefins 2 and Aromatics 2 units are scheduled to occur in 2014; and
- the Rio de Janeiro Complex's Olefins unit is scheduled to occur in 2017.

We last performed maintenance of the Northeastern Complex's Aromatics 1 and Olefins 1 units in 2013.

# Plants of Our Polyolefins, Vinyls and USA and Europe Units

We have a regular maintenance program for each of our polyolefins plants. Production at each of our polyolefins plants generally is shut down for seven to 20 days every two to three years to allow for regular inspection and maintenance. In addition, we undertake other brief shutdowns for maintenance purposes that do not materially affect our production of polyolefins. We coordinate the maintenance cycles of our polyolefins plants with those of our basic petrochemicals plants. While our basic petrochemicals facilities must be shut down for up to 30 days for maintenance, our polyolefins facilities may be shut down for shorter periods because these facilities are less complex to operate and maintain than our basic petrochemicals plants. Similarly, Braskem America attempts to coordinate its maintenance cycles with the routines of their largest suppliers for each plant.

We have a regular maintenance program for each of our vinyls plants. Our Camaçari and Alagoas PVC plants are generally shut down for 15 to 20 days every two years to allow for regular inspection and maintenance. Our caustic soda and chlorine plant in Alagoas shuts down once a year for three days of maintenance in different parts of the plant. Our caustic soda and chlorine plant in Camaçari does not require prolonged maintenance shutdowns and is shut down for two or three days each year.

#### **Discontinued Operations**

As a result of our decision to maintain QuantiQ and IQAG, which previously represented the Chemical Distribution segment before we temporarily offered them for sale last year, we have restated our financials to include the Chemical Distribution segment as of 2011. As a result of our decision to dispose of our former subsidiary Cetrel and Braskem Distribuidora, both of which sold in December 2012, we have recorded the operations of these subsidiaries as discontinued operations as from January 1, 2010.

# **Environmental Regulation**

In each of the countries in which we operate, our operations are subject to federal, state and local laws and regulations governing the discharge of effluents and emissions into the environment and the handling and disposal of industrial waste and otherwise relating to the protection of the environment.

Our consolidated annual expenditures on environmental control were R\$292.6 million in 2013, R\$256.3 million in 2012 and R\$198.9 million in 2011. Our consolidated environmental expenses relate to our continuous control and monitoring policies, and we do not have any material future environmental liabilities. However, our environmental compliance costs are likely to increase as a result of the projected increase in our production capacity and projected

increases in unit costs for treatment and disposal of industrial waste, as well as the cost of compliance with future environmental regulations.

We had established a provision for recovery of potential environmental liabilities in the amount of R\$59.4 million as of December 31, 2013.

# Compliance with Environmental Laws in Brazil

The Brazilian government enacted an Environmental Crimes Law in 1998 that imposes criminal penalties on corporations and individuals causing environmental damage. Corporations found to be polluting can be fined up to R\$50.0 million, have their operations suspended, be prohibited from government contracting, be required to repair damage that they cause and lose certain tax benefits and incentives. Executive officers, directors and other individuals may be imprisoned for up to five years for environmental violations.

Our operations are in compliance in all material respects with applicable Brazilian environmental laws and regulations currently in effect. Some environmental studies that we have commissioned have indicated instances of environmental contamination at certain of our plants. In addition, we and certain executive officers of our company and of our subsidiaries have received notices from time to time of minor environmental violations and are or have been subject to investigations or legal proceedings with respect to certain alleged environmental violations. These environmental issues, and any future environmental issues that may arise, could subject us to fines or other civil or criminal penalties imposed by Brazilian authorities. We are addressing all environmental issues of which we are aware, and we believe that none of these issues will have a material adverse effect on our business, financial condition or results of operations.

#### **Operating Permits**

Under Brazilian federal and state environmental laws and regulations, we are required to obtain operating permits for our manufacturing facilities. If any of our environmental licenses and permits lapse or are not renewed or if we fail to obtain any required environmental licenses and permits, we may be subject to fines ranging from R\$500 to R\$50.0 million, and the Brazilian government may partially or totally suspend our activities and impose civil and criminal sanctions on our company or both.

Each State in which we operate has its own environmental standards and state authorities in each state have issued operating permits that must be renewed periodically. Additionally, all projects for the installation and operation of industrial facilities in the Northeastern Complex, Southern Complex São Paulo Complex and Rio de Janeiro Complex are subject to approval by various environmental protection agencies, which must approve installed projects prior to their commencement of operations and must renew such approval periodically thereafter. State authorities have issued operating permits for all of our plants, as follows: the Northeastern Complex (State of Bahia); Southern Complex (State of Rio Grande do Sul), São Paulo Complex and Cubatão, Santo André, Mauá and Paulínia plants (State of São Paulo), Rio de Janeiro Complex (State of Rio de Janeiro) and our Alagoas plants (State of Alagoas). We are in possession of all necessary permits and do not expect to have difficulty in renewing any of them.

# Industrial Waste

Companhia Riograndense de Saneamento, or Corsan, a state-owned sanitation company, operates an integrated system for liquid effluents treatment, or Sitel, in the Southern Complex. Sitel treats wastewater generated by our company and the other petrochemical producers at the Southern Complex at a liquid effluents treatment station located in the Southern Complex. This treatment station also includes a system for the collection of contaminated wastewater and disposal after treatment. We treat wastewater generated by our company at the Rio de Janeiro Complex at a liquid effluents treatment station located in the Rio de Janeiro Complex. This treatment station also includes a system for the collection and disposal of contaminated wastewater. Hazardous solid waste is co-processed in cement kilns or incinerated and other kinds of solid waste are disposed of in landfills at facilities approved by our company.

We treat wastewater generated by our company at the São Paulo Complex at a liquid effluents treatment station located in the São Paulo Complex. This treatment station also includes a system for the collection and disposal of contaminated wastewater, while hazardous waste generated at the São Paulo Complex is incinerated in cement kilns and other kinds of solid waste is disposed of in landfills.

In our Bahia facilities, all wastewater is transported to Cetrel, a wastewater treatment facility. Solid waste is incinerated in cement kilns or incinerators and the remaining waste is disposed of in landfills.

Additionally, we have a series of recycling programs that includes recycling of solid waste and wastewater. We recycle or reuse 17% of the solid waste generated by our facilities and 18% of the water used in our production processes.

# Compliance with Environmental Laws in the United States

Our operations in the United States are subject to United States federal, state and local laws and regulations governing the discharge of effluents and emissions into the environment; the storage, handling, management, transportation and disposal of hazardous waste, industrial waste and other types of waste; the use, storage, and handling of various types of products and materials; and the protection of human health, safety and the environment. In many instances, specific permits must be obtained for particular types of operations, emissions or discharges. We believe that our operations in the United States are in compliance in all material respects with applicable U.S. federal, state and local environmental laws and regulations currently in effect.

As with the U.S. petrochemical industry generally, compliance with existing and anticipated laws and regulations increases the overall cost of operating Braskem America's business, including operating costs and capital costs to construct, maintain and upgrade equipment and facilities. These laws and regulations have required, and are expected to continue to require, Braskem America to make expenditures of both a capital and an expense nature.

Our facilities in Texas, Pennsylvania and West Virginia are required to maintain various permits relating to air quality and treatment of industrial wastewater, and to comply with regulatory requirements relating to waste management. We are in possession of necessary permits to operate our facilities (or they are in the process of being renewed in the ordinary course) and we do not expect to have difficulty in renewing any of them.

The Clean Air Act, which was last amended in 1990, requires the United States Environmental Protection Agency to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Clean Air Act requires periodic review of the science upon which the standards are based and the standards themselves. NAAQS, for ozone and fine particulate matter, PM2.5, promulgated by the EPA have resulted in identification of nonattainment areas throughout the country, including certain areas within Texas, Pennsylvania and West Virginia, where Braskem America operates facilities. As a result of these nonattainment designations by the EPA, state or local air pollution control agencies are required to apply permitting and/or control requirements intended to reduce emissions of ozone precursors (nitrogen oxides and volatile organic compounds), and fine particles (including PM2.5 precursors), in order to demonstrate attainment with the applicable NAAQS. Such requirements may include imposition of stringent offset ratios and could result in enhanced emission control requirements. Numerous states have challenged the EPA's particulate standards. The EPA has signaled its plans to promulgate new regulations in 2014 related to the NAAQS, which may be stricter than the existing standards and require further reductions in allowable emissions of certain pollutants.

Additionally, there are various legislative and regulatory measures to address greenhouse gas emissions which are in various stages of review, discussion or implementation by Congress and the EPA. While it is currently not possible to predict the impact, if any, that these issues will have on Braskem America or the U.S. petrochemical industry in general, they could result in increases in costs to operate and maintain our facilities in the United States, as well as capital outlays for new emission control equipment at these facilities. In addition, regulations limiting greenhouse gas emissions of carbon content of products, which target specific industries such as petrochemical manufacturing could adversely affect our ability to conduct Braskem America's business and also may reduce demand for its products.

In addition to permitting and/or control requirements that may result from the implementation of the NAAQS at the state or local level, the EPA may promulgate new or revised federal New Source Performance Standards or National Emission Standards for Hazardous Air Pollutants that would apply directly to certain facility operations and may require the installation or upgrade of control equipment in order to satisfy applicable emission limits and/or operating standards under these regulatory programs.

#### Environmental Regulation in Germany and the European Union

Our operations of Germany are subject to German federal, state and local laws and regulations governing the discharge of effluents and emissions into the environment and the handling and disposal of industrial waste and otherwise relating to the protection of the environment and waste management. Our operations in Germany are in compliance in all material respects with applicable German federal, state and local environmental laws and regulations currently in effect.

As with the petrochemical industry in the European Union generally, compliance with existing and anticipated German laws and regulations increases the overall cost of operating our European business, including operating costs and capital costs to construct, maintain and upgrade equipment and facilities. These laws and regulations have required, and are expected to continue to require us to make expenditures of both a capital and an expense nature.

At our Schkopau and Wesseling, Germany facilities, we are required to maintain air, radiation, waste water and waste management permits from the German government and local agreements relating to the treatment of industrial wastewaters. We are in possession of all necessary permits.

Our European facility in Wesseling is subject to existing European greenhouse gas regulations and a cap and trade program relating to emissions. The necessary steps for the trade credit allocations for the period from 2013 to 2020 have been taken and we have received an allocation based on carbon dioxide emissions in accordance with guidelines for normal use. We will purchase any additional permits that may be required on the emission trade market. We are not aware of any new environmental regulations that would affect our European operations. Accordingly, we cannot estimate the potential financial impact of any future European Union or German environmental regulations.

# **Property, Plant and Equipment**

Our properties consist primarily of petrochemical production facilities in:

- Camaçari in the State of Bahia;
- Triunfo in the State of Rio Grande do Sul;
- Duque de Caxias in the State of Rio de Janeiro;
- São Paulo, Paulínia, Cubatão, Santo André and Mauá in the State of São Paulo;
- Maceió and Marechal Deodoro in the State of Alagoas;
- the United States in La Porte, Freeport and Seadrift, Texas, Marcus Hook, Pennsylvania, Neal, West Virginia, and
- Germany in Schkopau and Wesseling.

Our principal executive offices are located in São Paulo in the State of São Paulo, and we have an administrative support office in the City of Salvador in the State of Bahia. We also have equity interests in investments located in other parts of the country. We own all our production facilities, but we generally rent our administrative offices.

The following table sets forth our properties as of December 31, 2013 by location of facilities, products produced and size of plant.

Type of Product or Service	<b>Location of Facilities</b>	Size of Plant (in hectares)(1)
Basic petrochemicals	Triunfo	152.8
Basic petrochemicals	Santo André	74.1

Basic petrochemicals	Camaçari	65.5
Basic petrochemicals	Duque de Caxias	53.0
Polypropylene	Paulínia	39.7
Polyethylene	Triunfo	30.5
Polyethylene	Camaçari	24.5
Polyethylene	Cubatão	17.6
Polyethylene	Santo André	15.8
Polyethylene	Duque de Caxias	15.0
Polypropylene	LaPorte, Texas	87.0
Polypropylene	Neal, West Virginia	27.1
Polypropylene	Mauá	15.8
Polypropylene	Duque de Caxias	15.0
Polypropylene	Camaçari	13.2
Polypropylene	Triunfo	10.0
Polypropylene	Marcus Hook, Pennsylvania	6.9
Polypropylene	Freeport, Texas	8.9
Polypropylene	Seadrift, Texas	2.5
Polypropylene	Schkopau, Germany	3.7
Polypropylene	Wesseling, Germany	26.0
Caustic soda/chlorine	Maceió	15.0
PVC/caustic soda/chlorine	Camaçari	12.6
PVC	Marechal Deodoro	186.7
Distribution Center	Vila Prudente/Capuava	3.2

(1) One hectare equals 10,000 square meters.

We believe that all of our production facilities are in good operating condition. As of December 31, 2013, the consolidated net book value of our property, plant and equipment was R\$25,413.5 million.

The following properties are mortgaged or pledged to secure certain of our financial transactions: (1) our basic petrochemicals plant and our polyethylene plant located in the Southern Complex; (2) our chloro-soda plant and PVC plant located in the Northeastern Complex; (3) our basic petrochemicals plant and our polyethylene plant located in São Paulo Complex; (4) our chloro-soda plant and PVC plant located in the State of Alagoas; and (5) our basic petrochemicals plant, our polyethylene plant and our polypropylene plant located in the Rio de Janeiro Complex.

#### **Insurance**

In addition to the policies described below for our Brazilian and international operations, we maintain other insurance policies for specific risks, including directors and officers liability coverage, workers' compensation, employers practice liability and automotive insurance.

We do not anticipate having any difficulties in renewing any of our insurance policies and believe that our insurance coverage is reasonable in amount and consistent with industry standards applicable to chemical companies operating globally.

#### Operations in Brazil, the United States and Germany

We carry insurance for all our plants against material damage and consequent business interruption through comprehensive "all risk" insurance policies.

The all risks insurance program for our plants provides for a total replacement value of US\$22.6 billion for property damage. This insurance program is underwritten through separate policies in Brazil and the United States by large insurance companies. This all risk insurance program/policies are in force until October 2015.

The material damage insurance for our plants provides insurance coverage for losses due to accidents resulting from fire, explosion and machinery breakdown, among others. This coverage has a maximum indemnification limit of US\$2 billion per event (combined material damage and business interruption coverage) for the Brazilian plants and US\$250 million (combined material damage and business interruption coverage, excluding wind damage, which has a maximum indemnification limit of \$200 million per event) for our plants in the United States and Germany. Our policies have deductibles of up to US\$15 million, depending on the plant.

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The business interruption coverage under our policies provides coverage for losses resulting from interruptions due to any material damage covered by the policy. The losses are covered with maximum indemnity periods ranging from 12 to 24 months and deductibles ranging from 45 to 60 days, depending on the plant.

As a part of our insurance program, we also have a third-party liability policy for our operations, which covers losses for damages caused to third parties from our operations, including sudden environmental pollution.

#### Operations in Mexico

We have an insurance program for our Project Ethylene XXI project in Mexico that provides coverage for the project during the construction and testing stages until the commencement of operations, which is expected to occur in 2015. This insurance program is comparable to policies issued by large insurance companies in Mexico and includes: (1) all risk policies for construction and delays in commencement of operations up to an aggregate amount of US\$4.1 billion, (2) terrorism coverage up to a limit of US\$900 million, (3) marine cargo coverage up to a limit per shipment of US\$50 million and (4) delays in commencement of operations up to a combined limit of US\$629 million. The project also has comprehensive third-party liability insurance coverage for the construction and testing period.

## ITEM 4A. UNRESOLVED STAFF COMMENTS

Not Applicable.

#### ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

The following discussion of our financial condition and results of operations should be read in conjunction with our audited consolidated financial statements as of December 31, 2012 and 2011 and for the three years ended December 31, 2012, included in this annual report, as well as with the information presented under "Presentation of Financial and Other Information" and "Item 3. Key Information—Selected Financial and Other Information."

The following discussion contains forward-looking statements that involve risks and uncertainties. Our actual results may differ materially from those discussed in the forward-looking statements as a result of various factors, including those set forth in "Cautionary Statement with Respect to Forward-Looking Statements" and "Item 3. Key Information—Risk Factors."

#### Overview

Our results of operations for the years ended December 31, 2013, 2012 and 2011 have been influenced, and our results of operations will continue to be influenced, by a variety of factors, including:

- the growth rate of Brazilian GDP, which grew by an annual rate of an estimated 2.3% in 2013, 0.9% in 2012 and 2.7% in 2011, which affects the demand for our products and, consequently, our domestic sales volume;
- the expansion of global production capacity for the products that we sell and the growth rate of the global economy;
- the international market price of naphtha, our principal raw material, expressed in dollars, which has a significant effect on the cost of producing our products and which has been volatile during the three years ended December 31, 2013, fluctuating in a range between US\$816 and US\$992 per ton during 2013, between US\$729 and US\$1,069 during 2012 and between US\$854 and US\$1,053 during 2011;
- the average domestic prices of our principal products expressed in dollars, which fluctuate to a significant extent based on fluctuations of international prices for these products and which also have a high correlation to our raw material costs;
- our capacity utilization rates, which increased in 2013, primarily as a result of the improvement in the petrochemical sector;
- government industrial policy adopted by the government of Brazil;
- sales outside Brazil, which increased to R\$17.5 billion in 2013 from R\$15.6 billion in 2012;
- changes in the *real*/U.S. dollar exchange rate, including the depreciation of the *real* against the U.S. dollar by 14.6% in 2013, 8.9% in 2012 and 12.6% in 2011, which have affected our financial expenses as a result of our significant U.S. dollar-denominated liabilities that require us to make principal and interest payments in U.S. dollars;
- the level of our outstanding indebtedness, fluctuations in benchmark interest rates in Brazil, which affect our interest expenses on our *real*-denominated floating rate debt, and fluctuations in the LIBOR rate, which affect our interest expenses on our dollar-denominated floating rate debt;

• the inflation rate in Brazil, which was 5.5% in 2013, 7.8% in 2012 and 5.1% in 2011, in each case, as measured by the IGP-DI, and the effects of inflation on our operating expenses denominated in *reais* and our *real*-denominated debt that is indexed to take into account the effects of inflation or bears interest at rates that are partially adjusted for inflation; and

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• the tax policies adopted by, and resulting tax obligations to, the Brazilian government and the governments of the Brazilian states in which we operate.

Our financial condition and liquidity is influenced by various factors, including:

- our ability to generate cash flows from our operations and our liquidity;
- prevailing Brazilian and international interest rates and movements in exchange rates, which affect our debt service requirements;
- our ability to continue to be able to borrow funds from Brazilian and international financial institutions and to sell our debt securities in the Brazilian and international securities markets, which is influenced by a number of factors discussed below;
- our capital expenditure requirements, which consist primarily of maintenance of our operating facilities, expansion of our production capacity and research and development activities; and
- the requirement under Brazilian law and our by-laws that we pay dividends on an annual basis in an amount equal to at least 25% of our adjusted net income, unless our board of directors deems it inconsistent with our financial position and the decision of our board of directors is ratified by our shareholders.

#### **Financial Presentation and Accounting Policies**

#### Presentation of Financial Statements

We have prepared our audited consolidated financial statements as of December 31, 2013 and 2012 and for each of the years ended December 31, 2013, 2012 and 2011 in accordance with IFRS.

Our consolidated financial statements have been prepared in accordance with International Accounting Standards, or IAS, 27 (Consolidated and Separate Financial Statements) and 31 (Interests in Joint Ventures). Beginning on January 1, 2012, we adopted the alternative provided by IAS 31 under which jointly controlled investments may initially be valued at their acquisition cost and subsequently valued using the equity method. Prior to January 1, 2012, we proportionally consolidated these investments. As we believe that the information relating to jointly controlled companies is not material to our financial statements, we have not restated such information prior to January 1, 2012 has not been restated.

As a result of our decision to dispose of our former subsidiary Cetrel, which we sold in December 2012, and our former subsidiary Braskem Distibuidora, which we sold in December 2012, we have recorded the operations of these subsidiaries as discontinued operations as from January 1, 2010. In accordance with IFRS, we have not made adjustments to our balance sheet.

## Operating Segments and Presentation of Segment Financial Data

We believe that our organizational structure as of December 31, 2013 reflected our business activities and corresponded to our principal products and production processes. As described in "—Results of Operations," we no longer record results for our distribution segment as the operations of this segment are accounted for as discontinued operations. As of December 31, 2013, we had five production business units and reported our results by five

corresponding segments to reflect this organizational structure:

• Basic Petrochemicals—This segment includes (1) our production and sale of basic petrochemicals at the Northeastern Complex and the Southern Complex, (2) our production and sale of basic petrochemicals at the São Paulo Complex and the Rio de Janeiro Complex, and (3) our supply of utilities produced at these complexes to second generation producers, including some producers owned or controlled by our company.

- *Polyolefins*—This segment includes the production and sale of polyethylene, including the production of "green polyethylene" from renewable resources, and polypropylene by our company, excluding the operations of Braskem Europe.
- *USA and Europe*—This segment includes the operations of Braskem America, which consists of the production and sale of polypropylene in the United States and the operations of our two polypropylene plants in Germany.
- *Vinyls*—This segment includes our production and sale of PVC, caustic soda and EDC. We produce EDC, the principal feedstock used in the production of PVC. In 2013, we used all of our EDC production for further processing into PVC. Although we have historically sold EDC to third parties, we do not expect to do so in the future due to the opening of our new PVC plant in Alagoas in August 2012, as a result of which we use all of the EDC we produce internally.
- *Chemical distribution*—This segment includes operations of QuantiQ and IQAG, which consists of distribution of petroleum-based solvents, intermediate chemicals, special chemicals and pharmacons.

We have included a reconciliation of the results of operations of our segments, as they existed as of December 31, 2013, to our consolidated results of operations under "—Results of Operations" below.

# **Critical Accounting Policies**

The presentation of our financial condition and results of operations in conformity with IFRS requires us to make certain judgments and estimates regarding the effects of matters that are inherently uncertain and that impact the carrying value of our assets and liabilities. Actual results could differ from these estimates. In order to provide an understanding about how we form our judgments and estimates about certain future events, including the variables and assumptions underlying the estimates, and the sensitivity of those judgments to different variables and conditions, we have included comments related to the following critical accounting policies under IFRS:

• Impairment of property, plant and equipment and non-financial assets. Our goodwill based on expected future profitability and property, plant and equipment as of December 31, 2013 were R\$2,058.9 million and R\$25,413.5 million, respectively. The recoverable value of property, plant and equipment and other noncurrent assets including intangible assets (other than goodwill based on expected future profitability) are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. The recoverable value of goodwill based on expected future profitability is reviewed for impairment on an annual basis. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of (1) an asset's fair value less costs to sell; and (2) its value in use. For the purposes of assessing impairment, assets are grouped at the lowest level for which there are separately identifiable cash flows that can be cash-generating units or operating segments. Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment at each reporting date.

We did not record any impairment charges in the years ended December 31, 2013, 2012 and 2011. As of December 31, 2013, we do not believe that any of our cash generating units were at risk of impairment.

Our impairment tests of goodwill consider the lowest level of cash-generating operations at (1) the Southern Complex in the Basic Petrochemicals Unit, (2) the Polyolefins Unit and (3) the Vinyls Unit.

The discount rate applied is based on the weighted average cost of capital for our company at the relevant dates of valuation. Our projections include assumptions regarding (1) volumes that consider our current and projected production; (2) prices based on a sales prices cycle of approximately five years for our products; (3) costs of goods sold based on international reference prices; and (4) capital expenditures projected for future years. The current price cycle has exhibited low margins during the last three years, which reached a low point in 2012 due to global economic volatility. Changes to our projected margins resulting from changes in the petrochemical cycle, global economic conditions or strategic decisions to suspend or terminate production of certain products and to close the related plants could significantly impact our impairment charges. The impairment test performed as of October 31, 2012 supports a 5% negative fluctuation in contribution margin without changing the impairment result.

- Valuation of derivative instruments. We use swaps, non-deliverable forwards and other derivative instruments to manage risks from changes in foreign exchange, interest rates and commodities prices. We record these instruments at their estimated fair market value based on market quotations for similar instruments, and based on standard mark-to-market practices, which take into account reliable market curves for interest rates, foreign exchange rates and commodities prices.
- Deferred Income Tax and Social Contribution. We recognize deferred income tax and social contribution assets and liabilities based on the differences between the financial statement carrying amounts and the tax basis of assets and liabilities using prevailing tax rates. We regularly review any deferred income tax and social contribution assets for recoverability and reduce their carrying value based on our historical taxable income, projected future taxable income and the expected timing of any reversals of existing temporary differences. If one of our subsidiaries operates at a loss or is unable to generate sufficient future taxable income, or if there is a material change in the actual effective tax rates or the time period within which the underlying temporary differences become taxable or deductible, we evaluate the need to reduce partially or completely the carrying value of our deferred income tax and social contribution assets.
- Provisions and Contingencies. We are currently involved in numerous judicial and administrative proceedings, as described under "Item 8. Financial Information—Legal Proceedings," and in notes 24 and 29 to our audited consolidated financial statements. We record accrued liabilities for provisions that we deem probable of creating an adverse effect on our results of operations or financial condition. For the main contingencies that we deem possible of creating an adverse effect on our results of operations or financial condition, we disclose relevant information regarding the proceedings in accordance with IAS 37. Additionally, the contingencies assumed in a business combination for which an unfavorable outcome is considered possible are recognized at their fair value on the acquisition date. We believe that these judicial and administrative proceedings are properly recognized or disclosed in our financial statements.
- Allowance for doubtful accounts. We record an allowance for doubtful accounts in an amount considered sufficient to cover estimated losses on the realization of our trade accounts receivable, taking into account our loss experience and the aging of our accounts receivable. Additionally, we analyze, on a monthly basis, the amounts and characteristics of trade accounts receivable compared to our pre-defined credit limits for our customers in order to determine if additional provisions are required. As of December 31, 2013, our total trade accounts receivable was R\$3,155.1 million and the provision for doubtful accounts was R\$282.8 million. Significant changes in our historical loss experience on accounts receivable which are not apparent through our aging analysis could require significant changes to our provisions for doubtful accounts.
- *Pension plans*. For defined benefit plans that we sponsor, we calculate our funding obligations based on calculations performed by independent actuaries using assumptions provided by the plan's management, such as interest rates investment returns, and levels of inflation, and provided by the actuaries, such as mortality rates and future employment levels. Collectively, these assumptions directly impact our liability for accrued pension costs and the amounts we record as pension costs, although individual assumptions are not expected to be material.
- Useful life of long-lived assets. We recognize the depreciation of long-lived assets based on their estimated useful life, which in turn is based on industry practices and previous experience. However, the actual useful life can vary based on the current state of technologies at each unit. The useful life of the long-lived asset also affects the impairment testing. We do not believe that there are any indications of material change in the estimates and assumptions used in the calculation or the impairment losses of long-lived assets. However, if the actual results are not

consistent with the estimates and assumptions used in the future cash flows estimating the fair value of the assets, we could be exposed to potentially significant losses.

• Valuation of assets and liabilities in business combinations. We have entered into certain business combinations in accordance with IFRS, as described in note 5 to our audited consolidated financial statements. In this regard, we hire specialized service providers to evaluate the fair value of the assets acquired and liabilities assumed. We allocate the cost of the entity acquired to the assets acquired and liabilities assumed, on a fair value basis, estimated at the date of acquisition. Any difference between the cost of the acquisition and the fair value of the assets acquired and liabilities assumed is recorded as goodwill or a gain on bargain purchase. We exercise significant judgment in the process of identifying the tangible and intangible assets and liabilities, valuing such assets and liabilities in determining the remaining useful life. Assumptions used to value those assets and liabilities include estimates of discounted cash flows or discount rates and may result in a difference between the estimated and actual values. If the actual results are not consistent with the estimates and assumptions used, we could be exposed to potentially significant losses.

# **Principal Factors Affecting Our Results of Operations**

## Effects of the Dow Propylene Acquisition

Dow Polypropylene Acquisition

On September 30, 2011, we acquired the polypropylene business of Dow for US\$323 million, excluding acquisition cost, and paid US\$166 million related to our assumption of certain trade payables. This business is conducted through four polypropylene plants located in Freeport and Seadrift, Texas, United States and Wesseling and Schkopau, Germany, with an aggregate annual production capacity of 1,050 tons. In addition to these plants, we acquired inventory, accounts receivable, business know-how, certain product and process technology, and customer contracts and lists. As a result of the completion of the Dow Polypropylene Acquisition, we believe that we have the largest polypropylene production capacity of United States producers and we now have a manufacturing presence in the European polypropylene market. We have consolidated the results of the acquired polypropylene business in our financial statements as from October 1, 2011.

We accounted for this acquisition under the purchase method. In the financial statements for the year ended December 31, 2011, the amounts were allocated, on a preliminary basis, to the assets acquired and liabilities assumed by the acquirers. Independent appraisers were hired to ensure that the assets were acquired and the liabilities were assumed at fair value. Because the acquisition cost for the polypropylene business of Dow of R\$570.7 million was lower than the fair value on the acquisition date of the net assets acquired of R\$600.7 million, the difference of R\$30.0 million was recognized in our statement of operations as a gain from business combination. In the second quarter of 2012, independent experts concluded the assessment of the fair value of the assets we acquired and the liabilities we assumed in the Dow Polypropylene Acquisition. As a result, and as required by IFRS 3, we recognized the amounts of the adjustments in the 2011 financial statements, which principally impacted (1) the line items "property, plant and equipment" and "deferred income tax" in the balance sheet and (2) gain recognition in the line item "results from business combination" in the statement of operations.

Our acquisition of the polypropylene business of Dow has increased the volume of our sales from polypropylene and the related net sales revenue as from October 1, 2011 as a result of the consolidation in our financial statements of the consolidated results of operations of Braskem America.

# Growth of Brazil's GDP and Domestic Demand for Our Products

Our sales in Brazil represented 57.5% of our net sales revenue in the year ended December 31, 2013. As a Brazilian company with a substantial majority of our operations in Brazil, we are significantly affected by economic conditions in Brazil. Our results of operations and financial condition have been, and will continue to be, affected by the growth rate of Brazilian GDP because our products are used in the manufacture of a wide range of consumer and industrial products.

Because of our significant market share in many of the Brazilian markets in which our petrochemical products are sold, fluctuations in Brazilian demand for polyethylene, polypropylene and PVC affect our production levels and net sales revenue. Brazilian GDP grew at an estimated compound average annual rate of 3.5% from 2004 through 2013. From 2004 through 2013, the apparent consumption volumes in Brazil of polyethylene (including EVA), polypropylene and PVC increased at compound average annual rates of 4.6%, 4.9% and 8.0%, respectively.

The following table sets forth the growth rates of Brazilian GDP and domestic apparent consumption for polyethylene, polypropylene and PVC for the periods presented.

	Year Ended December 31,				
	2013	2012	2011	2010	2009
Brazilian GDP	2.3%	0.9%	2.7%	7.5%	(0.3)%
Brazilian consumption of polyethylene	10.2	2.9	(3.4)	22.8	6.4
Brazilian consumption of polypropylene	8.7	4.5	(4.0)	18.1	(3.4)
Brazilian consumption of PVC	2.4	(1.1)	5.7	18.9	(10.5)

Source: Brazilian government, IPEA and ABIQUIM

Brazilian GDP growth has fluctuated significantly, and we anticipate that it will likely continue to do so. Our management believes that economic growth in Brazil should positively affect our future net sales revenue and results of operations. However, continued low growth or a recession in Brazil would likely reduce our future net sales revenue and have a negative effect on our results of operations.

The Brazilian economy slowed in 2011, registering GDP growth of only 2.7%. This reduced growth rate, combined with an increase in imports of finished goods primarily as a result of the ICMS tax benefits granted by certain Brazilian ports and the effects of the stronger reais throughout much of the year, led to a decline in domestic resin sales volume of 0.8%. Brazilian apparent consumption volumes of polyethylene declined by 3.4%, polypropylene declined by 4.0% and PVC increased by 5.7%.

Despite government incentives, the Brazilian economy did not grow as expected in 2012, registering an increase in GDP growth of only 0.9%. Even with the slower growth, Brazilian consumption volumes increased by 2.9% for polyethylene and 4.5% for polypropylene, primarily as a result of a decline of imports of resins and finished goods and the depreciation of the *real* against the U.S. dollar, and declined by 1.1% for PVC.

In 2013, Brazilian GDP growth fell short of market expectations and increased by only 2.3% in 2013. However, the stronger performance of certain sectors, such as food, infrastructure, automotive and agribusiness, and the trend toward restocking supply chains positively influenced apparent consumption of thermoplastic resins, which increased by 10.2% for polyethylene, 8.7% for polypropylene and 2.4% for PVC.

We generally obtain higher prices in Brazil for our products than the prevailing international prices. The difference in prices between the Brazilian and export markets results from:

- high costs of transporting products to and within Brazil;
- warehousing, and other logistics costs; and
- tariffs and duties.

In addition, we are generally able to charge higher prices for our products than the *real* price of imports because we are able to provide better product customization services to our customers than sellers of imported products.

During periods in which the domestic demand for our products is reduced, we actively pursue export opportunities for our products in order to maintain capacity utilization rates. During periods of increased domestic demand for our products, our export sales volumes may decline as we increase domestic sales of our products.

We believe that domestic demand for thermoplastic resins may continue to be affected by global macroeconomic factors. In addition, although the volume of our basic petrochemical and thermoplastic resin sales has recovered significantly from the levels experienced in the fourth quarter of 2008, exports of basic petrochemicals now constitute a larger percentage of our sales than has historically been the case, a trend that we believe is likely to continue in the future.

# Cyclicality Affecting the Petrochemical Industry

Global consumption of petrochemical products has increased significantly over the past 30 years. Due to this growth in consumption, producers have experienced periods of insufficient capacity for these products. Periods of insufficient capacity, including some due to raw material shortages, have usually resulted in increased capacity utilization rates and international market prices for our products, leading to increased domestic prices and operating margins. These periods have often been followed by periods of capacity additions, which have resulted in declining capacity utilization rates and international selling prices, leading to declining domestic prices and operating margins.

We expect that these cyclical trends in international selling prices and operating margins relating to global capacity shortfalls and additions will likely persist in the future, principally due to the continuing impact of four general factors:

- cyclical trends in general business and economic activity produce swings in demand for petrochemicals;
- during periods of reduced demand, the high fixed cost structure of the capital intensive petrochemicals industry generally leads producers to compete aggressively on price in order to maximize capacity utilization;
- significant capacity additions, whether through plant expansion or construction, can take two to three years to implement and are therefore necessarily based upon estimates of future demand; and
- as competition in petrochemical products is generally focused on price, being a low-cost producer is critical to improved profitability. This favors producers with larger plants that maximize economies of scale, but construction of plants with high capacity may result in significant increases in capacity that can outstrip demand growth.

A variety of petrochemical companies have announced plans to build significant additional ethylene production capacity, primarily in Asia, the Middle East and North America. According to IHS, 32.7 million tons of annual global ethylene capacity is scheduled to be commissioned between 2014 and 2018, including approximately 11.7 million tons of annual capacity in China and 6.5 million tons of annual capacity in the Middle East. According to IHS, the majority of the new capacity in China (5.7 million tons of annual capacity) will be based on coal as their principal feedstock. The majority of the new capacity in the Middle East (3.5 million tons of annual capacity) will be based on ethane as their principal feedstock. However, expansions of ethylene capacity are frequently subject to delays, and we cannot predict when the planned additional capacity will be commissioned, if at all.

The contraction of demand in the United States led thermoplastic resin producers in the United States to increase the volume of exports of their thermoplastic products in the second half of 2008, leading to greater price competition in the export markets that we serve, which led to a decline in margins available to us in our export sales of these resins. In 2009, this price competition from United States producers abated somewhat following the decision of resin producers in the United States to shut down, temporarily or permanently, a portion of their production capacity. However, international pricing pressures increased in 2010 and continued during 2011 and 2012 as the price differential between naphtha and gas increased and producers using ethane as raw materials were able to maintain competitive margins at sales prices lower than those required by some naphtha based producers. In 2013, the global economy showed signs of recovery, as reflected by the improved performance of the U.S. economy and indications that the euro zone had begun to emerge from crisis. This scenario helped support a recovery in the profitability of the global petrochemical industry, and the spreads for thermoplastic resins and main basic petrochemicals improved during the year.

We believe that this pricing pressure will continue through 2013 as some ethylene production in the United States is converted from naphtha to more competitive feedstocks such as ethane, resulting in higher spreads and consequently new projects to increase ethylene capacities based on lighter feedstocks.

Based on historical growth of demand for polyethylene, polypropylene and PVC, we believe that the additional capacity introduced in the market in 2011,